July 2016 | Draft Environmental Impact Report
State Clearinghouse No. 2015081086

WATERMAN + BASELINE NEIGHBORHOOD SPECIFIC PLAN

for City of San Bernardino

VOLUME II – Appendices

Prepared for:

City of San Bernardino
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NOTICE OF PREPARATION

To: State Clearinghouse
P.O. Box 3044
(Address)
Sacramento, CA 95812-3044

From: PlaceWorks
501 W. Broadway Suite 800
San Diego, California 92101

Subject: **Notice of Preparation of a Draft Environmental Impact Report**

The City of San Bernardino will be the Lead Agency and will prepare an environmental impact report for the project identified below. We need to know the views of your agency as to the scope and content of the environmental information which is germane to your agency's statutory responsibilities in connection with the proposed project. Your agency will need to use the EIR prepared by our agency when considering your permit or other approval for the project.

The project description, location, and the potential environmental effects are contained in the attached materials. A copy of the Initial Study:

(☐ is ☒ is not) attached.

Due to the time limits mandated by State law, your response must be sent at the earliest possible date but not later than 30 days after receipt of this notice.

Please send your response to 300 North "D" Street. San Bernardino, CA 92418
at the address shown above.

We will need the name for a contact person in your **agency**.

Project Title: Waterman + Baseline Neighborhood Transformation Specific Plan

Project Applicant, if any: National Community Renaissance (National CORE)

Date August 31, 2015 **Signature**

Title Contract Senior Planner

Telephone (909) 384-7272, Ext: 333

Reference: California Code of Regulations, Title 14, (CEQA Guidelines) Sections 15082(a), 15103, 15375.

1. Project Description

As described in detail in this section, the Waterman + Baseline Neighborhood Transformation Specific Plan proposes a maximum build out of up to 4,341 residential units, 3,570,448 square feet of non-residential uses, and associated transportation/mobility and infrastructure improvements.

1.1 PROJECT LOCATION

The Waterman + Baseline Neighborhood Transformation Specific Plan (Specific Plan) project (proposed project) is located in the City of San Bernardino within the County of San Bernardino, as shown in **Figure 1.1**, *Regional Location*. The proposed project is within the southwestern section of the San Bernardino Quadrangle (USGS).

The proposed project area includes approximately 710 acres located near the center of San Bernardino around the intersection on Waterman Avenue and Baseline Avenue. Specifically, the proposed project boundaries are formed by Sierra Way to the west, Tippecanoe Avenue and the flood control channel on the east, 3rd Street to the south, and Highland Avenue to the north as shown in **Figure 1.2**, *Project Vicinity*. The western boundary is approximately 1.1 miles away from the Interstate 215 (I-215) freeway and the northern boundary is 0.6 miles from Foothill and Martin A. Matich highways (210).

1.2 STATEMENT OF OBJECTIVES

The following objectives have been established for the Waterman + Baseline Neighborhood Transformation Specific Plan project and will aid decision makers in their review of the project and associated environmental impacts:

- Identify desired land uses for districts within the Plan area, recognizing that districts have diverse needs, opportunities, constraints and assets;
- Attract a mix of quality, compatible residential, commercial, professional office and light industrial development while preserving and enhancing existing established residential neighborhoods;
- Augment the area's development capabilities by enhancing the linkages between Downtown and Inland Valley Development Agency (IVDA) reuse and development, focusing on the economic and physical synergies between these two areas;
- Encourage the growth of jobs and services, with opportunities and training available to existing and future residents within the neighborhood;
- Support existing investment in the area and enhancing existing assets;
- Lessen existing land-use conflicts and ensuring avoidance of future conflicts between residential neighborhoods and non-residential uses;
- Further the physical and economic revitalization of the Waterman + Baseline neighborhood;
- Develop a human capital plan to improve overall quality of life for residents focused on education, healthcare and job development; and

- Minimize the potential for displacement of existing residents as new residents are accommodated.

1.3 PROJECT CHARACTERISTICS

"Project," as defined by the CEQA Guidelines, means:

> ... the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment, and that is any of the following: (1)…enactment and amendment of zoning ordinances, and the adoption and amendment of local General Plans or elements thereof pursuant to Government Code Sections 65100–65700. (14 Cal. Code of Reg. § 15378[a])

1.3.1 Description of the Project

The proposed Waterman + Baseline Neighborhood Transformation Specific Plan would establish a land use and development framework, identify needed transportation and infrastructure improvements, and serve as a marketing tool for attracting developers to key sites and for boosting economic development. The proposed project is intended to encourage residential and neighborhood-serving commercial establishments on major corridors such as Baseline Avenue and Waterman Avenue, direct the creation of employment generating uses to the southern portion of the Plan area closer to the Civic Center and Downtown, and protect and enhance the existing residential neighborhoods.

Figure 1.3, *Proposed Land Use Plan,* depicts the proposed land use plan for the project site. This is the preferred land use plan for the proposed project and accommodates an increase in existing residential uses from an estimated 2,049 units to approximately 4,341 units, and an increase in commercial uses from roughly 2,366,385 square feet to approximately 3,570,448 square feet and establishes six distinct districts to guide future development of key parcels throughout the project area.

Planning Districts

As stated above, the Specific Plan will establish six "districts" that together would implement a mix of residential uses and commercial uses. The boundaries for each of the six districts are shown on **Figure 1.4**, *Proposed Planning Districts*. The six districts included in the Specific Plan are:

District 1 - Uptown Professional District. The Uptown Professional District is approximately 82 acres located in the northern portion of the Specific Plan project area. It includes all the parcels fronting Waterman Avenue between Highland Avenue and 13th Street. The Specific Plan would consolidate the medical uses scattered along Waterman Avenue into a focused district that leverages the demand generated by St. Bernardine Medical Center. District 1 would be zoned entirely as a mixed use district accommodating office uses, neighborhood serving commercial uses and limited residential uses up to 20 dwelling units an acre with a focus on senior housing. The Specific Plan would establish a connection to the Midtown District for its employees, patients, and visitors.

District 2 - Westside Neighborhood District. The Westside Neighborhood District includes approximately 127 acres at the western end of the Specific Plan project area. The boundaries of this district are formed by Sierra Way to the west, Waterman Avenue to the east, and 5th Street on the south. The district also includes the parcels fronting both sides of Baseline Street. The primary intent of this district is to improve and preserve the existing single family neighborhoods to the west of Waterman

Avenue. The District would accommodate mixed use development primarily including neighborhood serving commercial uses along Baseline Street and Waterman Avenue.

District 3 - Midtown Core District. Located in the center of the Specific Plan project rea, the Midtown Core District includes 120 acres and would serve as the center of the neighborhood. The boundaries of the district are Waterman Avenue on the west, 9th Street on the south, with no formal roadway boundaries to the north or east. Pivotal to this district is the redevelopment of Waterman Gardens, a 38-acre public housing project. The proposed project replaces 252 units of existing public housing with approximately 400 units of mixed income housing, a central park, community center, and other community and recreational resources. Olive Avenue would be re-designed and accommodate a pedestrian-oriented avenue with a variety of housing options, commercial shops and eating establishments along Waterman & Baseline Avenues– all within walking distance to a repurposed public K-12 school campus. Mixed use development would be accommodated including residential uses up to 30 dwelling units an acre.

District 4 - Eastside Neighborhood District. The Eastside Neighborhood District includes approximately 144 acres at the eastern end of the Specific Plan project area adjacent to the Midtown Core. The boundaries of this district are loosely formed by Tippecanoe Avenue and the flood control channel to the east and south, the parcels fronting Baseline to the north, with no formal boundary to the west. This district would accommodate mixed use development primarily including neighborhood serving commercial uses along Baseline Avenue that is consistent with the existing single family neighborhoods to the south. Portions of this district located along or adjacent to the flood control channel would be included in a linear park or trail system along the southern and eastern edges of the district.

District 5 - Gateway District. The Gateway District includes approximately 97 acres located south of 7th Street, east of Sierra Way, north of 3rd Street, and west of Waterman Avenue. This district would introduce streetscape and building design indicating a gateway to the Specific Plan area that would connect and distinguish the neighborhood from the Civic Center/Downtown. This district is intended to promote the identity of San Bernardino through enhanced landscaping and signage as well as mixed-use development at Seccombe Lake. This district accommodates mixed use development along Waterman Avenue, with a small single family enhancement area in the center of district. The majority of the district, including Seccombe Lake, would allow for higher density residential development up to 30 dwelling units per acre with compatible neighborhood serving commercial uses in the form of vertical or horizontal mixed use.

District 6 - Employment District. The Employment District is approximately 140 acres, located south of 9th Street, east of Waterman Avenue, north of 3rd Street, and west of the flood control channel. This district would be an employment generating and flexible business use district. The Employment District would accommodate office, commercial, and business park uses (mix of business and support services) creating new job opportunities in close proximately to new and existing residential development. The Specific Plan project area fronting Waterman Avenue would accommodate the development of mixed use projects including residential up to 20 dwelling units per acre. The portion between 5th and 4th Streets would remain as the existing residential neighborhood. Portions of this district located in or adjacent to the flood control channel would be included in a linear park or trail system along the eastern edge of the district.

Table 1.1, *Specific Plan Build-Out Projections,* presents information on the existing conditions of each district including square feet of non-residential uses and numbers of residential units and the proposed build-out of residential units and non-residential square footage allowed by the proposed Specific Plan.

Table 1.1 – Specific Plan Build-out Projections

District Name	Area (acres)	Existing Residential (units)	Existing Commercial (square feet)	Proposed Residential (units)	Proposed Commercial (square feet)
Uptown Professional	81.7	259 units	1,244,332 SF	277 units	513,363 SF
Westside Neighborhood	127.0	397 units	243,519 SF	808 units	342,852 SF
Midtown Core Mixed Use	119.2	344 units	346,981 SF	1,017 units	610,450 SF
Eastside Neighborhood	144.5	657 units	108,527 SF	1,402 units	206,614 SF
Gateway	97.4	229 units	136,318 SF	675 units	444,896 SF
Mixed Business	140.9	60 units	286,708 SF	162 units	1,452,273 SF
Total	710.7	1,946 units	2,366,385 SF	4,341 units	3,570,448 SF

Land Use Zones

To guide development and encourage revitalization of the neighborhood, the Specific Plan would establish five new land use zones to achieve a mix of residential uses and commercial uses. The proposed Land Use Plan is shown in **Figure 1.3**, *Proposed Land Use Plan*. The five zones shown within the Specific Plan Area are:

Open Space. The open space zone is intended to preserve and create recreational and open space opportunities throughout the Specific Plan Area. New development is not permitted, unless it is tied to a recreational uses and/or enhancement of existing facilities, such as a linear trail, ball parks, pocket parks, tot lots, and other similar uses.

Neighborhood Residential. The neighborhood residential zone is intended to promote the preservation and enhancement of existing single family neighborhoods while allowing for the development of new residential units up to 14 dwelling units per acre. This zone would buffer existing neighborhoods from higher intensity surrounding uses and provide transitions between residential and non-residential uses.

Corridor Mixed Use. The corridor mixed use zone is intended to encourage the development of a mix of neighborhood serving commercial and residential uses along Baseline Street and Waterman Avenue. The zone would accommodate both vertical and horizontal mixed use development up to 20 dwelling units per acre and a floor area ratio (FAR) of 0.5. Existing businesses and new construction would incorporate streetscape improvements to encourage walkability along these two major corridors.

Urban Mixed Use. The urban mixed use zone is intended to develop a pedestrian-oriented environment with a variety of housing options, commercial shops and eating establishments. Mixed use development will be encouraged including residential uses up to 30 dwelling units an acre and non-residential uses up to an FAR of 0.75. These zones are intended to create a sense of place and identify the Specific Plan Area as a distinct location within the City.

Employment. The employment zone is intended to promote the development of employment generating uses including office, commercial, and business park uses (mix of business and support services) to establish new job opportunities in close proximately to new and existing residential development. This zone allows for non-residential uses up to an FAR of 0.75.

Opportunity Areas/Sites

Within each district two types of opportunity sites have been identified – catalytic sites and redevelopment sites. Catalytic sites are envisioned to be significant development projects that are likely to occur in the near future that will create the momentum for other redevelopment projects on adjacent and nearby parcels. Within the Specific Plan project area, seven catalytic sites have been identified that are in the process of being redevelopment or have a high likelihood of being redeveloped in the near future. Catalytic sites are shown in red on **Figure 1.5**, *Proposed Opportunity and Enhancement Areas*. In contrast, redevelopment sites are parcels throughout the Specific Plan area that are generally vacant or house underutilized properties and/or older facilities that no longer meet current standards and market conditions, and thus have the most potential for change. They are typically smaller in size and may require additional steps to facilitate redevelopment (i.e. lot consolidation, demolition). A large number of parcels throughout the Specific Plan area are identified as redevelopment sites particularly along Waterman Avenue, 5th Street, and Baseline Street. Redevelopment sites as shown in blue on **Figure 1.5**.

Enhancement Areas

The proposed Specific Plan includes "Enhancement Areas" that are predominantly residential neighborhoods that lie outside of Opportunity Areas/Sites. No substantive changes are proposed for these areas. Enhancement Areas include established residential neighborhoods outside the corridors, and some existing office professional and commercial parcels that are already developed with compatible, economically viable and job-generating uses. The Specific Plan intends to retain, enhance, and improve these Enhancement Areas. Enhancement areas are shown in yellow on **Figure 1.5**.

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Figure 1.1 - Regional Location

CITY OF SAN BERNARDINO

WATERMAN GARDENS SPECIFIC PLAN

Source: The City of SAn Bernardino, 2015

0 10 Miles

Specific Plan Boundary
City of San Bernardino
County Boundary
Water Bodies
National Parks and Forests
State Parks and Forests

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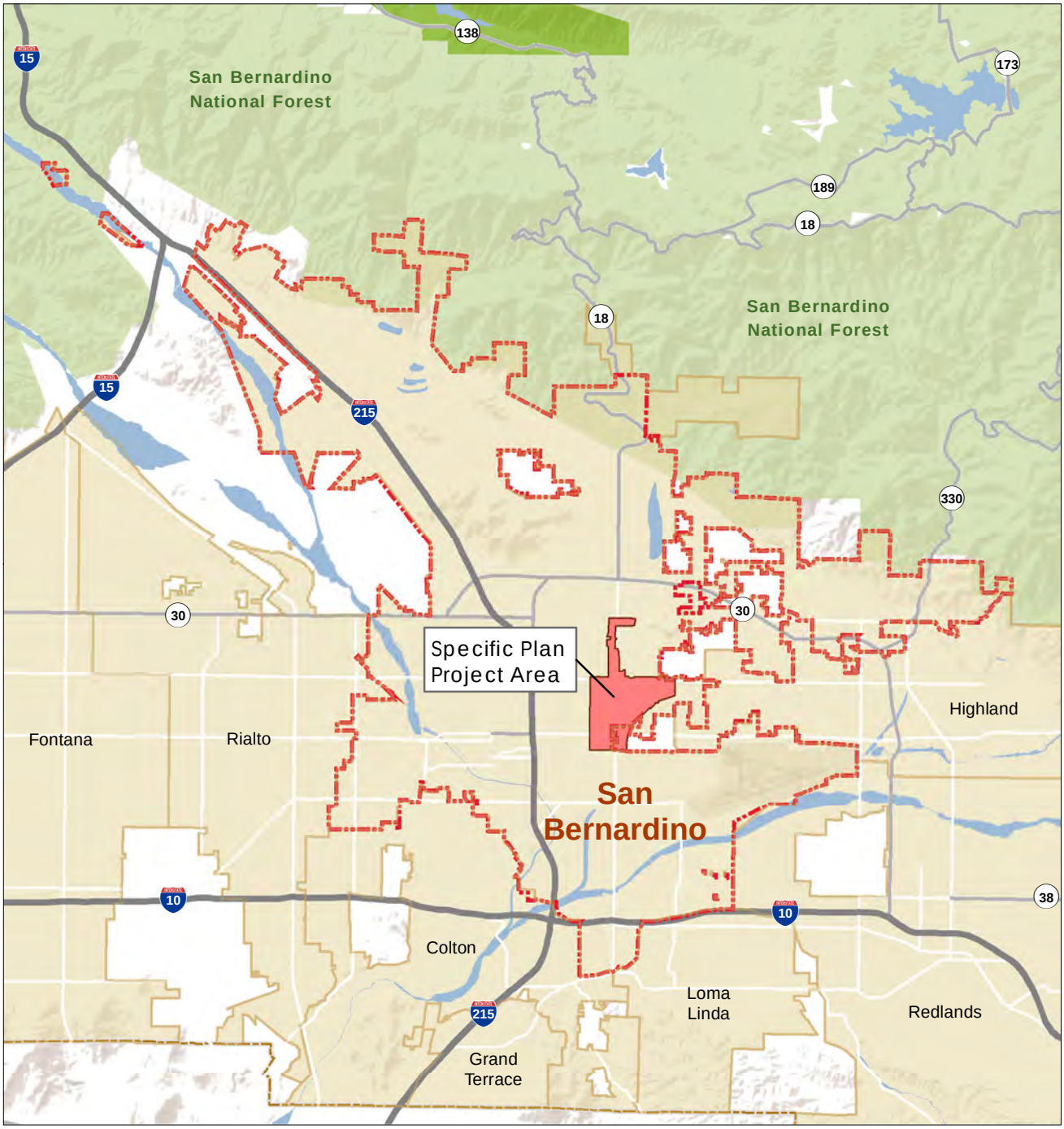
Figure 1.2 - Project Vicinity Map

CITY OF SAN BERNARDINO

WATERMAN GARDENS SPECIFIC PLAN



Source: The City of SAn Bernardino, 2015

0 1 2 Miles

City of San Bernardino

Specific Plan Boundary

County Boundary

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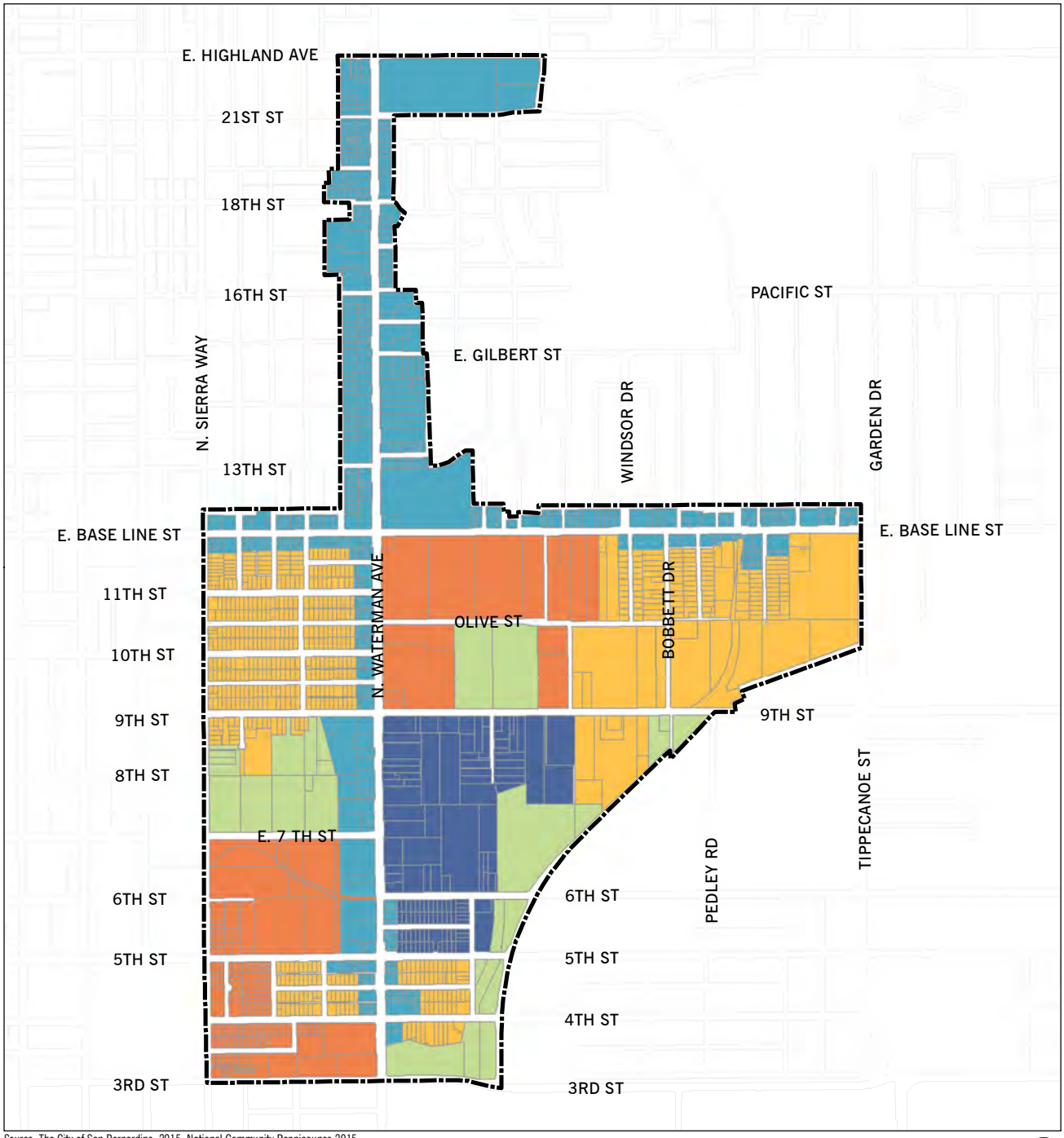
Figure 1.3 - Proposed Land Use Plan

CITY OF SAN BERNARDINO

WATERMAN GARDENS SPECIFIC PLAN



Source: The City of San Bernardino, 2015; National Community Rennisaunce,2015

0 1,000 Feet

Open Space
Neighborhood Residential
Corridor Mixed Use
Urban Mixed Use
Employment
Specific Plan Boundary

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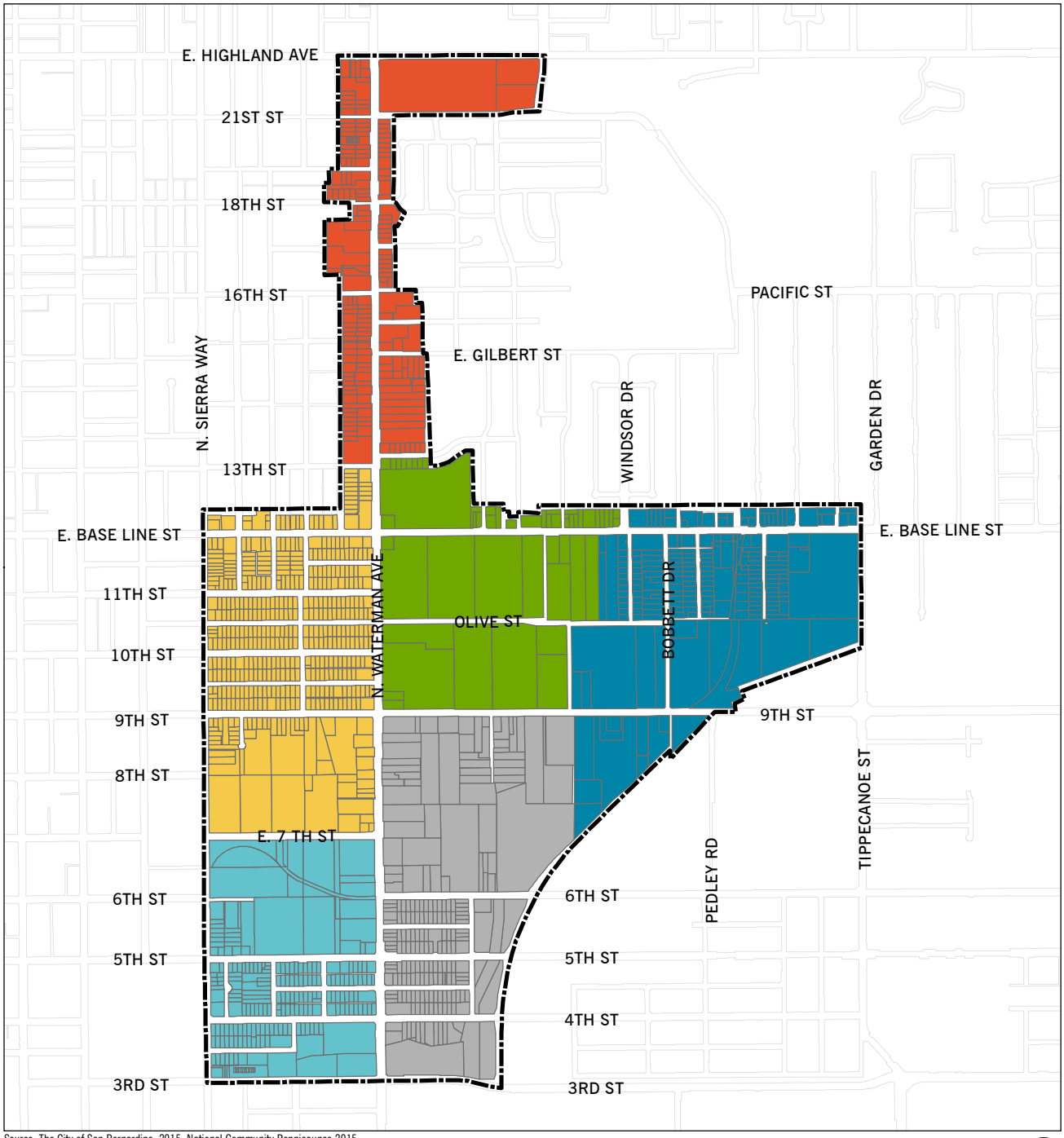
Figure 1.4 - Proposed Planning Districts

CITY OF SAN BERNARDINO

WATERMAN GARDENS SPECIFIC PLAN



Source: The City of San Bernardino, 2015; National Community Rennisaunce,2015

0 1,000 Feet

1 - Uptown Professional District
2 - Westside Residential District
3 - Midtown Core District
4 - Eastside Residential District
5 - Gateway Lake District
6 - Employment Mixed Use District
Specific Plan Boundary

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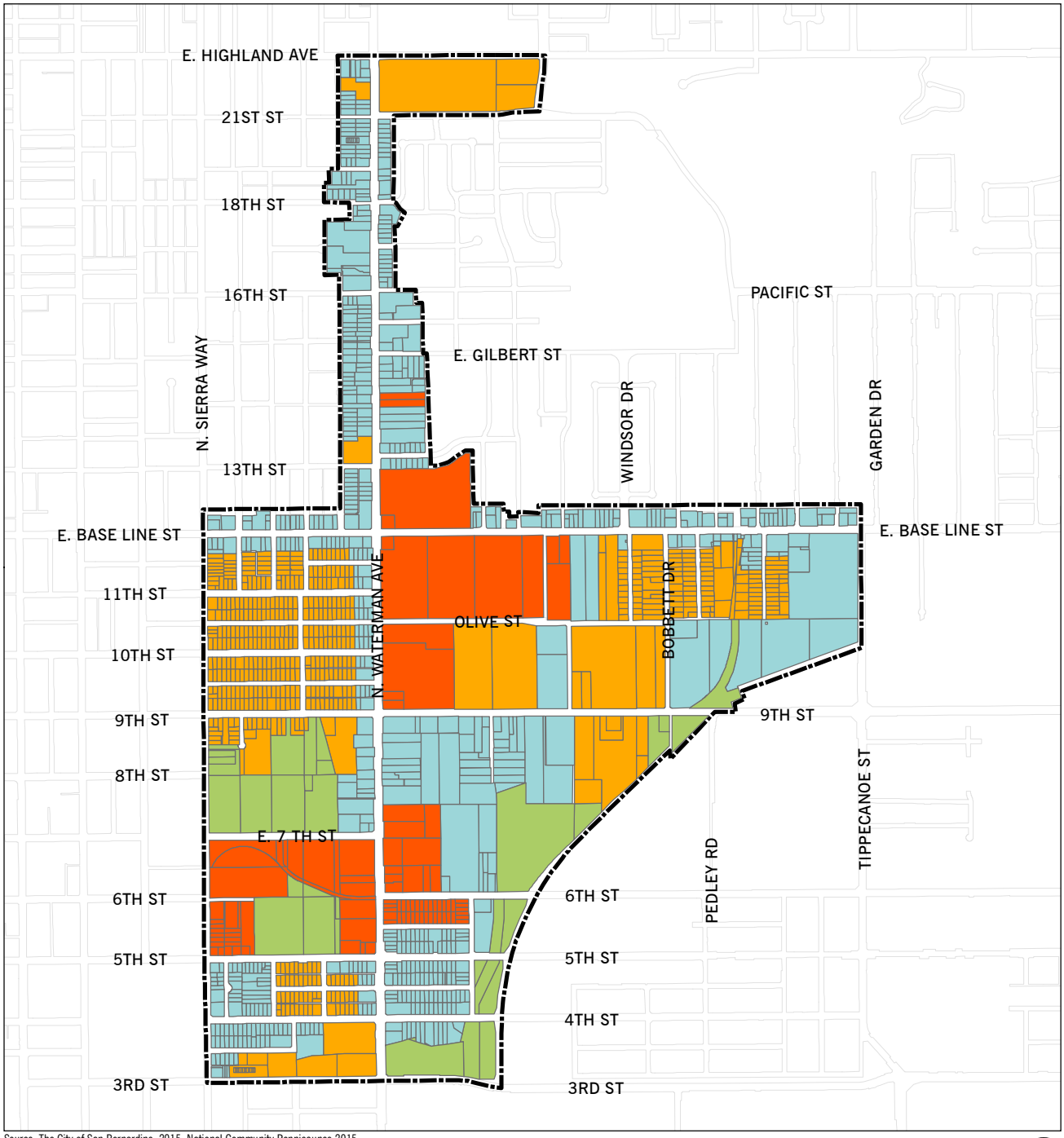
Figure 1.5 - Proposed Opportunity and Enhancement Areas

CITY OF SAN BERNARDINO

WATERMAN GARDENS SPECIFIC PLAN



Source: The City of San Bernardino, 2015; National Community Rennisaunce,2015

0 1,000 Feet

Open Space
Catalytic Site
Redevelopment Site
Preservation and Enhancement Site
Specific Plan Boundary

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2. Environmental Effects of the Proposed Project

The Waterman + Baseline Neighborhood Transformation Specific Plan Program EIR will address impacts pertaining to the impact topics identified below. Each resource area chapter will include a discussion of the existing setting, thresholds of significance, evaluation of potential impacts, mitigation measures, and monitoring strategies associated with the resource area.

Aesthetics

The Aesthetics chapter will summarize existing area aesthetics and visual setting. The chapter will describe project-specific aesthetics issues regarding build-out of the proposed project such as scenic vistas, trees, historic buildings, scenic highways, existing visual character or quality of the area, as well as light and glare. The chapter will include analysis of the existing setting, identification of the thresholds of significance, identification of impacts, and the development of mitigation measures and monitoring strategies.

Air Quality and Greenhouse Gas Emissions

The Air Quality and Greenhouse Gas Emissions chapter of the EIR will summarize setting information and identify potential impacts related to emissions of criteria air pollutants, greenhouse gas emissions and global climate change, and the cumulative contribution to regional air quality that may result from the proposed project.

Air Quality Analysis. The air quality analysis for the proposed project will be performed utilizing the California Emissions Estimator Model (CalEEMod) software package and following the South Coast Air Quality Management District (SCAQMD) CEQA Guidelines. Vehicle trip generation data will be provided by the applicant's traffic consultant under the City's direction for use in the air quality analysis. The air quality impact analysis will include a quantitative assessment of short-term (i.e., construction) and long-term (i.e., operational) increases of criteria air pollutant emissions (i.e., ROG, NOX, and PM10) associated with the proposed project and the project alternatives. For carbon monoxide, CALINE 4 modeling will be performed if one or more of the study intersections are degraded to a level of service specified by SCAQMD. The project's cumulative contribution to regional air quality will be discussed, based in part on the modeling conducted at the project level. The significance of air quality impacts will be determined in comparison to SCAQMD-recommended significance thresholds. SCAQMD-recommended mitigation measures will be incorporated to reduce any significant air quality impacts, and anticipated reductions in emissions associated with any proposed mitigation measures will be quantified.

The CalEEMod software will be utilized to produce an estimate of GHG emissions for the project, including direct emissions, as well as indirect emissions (e.g., electricity, natural gas). Emissions will be calculated as carbon dioxide equivalents. GHG emissions will be quantified for the project as follows:

- Run the CalEEMod program, based on discussions with SCAQMD, using project land use and trip generation, if available, to produce an estimate of carbon dioxide equivalent emissions associated with the project. If project-specific land use and trip generation data is not available, the model's default trip generation rates will be utilized for the analysis; and

- Compare project GHG emissions to SCAQMD Business As Usual (BAU) standards and SCAQMD CEQA Guidelines.

Biological Resources

The Biological Resources chapter of the EIR will summarize the setting and describe the potential effects to plant communities, trees, wildlife, and wetlands, including adverse effects on rare, endangered, candidate, sensitive, and special-status species associated with implementation of the proposed project The analysis will rely on a Biological Resources report prepared for the project site, along with existing knowledge of the project area, available documentation, and information on wetland or biological resources in the area. The results of the report will be incorporated into the Biological Resources chapter of the EIR.

Cultural Resources

The Cultural Resources chapter will summarize the setting and briefly describe the potential construction-related effects to any potential on-site historical and/or archaeological resources. The analysis will rely on a Cultural Resources report prepared for the project site Given that the project site is currently highly developed and disturbed, visible resources are unlikely to occur on the site. Mitigation will be provided to address any potentially unknown cultural resources.

A records search of the California Historical Records Information System from the North Central Information Center will be conducted to identify any known cultural resources on or within the vicinity of the project site.

In addition, consultation with Native American tribes, pursuant to SB18, will occur by obtaining a list of tribes from the Native American Heritage Commission and sending letters to the tribes requesting any input they may have on the project site. Should any potentially significant cultural resources be identified, a cultural resources report would be prepared and the results included in the chapter.

Geology and Soils.

The Geology and Soils chapter of the EIR will summarize the setting and describe the potential effects from soil erosion, earthquakes, liquefaction, and expansive soils within the project area. The analysis will rely on a Geology and Soils report prepared for the project site, as well as the City of San Bernardino General Plan, General Plan EIR, and United States Geological Survey (USGS) maps for analysis.

Hazards and Hazardous Materials

The Hazards & Hazardous Materials chapter of the EIR will summarize the setting and describe any existing or potential hazardous materials within the project area or as a result of the proposed project. The analysis will rely on a Phase I Environmental Site Assessment prepared for the project site. In addition, hazards associated with airports, wildland fire and emergency response/evacuation will be evaluated.

Hydrology and Water Quality / Storm Water Quality

The Hydrology and Water Quality / Storm Water Quality chapter will summarize setting information and identify potential impacts related to irrigation drainage, storm water drainage, flooding, groundwater, seepage, and water quality. Consideration of on-site and off-site infrastructure facilities will be included in the analysis.

Land Use and Planning

The Land Use and Planning chapter will evaluate the consistency of the proposed project with the City of San Bernardino's adopted plans and policies. In addition, the City's General Plan and Zoning Ordinance, SCAG Regional Comprehensive Plan and 2012-2035 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), and any other appropriate documents, will be reviewed to address consistency issues. The chapter will further assess the compatibility of the proposed project with the surrounding land uses, both existing and proposed, as well as the compatibility of land uses within the proposed project area.

Mineral Resources

The Mineral Resources chapter will evaluate the proposed project site for mineral deposits of regional and state-wide importance within Mineral Resource Zones determined under the Surface Mining and Reclamation Act (SMARA). Classification of land within the proposed project site will be according to a priority list established by the State Mining and Geology Board (SMGB).

Noise

The Noise chapter of the EIR will be based upon a technical study prepared for the proposed project that will include short-term construction noise and vibration impacts as well as long-term operational noise impacts associated with transportation and stationary noise sources. A community noise survey will be completed to quantify existing background noise levels within the project site, including short-term noise level measurements and continuous noise level measurements for a minimum of 24-hours. Existing traffic noise levels at major roadways (including Waterman Avenue and Baseline Road) as well as any stationary noise sources associated with land use activities will be evaluated. All significant noise impacts due to and upon development of the proposed project will be identified. Future traffic noise will be and existing traffic data will also be used to quantify the potential noise effects. Traffic data, such as existing posted speed limits, truck count information, and 24-hour traffic split data, will be used to run the model. Noise exposure associated with existing railroad operations in the project vicinity will also be quantified.

Population and Housing

The Population and Housing chapters will evaluate the consistency of the proposed project with the City of San Bernardino's adopted plans and policies. In addition, the City's General Plan and Zoning Ordinance, SCAG Regional Comprehensive Plan and 2012-2035 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), and any other appropriate documents, will be reviewed to address consistency issues. The Population and Housing chapter will also address potential impacts related to population and housing due to the implementation of the proposed project, including affordable housing and impacts to any existing disadvantaged unincorporated communities.

Public Services

The Public Services chapter will summarize setting information and identify potential new demand for services; including fire, police, schools, parks, and recreation. Information from the San Bernardino Services Master Plans will be utilized. Local public services representatives will also be contacted in order to obtain the most recent information.

Transportation and Circulation

The Transportation and Circulation chapter of the EIR will be based upon an on-site circulation study Traffic Impact Analysis. The traffic analysis will include a 20-year land use forecast to estimate foreseeable development to the Year 2035 as a subset of the entire buildout of the General Plan. The forecast will be based on potential market absorption in the area, historic growth rates in the area, and land use forecasts from the City of San Bernardino and SCAG. After establishing a realistic 20-year land use scenario, a Year 2035 travel demand model will be developed, based on the San Bernardino Associated Governments (SANBAG) existing travel demand model. The model will be updated to include recent development projects. Model runs will include scenarios with and without the proposed project in order to identify transportation network deficiencies based on daily and peak hour roadway segment analysis.

The Traffic Impact Analysis will be prepared for the project and utilized in the EIR analysis. The Traffic Impact Analysis will include, at a minimum, the following traffic scenarios: Existing Conditions, Existing Plus Project Conditions, Cumulative No Project Conditions, and Cumulative Plus Project Conditions.

Utilities

The Utilities chapter will summarize setting information and identify potential new demand for services; including water, sewer, energy, and solid waste. Information from the San Bernardino Utilities Master Plans and San Bernardino Valley Municipal Water District Master Plans for Water and Sewer as well as the Wastewater Collection System Master Plan and EIR will be utilized. In addition, the applicant will provide an infrastructure plan for the project. Local utilities representatives will also be contacted in order to obtain the most recent information.

Cumulative Impacts

In accordance with Section 15130 of the CEQA Guidelines, an analysis of the cumulative impacts associated with the project will be undertaken and discussed. CEQA Guidelines Section 15355 define cumulative effects as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." The cumulative impact analyses will utilize the regional growth projections for the County and region as a whole. The individual and incremental effects of the proposed project when added to other closely related past, present and foreseeable future projects will be addressed. In addition, pursuant to CEQA Section 21100(B)(5), the analysis will address the potential growth-inducing impacts of the proposed project, focusing on whether or not a removal of any impediments to growth would occur with implementation of the proposed project.

Alternatives

In accordance with Section 15126.6(a) of the CEQA Guidelines, the EIR will include an analysis of several project alternatives, including the No Project Alternative. The Alternatives Analysis chapter will "describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives." The EIR will include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project. The significant effects of the alternatives will be discussed, but in less detail than the significant effects of the proposed project. The EIR will also include a discussion of the environmentally superior alternative, and a description of alternatives considered but rejected from detailed analysis.

At this time, the alternatives to be analyzed by the EIR are still under consideration. Input is sought from the public as to alternatives to be included in the EIR.

SUBMITTING COMMENTS

To ensure that the full range of project issues and alternatives related to the proposed project are addressed and that all significant issues are identified, comments and suggestions are invited from all interested parties.

Written comments or questions concerning the EIR for the project should be directed to the following address by 5:00 p.m. on September 30, 2015:

City of San Bernardino Community Development Department

ATTN: Oliver Mujica, Contract Planner, 300 North "D" Street, San Bernardino, CA 92418

Phone: (909) 384-7272, Ext. 3332

In addition, **a scoping meeting will be held on September 10, 2015** before the City of San Bernardino. The meeting will be located at Bobby Vega Community Center, 402 Alder Street, San Bernardino, CA 92410 and the meeting begins at 5:30p.m. The purpose of the meeting will be to receive verbal and/or written comments from the public on the NOP.

All comments must include full name and address in order for staff to respond appropriately.

STATE OF CALIFORNIA

GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH

STATE CLEARINGHOUSE AND PLANNING UNIT

EDMUND G. BROWN JR.
GOVERNOR

KEN ALEX
DIRECTOR

Notice of Preparation

August 31, 2015

RECEIVED
SEP 08 2015
By

To: Reviewing Agencies

Re: Waterman + Baseline Neighborhood Transformation Specific Plan
SCH# 2015081086

Attached for your review and comment is the Notice of Preparation (NOP) for the Waterman + Baseline Neighborhood Transformation Specific Plan draft Environmental Impact Report (EIR).

Responsible agencies must transmit their comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of the NOP from the Lead Agency. This is a courtesy notice provided by the State Clearinghouse with a reminder for you to comment in a timely manner. We encourage other agencies to also respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

Oliver Mujica
City of San Bernardino
300 North D Street, 3rd Floor
San Bernardino, CA 92418

with a copy to the State Clearinghouse in the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the environmental document review process, please call the State Clearinghouse at (916) 445-0613.

Sincerely,

Scott Morgan
Director, State Clearinghouse

Attachments
cc: Lead Agency

1400 10th Street P.O. Box 3044 Sacramento, California 95812-3044
(916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

Document Details Report
State Clearinghouse Data Base

SCH#	2015081086
Project Title	Waterman + Baseline Neighborhood Transformation Specific Plan
Lead Agency	San Bernardino, City of

Type	NOP Notice of Preparation
Description	The proposed Waterman + Baseline Neighborhood Transformation Specific Plan would establish a land use and development framework, identify needed transportation and infrastructure improvements, and serve as a marketing tool for attracting developers to key sites and for boosting economic development. The proposed project is intended to encourage residential and neighborhood-serving commercial establishments on major corridors such as Baseline Avenue and Waterman Avenue, direct the creation of employment generating uses to the southern portion of the Plan area closer to the Civic Center and Downtown, and protect and enhance the existing residential neighborhoods.

Lead Agency Contact

Name	Oliver Mujica		
Agency	City of San Bernardino		
Phone	(909) 384-5057	*Fax*	
email			
Address	300 North D Street, 3rd Floor		
City	San Bernardino	*State* CA	*Zip* 92418

Project Location

County	San Bernardino		
City	San Bernardino		
Region			
Cross Streets	Waterman/Highland/3rd Street		
Lat / Long	34° 7' 9.728" N / 117° 16' 31.97" W		
Parcel No.			
Township	*Range*	*Section*	*Base*

Proximity to:

Highways	Hwy 215, 210
Airports	San Bernardino Int'l
Railways	San Bernardino Metrolink
Waterways	Highland Creek
Schools	Eagle Valley, Juanita
Land Use	Residential: Suburban, Urban, Med, Med-High, High. Commercial: Office, Gen 1, Gen 2, Heavy. Indust. Public Facility

Project Issues	Aesthetic/Visual; Air Quality; Archaeologic-Historic; Biological Resources; Drainage/Absorption; Fiscal Impacts; Flood Plain/Flooding; Forest Land/Fire Hazard; Geologic/Seismic; Minerals; Noise; Population/Housing Balance; Public Services; Recreation/Parks; Schools/Universities; Septic System; Sewer Capacity; Soil Erosion/Compaction/Grading; Solid Waste; Toxic/Hazardous; Traffic/Circulation; Vegetation; Water Quality; Water Supply; Wetland/Riparian; Growth Inducing; Landuse; Cumulative Effects
Reviewing Agencies	Resources Agency; Department of Parks and Recreation; Department of Water Resources; Department of Fish and Wildlife, Region 6; Department of Housing and Community Development; Office of Emergency Services, California; Native American Heritage Commission; Public Utilities Commission; California Highway Patrol; Caltrans, District 8; Air Resources Board; Regional Water Quality Control Board, Region 8

Date Received	08/31/2015	*Start of Review*	08/31/2015	*End of Review*	09/29/2015

Note: Blanks in data fields result from insufficient information provided by lead agency.

Notice of Completion & Environmental Document Transmittal

Mail to: State Clearinghouse, P.O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613
For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH # 2015081036

Project Title: Waterman + Baseline Neighborhood Transformation Specific Plan

Lead Agency: City of San Bernardino — Contact Person: Oliver Mujica
Mailing Address: 300 North "D" Street. San Bernardino, CA. 92418 — Phone: (909)384-5057
City: City of San Bernardino — Zip: CA — County: San Bernardino

Project Location: County: San Bernardino — City/Nearest Community: San Bernardino
Cross Streets: Waterman/Highland/3rd Street — Zip Code:
Longitude/Latitude (degrees, minutes and seconds): 34 ° 7 ' 9.72" N / 117 ° 16 ' 31.97" W — Total Acres: 710
Assessor's Parcel No.: N/A — Section: N/A — Twp.: N/A — Range: N/A — Base: N/A
Within 2 Miles: State Hwy #: 215, 210 — Waterways: Highland Creek
Airports: San Bernardino International — Railways: Sn Bernardino Metrolink — Schools: Eagle Valley, Juanita

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Document Type:

CEQA:
- [x] NOP
- [ ] Early Cons
- [ ] Neg Dec
- [ ] Mit Neg Dec
- [ ] Draft EIR
- [ ] Supplement/Subsequent EIR (Prior SCH No.)
- Other:

NEPA:
- [ ] NOI
- [ ] EA
- [ ] Draft EIS
- [ ] FONSI

Other:
- [ ] Joint Document
- [ ] Final Document
- [ ] Other:

Local Action Type:

- [ ] General Plan Update
- [x] General Plan Amendment
- [ ] General Plan Element
- [ ] Community Plan
- [x] Specific Plan
- [ ] Master Plan
- [ ] Planned Unit Development
- [ ] Site Plan
- [x] Rezone
- [ ] Prezone
- [ ] Use Permit
- [ ] Land Division (Subdivision, etc.)
- [ ] Annexation
- [ ] Redevelopment
- [ ] Coastal Permit
- [ ] Other:

Development Type:

- [x] Residential: Units 4,341 Acres
- [ ] Office: Sq.ft. Acres Employees
- [x] Commercial: Sq.ft. 3,570,4 Acres Employees
- [ ] Industrial: Sq.ft. Acres Employees
- [ ] Educational:
- [ ] Recreational:
- [ ] Water Facilities: Type MGD
- [ ] Transportation: Type
- [ ] Mining: Mineral
- [ ] Power: Type MW
- [ ] Waste Treatment: Type MGD
- [ ] Hazardous Waste: Type
- [ ] Other:

Project Issues Discussed in Document:

- [x] Aesthetic/Visual
- [ ] Agricultural Land
- [x] Air Quality
- [x] Archeological/Historical
- [x] Biological Resources
- [ ] Coastal Zone
- [x] Drainage/Absorption
- [x] Economic/Jobs
- [x] Fiscal
- [x] Flood Plain/Flooding
- [x] Forest Land/Fire Hazard
- [x] Geologic/Seismic
- [x] Minerals
- [x] Noise
- [x] Population/Housing Balance
- [x] Public Services/Facilities
- [x] Recreation/Parks
- [x] Schools/Universities
- [x] Septic Systems
- [x] Sewer Capacity
- [x] Soil Erosion/Compaction/Grading
- [x] Solid Waste
- [x] Toxic/Hazardous
- [x] Traffic/Circulation
- [x] Vegetation
- [x] Water Quality
- [x] Water Supply/Groundwater
- [x] Wetland/Riparian
- [x] Growth Inducement
- [x] Land Use
- [x] Cumulative Effects
- [ ] Other:

Present Land Use/Zoning/General Plan Designation:

Residential: Suburban ,Urban, Med, Med-High, High. Commerical: Office, Gen 1, Gen 2, Heavy. Indust: Light, Heavy. Public Facilit

Project Description: *(please use a separate page if necessary)*
See attached.

Note: The State Clearinghouse will assign identification numbers for all new projects. If a SCH number already exists for a project (e.g. Notice of Preparation or previous draft document) please fill in.

Revised 2008

NOP Distribution List

JV

County: San Bernardino

SCH# 2015081086

Resources Agency

- [x] Resources Agency
  Nadell Gayou
- [ ] Dept. of Boating & Waterways
  Denise Peterson
- [ ] California Coastal Commission
  Elizabeth A. Fuchs
- [ ] Colorado River Board
  Lisa Johansen
- [ ] Dept. of Conservation
  Elizabeth Carpenter
- [ ] California Energy Commission
  Eric Knight
- [ ] Cal Fire
  Dan Foster
- [ ] Central Valley Flood Protection Board
  James Herota
- [ ] Office of Historic Preservation
  Ron Parsons
- [x] Dept of Parks & Recreation
  Environmental Stewardship Section
- [ ] California Department of Resources, Recycling & Recovery
  Sue O'Leary
- [ ] S.F. Bay Conservation & Dev't. Comm.
  Steve McAdam
- [x] Dept. of Water Resources
  Resources Agency
  Nadell Gayou

Fish and Game

- [ ] Depart. of Fish & Wildlife
  Scott Flint
  Environmental Services Division
- [ ] Fish & Wildlife Region 1
  Curt Babcock
- [ ] Fish & Wildlife Region 1E
  Laurie Harnsberger
- [ ] Fish & Wildlife Region 2
  Jeff Drongesen
- [ ] Fish & Wildlife Region 3
  Charles Armor
- [ ] Fish & Wildlife Region 4
  Julie Vance
- [ ] Fish & Wildlife Region 5
  Leslie Newton-Reed
  Habitat Conservation Program
- [x] Fish & Wildlife Region 6
  Tiffany Ellis
  Habitat Conservation Program
- [ ] Fish & Wildlife Region 6 I/M
  Heidi Calvert
  Inyo/Mono, Habitat Conservation Program
- [ ] Dept. of Fish & Wildlife M
  George Isaac
  Marine Region

Other Departments

- [ ] Food & Agriculture
  Sandra Schubert
  Dept. of Food and Agriculture
- [ ] Depart. of General Services
  Public School Construction
- [ ] Dept. of General Services
  Anna Garbeff
  Environmental Services Section
- [ ] Delta Stewardship Council
  Kevan Samsam
- [x] Housing & Comm. Dev.
  CEQA Coordinator
  Housing Policy Division

Independent Commissions,Boards

- [ ] Delta Protection Commission
  Michael Machado
- [x] OES (Office of Emergency Services)
  Marcia Scully
- [x] Native American Heritage Comm.
  Debbie Treadway
- [x] Public Utilities Commission
  Supervisor
- [ ] Santa Monica Bay Restoration
  Guangyu Wang
- [ ] State Lands Commission
  Jennifer Deleong
- [ ] Tahoe Regional Planning Agency (TRPA)
  Cherry Jacques

Cal State Transportation Agency CalSTA

- [ ] Caltrans - Division of Aeronautics
  Philip Crimmins
- [ ] Caltrans – Planning
  HQ LD-IGR
  Terri Pencovic
- [x] California Highway Patrol
  Suzann Ikeuchi
  Office of Special Projects

Dept. of Transportation

- [ ] Caltrans, District 1
  Rex Jackman
- [ ] Caltrans, District 2
  Marcelino Gonzalez
- [ ] Caltrans, District 3
  Eric Federicks – South
  Susan Zanchi - North
- [ ] Caltrans, District 4
  Patricia Maurice
- [ ] Caltrans, District 5
  Larry Newland
- [ ] Caltrans, District 6
  Michael Navarro
- [ ] Caltrans, District 7
  Dianna Watson
- [x] Caltrans, District 8
  Mark Roberts
- [ ] Caltrans, District 9
  Gayle Rosander
- [ ] Caltrans, District 10
  Tom Dumas
- [ ] Caltrans, District 11
  Jacob Armstrong
- [ ] Caltrans, District 12
  Maureen El Harake

Cal EPA

Air Resources Board

- [x] All Other Projects
  Cathi Slaminski
  - [ ] Transportation Projects
    Nesamani Kalandiyur
  - [ ] Industrial/Energy Projects
    Mike Tollstrup
- [ ] State Water Resources Control Board
  Regional Programs Unit
  Division of Financial Assistance
- [ ] State Water Resources Control Board
  Karen Larsen
  Division of Drinking Water
- [ ] State Water Resources Control Board
  Student Intern, 401 Water Quality Certification Unit
  Division of Water Quality
- [ ] State Water Resouces Control Board
  Phil Crader
  Division of Water Rights
- [ ] Dept. of Toxic Substances Control
  CEQA Tracking Center
- [ ] Department of Pesticide Regulation
  CEQA Coordinator

Regional Water Quality Control Board (RWQCB)

- [ ] RWQCB 1
  Cathleen Hudson
  North Coast Region (1)
- [ ] RWQCB 2
  Environmental Document Coordinator
  San Francisco Bay Region (2)
- [ ] RWQCB 3
  Central Coast Region (3)
- [ ] RWQCB 4
  Teresa Rodgers
  Los Angeles Region (4)
- [ ] RWQCB 5S
  Central Valley Region (5)
  - [ ] RWQCB 5F
    Central Valley Region (5)
    Fresno Branch Office
  - [ ] RWQCB 5R
    Central Valley Region (5)
    Redding Branch Office
- [ ] RWQCB 6
  Lahontan Region (6)
  - [ ] RWQCB 6V
    Lahontan Region (6)
    Victorville Branch Office
- [ ] RWQCB 7
  Colorado River Basin Region (7)
- [x] RWQCB 8
  Santa Ana Region (8)
- [ ] RWQCB 9
  San Diego Region (9)

- [ ] Other _____
  _____
  _____

- [ ] _____
  Conservancy

Last Updated 6/23/2015

DEPARTMENT OF TRANSPORTATION
DISTRICT 8
PLANNING (MS 725)
464 WEST 4th STREET, 6th FLOOR
SAN BERNARDINO, CA 92401-1400
PHONE (909) 388-7017
FAX (909) 383-5936
TTY 711
www.dot.ca.gov/dist8

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City of San Bernardino
Public Works Director

September 16, 2015

File: 08-SBd-18-PM 6.15
08-SBd-66-PM 23.15
08-SBd-210-PM 24.6
08-SBd-215-PM 7.688

Oliver Mujica
City of San Bernardino
300 North D Street, 3rd Floor
San Bernardino, CA 92418

Waterman + Baseline Neighborhood Transformation Specific Plan – Notice of Preparation of a Draft Environmental Impact Report

Dear Mr. Mujica:

Thank you for providing the California Department of Transportation (Department) the opportunity to review and comment on the Notice of Preparation for the Waterman + Baseline Neighborhood Transformation Specific Plan (Project) Draft Environmental Impact Report (DEIR). The proposed project area includes approximately 710 acres located near the center of the City of San Bernardino around the intersection on Waterman Avenue and Baseline Avenue. The Project proposes a maximum build out of up to 4,341 residential units, 3,570,448 square feet of non-residential uses, and associated transportation/mobility and infrastructure improvements.

In General, the Department supports efforts to increase density of infill development and/or redevelopment. This will help meet our Goal of Sustainability, Livability and Economy, where long lasting, smart mobility decisions are made that improve the environment, support a vibrant economy, and build communities not sprawl.

As the owner and operator of the State Highway System (SHS), it is our responsibility to coordinate and consult with local jurisdictions when proposed development may impact our facilities. As the responsible agency under the California Environmental Quality Act, it is also our responsibility to make recommendations to offset associated impacts with the proposed project. Although the project is under the jurisdiction of the City of San Bernardino, due to the project's potential impact to the State facilities, it is also subject to the policies and regulations that govern the SHS. We recommend the following to be analyzed in the preceding DEIR:

To Oliver Mujica. 9/17/15 - EM

A traffic study to accurately evaluate the extent of potential impacts to the operational characteristics of the existing highway. We offer the following guidance on the preparation of the Traffic Impact Analysis (TIA):

- All state facilities impacted by the project area, which include State Route 18 (SR-18), State Route 66 (SR-66), State Route 210 (SR-210), State Route 259 (SR-259), Interstate Route 10 (I-10), and Interstate Route 215 (I-215), should be analyzed in the traffic study; intersections impacted by the project should also be analyzed. Where applicable, synchro analyses, merge/diverge analyses, and queuing analyses are recommended to analyze such mitigation measures as signalized intersections and ramp interchanges. The data used in the Traffic Impact Study should not be more than 2 years old.

- Traffic analysis scenarios should clearly be exhibited as exiting with/without proposed project, proposed project only, cumulative conditions with/without proposed project, and long range cumulative conditions with/without proposed project.

- The geographic area examined in the TIA should include as a minimum all regionally significant arterial system segments and intersections, including State highway facilities, where the project will add over 100 peak hour trips. State highway facilities that are experiencing noticeable delays should be analyzed in the scope of the traffic study for projects that add 50 to 100 peak hour trips.

- The lead agency should monitor impacts to ensure that roadway segments and intersections remain at an acceptable Level of Service (LOS). Should the LOS reach unacceptable levels, the lead agency should delay the issuance of building permits for any project until the appropriate impact mitigation is implemented. Clearly indicate LOS with and without mitigation improvements. Proposed improvements should be exhibited in preliminary drawings that indicate the LOS with improvements.

- Mitigation measures to State facilities should be included in the traffic impact analysis. Mitigation identified in the traffic study, subsequent environmental documents, and mitigation monitoring reports, should be coordinated with the Department to identify and implement the appropriate mitigation, as well as the appropriate timing of the mitigation. Mitigation improvements should be compatible with the Department concepts.

- Submit two hard copies and three electronic copies of all Traffic Impact Analysis documents and an electronic Synchro Analysis file.

Additionally, we recommend the traffic study be submitted prior to the circulation of the DEIR to ensure timely review of the submitted materials and a preliminary scoping meeting to discuss any potential issues.

Multimodal Accessibility:

The Department is committed to providing a safe transportation system for all users. We encourage the City to embark a safe, sustainable, integrated and efficient transportation system and complete street to enhance California's economy and livability within a mixed use development. A pedestrian/bike-friendly environment served by multimodal transportation would reduce traffic congestion prevalent in the surrounding areas. We offer the following comments:

- The Department supports a specific plan that fosters a transportation facility that is planned, designed, operated, and maintained to provide safe mobility for all users, including bicyclists, pedestrians, transit vehicles, truckers, and motorists, appropriate to the function and context of the facility specifically Waterman + Baseline Commercial/Residential Mixed Use projects (Complete Street Implementation Action Plan 2.0).

- Currently, the proposed Waterman + Baseline neighborhood is served by several transit routes. However, only Route 1 along Waterman Avenue partially serves and connects the proposed neighborhood to the San Bernardino Metrolink Station. It is recommended that the city in coordination with the Omnitrans reconfigure the transit routes, stops, and schedules to provide an efficient transportation network within the proposed project area. A coordinated transit services may lead to growth in transit ridership and reduction of Vehicle Miles Traveled and Greenhouse Gases which is one of the primary goals of the 2040 California Transportation Plan.

- When the City considers striping a bicycle facility on Waterman + Baseline Neighborhood, we encourage the City to use roadway configurations and design standards found in the National Association of City Transportation Officials' Urban Street Design Guide and the Urban Bikeway Design Guide. The Department officially endorsed these innovate design guidelines on April 11, 2014. These guidelines provide safety treatments that separate cyclists from through traffic and provide increased visibility at intersections.

- It appears that the San Bernardino County Non-Motorized Transportation Plan calls for Class II Bike Lanes on Baseline Avenue and no bike path on Waterman Avenue. We recommend the provision of a Class I or Class IV Protected Bike Lane instead of the Planned Class II Bike or no bike path.

Please continue to keep us informed of this project and other future updates, which could potentially impact the SHS and interfacing transportation facilities. If you have any questions or need to contact us, please do not hesitate to contact Adrineh Melkonian (909) 806-3928 or myself at (909) 383-4557.

Sincerely,

MARK ROBERTS
Office Chief
Intergovernmental Review, Community and Regional Planning

SOUTHERN CALIFORNIA
ASSOCIATION of
GOVERNMENTS

Main Office

818 West 7th Street
12th Floor
Los Angeles, California
90017-3435

t (213) 236-1800
f (213) 236-1825

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Bill Jahn, Big Bear Lake

Energy & Environment
Deborah Robertson, Rialto

Transportation
Alan Wapner, San Bernardino Associated Governments

September 30, 2015

Mr. Oliver Mujica, Contract Senior Planner
City of San Bernardino Community Development Department
300 North "D" Street
San Bernardino, California 92418
Phone: (909) 384-7272, Ext. 3332
E-mail: mujica_ol@sbcity.org

RE: SCAG Comments on the Notice of Preparation of a Draft Environmental Impact Report for the Waterman + Baseline Neighborhood Transformation Specific Plan [SCAG NO. IGR8591]

Dear Mr. Mujica,

Thank you for submitting the Notice of Preparation of a Draft Environmental Impact Report for the Waterman + Baseline Neighborhood Transformation Specific Plan ("proposed project") to the Southern California Association of Governments (SCAG) for review and comment. SCAG is the authorized regional agency for Inter-Governmental Review (IGR) of programs proposed for federal financial assistance and direct development activities, pursuant to Presidential Executive Order 12372. Additionally, SCAG reviews the Environmental Impact Reports of projects of regional significance for consistency with regional plans pursuant to the California Environmental Quality Act (CEQA) and CEQA Guidelines.

SCAG is also the designated Regional Transportation Planning Agency under state law, and is responsible for preparation of the Regional Transportation Plan (RTP) including its Sustainable Communities Strategy (SCS) component pursuant to SB 375. As the clearinghouse for regionally significant projects per Executive Order 12372, SCAG reviews the consistency of local plans, projects, and programs with regional plans.[1] Guidance provided by these reviews is intended to assist local agencies and project sponsors to take actions that contribute to the attainment of the regional goals and policies in the RTP/SCS.

SCAG staff has reviewed the Notice of Preparation of a Draft Environmental Impact Report for the Waterman + Baseline Neighborhood Transformation Specific Plan in the San Bernardino County. The project proposes a maximum build out of up to 4,341 residential units and 3,570,448 square feet of non-residential uses to anticipate future growth for the Waterman + Baseline Neighborhood Transformation Specific Plan area.

When available, please send environmental documentation to SCAG's *office in Los Angeles or by email to sunl@scag.ca.gov* providing, at a minimum, the full public comment period for review. If you have any questions regarding the attached comments, please contact the Inter-Governmental Review (IGR) Program, attn.: Lijin Sun, Esq., Senior Regional Planner, at (213) 236-1882 or sunl@scag.ca.gov. Thank you.

Sincerely,

Ping Chang

Ping Chang
Program Manager II, Land Use and Environmental Planning

[1] SB 375 amends CEQA to add Chapter 4.2 Implementation of the Sustainable Communities Strategy, which allows for certain CEQA streamlining for projects consistent with the RTP/SCS. Lead agencies (including local jurisdictions) maintain the discretion and will be solely responsible for determining "consistency" of any future project with the SCS. Any "consistency" finding by SCAG pursuant to the IGR process should not be construed as a finding of consistency under SB 375 for purposes of CEQA streamlining.

The Regional Council consists of 86 elected officials representing 191 cities, six counties, six County Transportation Commissions, one representative from the Transportation Corridor Agencies, one Tribal Government representative and one representative for the Air Districts within Southern California.

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COMMENTS ON THE NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE WATERMAN + BASELINE NEIGHBORHOOD TRANSFORMATION SPECIFIC PLAN [SCAG NO. IGR8591]

CONSISTENCY WITH RTP/SCS

SCAG reviews environmental documents for regionally significant projects for their consistency with the adopted RTP/SCS.

2012 RTP/SCS GOALS

The SCAG Regional Council adopted the 2012 RTP/SCS in April 2012. The 2012 RTP/SCS links the goal of sustaining mobility with the goals of fostering economic development, enhancing the environment, reducing energy consumption, promoting transportation-friendly development patterns, and encouraging fair and equitable access to residents affected by socio-economic, geographic and commercial limitations (see http://rtpscs.scag.ca.gov). The goals included in the 2012 RTP/SCS may be pertinent to the proposed project. These goals are meant to provide guidance for considering the proposed project within the context of regional goals and policies. Among the relevant goals of the 2012 RTP/SCS are the following:

SCAG 2012 RTP/SCS GOALS	
RTP/SCS G1:	*Align the plan investments and policies with improving regional economic development and competitiveness*
RTP/SCS G2:	*Maximize mobility and accessibility for all people and goods in the region*
RTP/SCS G3:	*Ensure travel safety and reliability for all people and goods in the region*
RTP/SCS G4:	*Preserve and ensure a sustainable regional transportation system*
RTP/SCS G5:	*Maximize the productivity of our transportation system*
RTP/SCS G6:	*Protect the environment and health for our residents by improving air quality and encouraging active transportation (non-motorized transportation, such as bicycling and walking)*
RTP/SCS G7:	*Actively encourage and create incentives for energy efficiency, where possible*
RTP/SCS G8:	*Encourage land use and growth patterns that facilitate transit and non-motorized transportation*
RTP/SCS G9:	*Maximize the security of the regional transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies*

For ease of review, we encourage the use of a side-by-side comparison of SCAG goals with discussions of the consistency, non-consistency or non-applicability of the policy and supportive analysis in a table format. Suggested format is as follows:

SCAG 2012 RTP/SCS GOALS		
	Goal	Analysis
RTP/SCS G1:	*Align the plan investments and policies with improving regional economic development and competitiveness*	*Consistent: Statement as to why;* *Not-Consistent: Statement as to why;* *Or* *Not Applicable: Statement as to why; DEIR page number reference*
RTP/SCS G2:	*Maximize mobility and accessibility for all people and goods in the region*	*Consistent: Statement as to why;* *Not-Consistent: Statement as to why;* *Or* *Not Applicable: Statement as to why; DEIR page number reference*
etc.		etc.

RTP/SCS STRATEGIES

To achieve the goals of the 2012 RTP/SCS, a wide range of strategies are included in SCS Chapter (starting on page 152) of the RTP/SCS focusing on four key areas: 1) Land Use Actions and Strategies; 2) Transportation Network Actions and Strategies; 3) Transportation Demand Management (TDM) Actions and Strategies and; 4) Transportation System Management (TSM) Actions and Strategies. If applicable to the proposed project, please refer to these strategies as guidance for considering the proposed project within the context of regional goals and policies. To access a listing of the strategies, please visit http://rtpscs.scag.ca.gov/Documents/2012/final/f2012RTPSCS.pdf (Tables 4.3 – 4.7, beginning on page 152).

REGIONAL GROWTH FORECASTS

At the time of this letter, the most recently adopted SCAG forecasts, at the jurisdictional level, consists of the 2020 and 2035 RTP/SCS population, household and employment forecasts. To view them, please visit http://scag.ca.gov/Documents/2012AdoptedGrowthForecastPDF.pdf. The forecasts for the region and applicable jurisdictions are below.

	Adopted SCAG Region Wide Forecasts		Adopted City of San Bernardino Forecasts	
	Year 2020	**Year 2035**	**Year 2020**	**Year 2035**
Population	19,663,000	22,091,000	231,200	261,400
Households	6,458,000	7,325,000	66,900	76,800
Employment	8,414,000	9,441,000	113,400	145,300

MITIGATION

SCAG staff recommends that you review the SCAG 2012 RTP/SCS Final Program EIR Mitigation Measures for guidance, as appropriate. See Chapter 6 (beginning on page 143) at:
http://rtpscs.scag.ca.gov/Documents/peir/2012/final/Final2012PEIR.pdf

As referenced in Chapter 6, a comprehensive list of example mitigation measures that may be considered as appropriate is included in Appendix G: *Examples of Measures that Could Reduce Impacts from Planning, Development and Transportation Projects.* Appendix G can be accessed at:
http://rtpscs.scag.ca.gov/Documents/peir/2012/final/2012fPEIR_AppendixG_ExampleMeasures.pdf

South Coast
Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

September 8, 2015

Oliver Mujica, Contract Planner
City of San Bernardino, Community Development Department
300 North "D" Street
San Bernardino, CA 92418

Notice of Preparation of a CEQA Document for the
Waterman + Baseline Neighborhood Transformation Specific Plan

The South Coast Air Quality Management District (SCAQMD) staff appreciates the opportunity to comment on the above-mentioned document. The SCAQMD staff's comments are recommendations regarding the analysis of potential air quality impacts from the proposed project that should be included in the draft CEQA document. Please send the SCAQMD a copy of the CEQA document upon its completion. Note that copies of the Draft EIR that are submitted to the State Clearinghouse are not forwarded to the SCAQMD. Please forward a copy of the Draft EIR directly to SCAQMD at the address in our letterhead. **In addition, please send with the draft EIR all appendices or technical documents related to the air quality and greenhouse gas analyses and electronic versions of all air quality modeling and health risk assessment files. These include original emission calculation spreadsheets and modeling files (not Adobe PDF files). Without all files and supporting air quality documentation, the SCAQMD will be unable to complete its review of the air quality analysis in a timely manner. Any delays in providing all supporting air quality documentation will require additional time for review beyond the end of the comment period.**

Air Quality Analysis

The SCAQMD adopted its California Environmental Quality Act (CEQA) Air Quality Handbook in 1993 to assist other public agencies with the preparation of air quality analyses. The SCAQMD recommends that the Lead Agency use this Handbook as guidance when preparing its air quality analysis. Copies of the Handbook are available from the SCAQMD's Subscription Services Department by calling (909) 396-3720. More recent guidance developed since this Handbook was published is also available on SCAQMD's website here: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/ceqa-air-quality-handbook-(1993). SCAQMD staff also recommends that the lead agency use the CalEEMod land use emissions software. This software has recently been updated to incorporate up-to-date state and locally approved emission factors and methodologies for estimating pollutant emissions from typical land use development. CalEEMod is the only software model maintained by the California Air Pollution Control Officers Association (CAPCOA) and replaces the now outdated URBEMIS. This model is available free of charge at: www.caleemod.com.

The Lead Agency should identify any potential adverse air quality impacts that could occur from all phases of the project and all air pollutant sources related to the project. Air quality impacts from both construction (including demolition, if any) and operations should be calculated. Construction-related air quality impacts typically include, but are not limited to, emissions from the use of heavy-duty equipment from grading, earth-loading/unloading, paving, architectural coatings, off-road mobile sources (e.g., heavy-duty construction equipment) and on-road mobile sources (e.g., construction worker vehicle trips, material transport trips). Operation-related air quality impacts may include, but are not limited to, emissions from stationary sources (e.g., boilers), area sources (e.g., solvents and coatings), and vehicular trips (e.g., on- and off-road tailpipe emissions and entrained dust). Air quality impacts from indirect sources, that is, sources that generate or attract vehicular trips should be included in the analysis.

The SCAQMD has also developed both regional and localized significance thresholds. The SCAQMD staff requests that the lead agency quantify criteria pollutant emissions and compare the results to the recommended regional significance thresholds found here: http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2. In addition to analyzing regional air quality impacts, the SCAQMD staff recommends calculating localized air quality impacts and comparing the results to localized significance thresholds (LSTs). LSTs can be used in addition to the recommended regional significance thresholds as a second indication of air quality impacts when preparing a CEQA document. Therefore, when preparing the air quality analysis for the proposed project, it is

recommended that the lead agency perform a localized analysis by either using the LSTs developed by the SCAQMD or performing dispersion modeling as necessary. Guidance for performing a localized air quality analysis can be found at: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/localized-significance-thresholds.

In the event that the proposed project generates or attracts vehicular trips, especially heavy-duty diesel-fueled vehicles, it is recommended that the lead agency perform a mobile source health risk assessment. Guidance for performing a mobile source health risk assessment ("*Health Risk Assessment Guidance for Analyzing Cancer Risk from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis*") can be found at: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/mobile-source-toxics-analysis. An analysis of all toxic air contaminant impacts due to the use of equipment potentially generating such air pollutants should also be included.

In addition, guidance on siting incompatible land uses (such as placing homes near freeways) can be found in the California Air Resources Board's *Air Quality and Land Use Handbook: A Community Perspective*, which can be found at the following internet address: http://www.arb.ca.gov/ch/handbook.pdf. CARB's Land Use Handbook is a general reference guide for evaluating and reducing air pollution impacts associated with new projects that go through the land use decision-making process.

Mitigation Measures

In the event that the project generates significant adverse air quality impacts, CEQA requires that all feasible mitigation measures that go beyond what is required by law be utilized during project construction and operation to minimize or eliminate these impacts. Pursuant to CEQA Guidelines §15126.4 (a)(1)(D), any impacts resulting from mitigation measures must also be discussed. Several resources are available to assist the Lead Agency with identifying possible mitigation measures for the project, including:

- Chapter 11 of the SCAQMD *CEQA Air Quality Handbook*
- SCAQMD's CEQA web pages at: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/mitigation-measures-and-control-efficiencies.
- CAPCOA's *Quantifying Greenhouse Gas Mitigation Measures* available here: http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf.
- SCAQMD's Rule 403 – Fugitive Dust, and the Implementation Handbook for controlling construction-related emissions
- Other measures to reduce air quality impacts from land use projects can be found in the SCAQMD's Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning. This document can be found at the following internet address: http://www.aqmd.gov/docs/default-source/planning/air-quality-guidance/complete-guidance-document.pdf?sfvrsn=4.

Data Sources

SCAQMD rules and relevant air quality reports and data are available by calling the SCAQMD's Public Information Center at (909) 396-2039. Much of the information available through the Public Information Center is also available via the SCAQMD's webpage (http://www.aqmd.gov).

The SCAQMD staff is available to work with the Lead Agency to ensure that project emissions are accurately evaluated and mitigated where feasible. If you have any questions regarding this letter, please contact me at Jwong1@aqmd.gov or call me at (909) 396-3176.

Sincerely,

Jillian Wong

Jillian Wong, Ph.D.
Program Supervisor
Planning, Rule Development & Area Sources

SBC150901-02
Control Number

825 East Third Street, San Bernardino, CA 92415-0835 | Phone: 909.387.8109 Fax: 909.387.7876
www.SBCounty.gov

SAN BERNARDINO COUNTY

Department of Public Works

Environmental & Construction • Flood Control
Operations • Solid Waste Management
Surveyor • Transportation

Gerry Newcombe
Director

September 30, 2015

File: 10(ENV)-4.01

City of San Bernardino Community Development
Attn: Oliver Mujica
300 North "D" Street
San Bernardino, CA. 92418
Fax (805) 583-7922

RE: CEQA – NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE WATERMAN AND BASELINE NEIGHBORHOOD TRANSFORMATION SPECIFIC PLAN FOR THE CITY OF SAN BERNARDINO

Dear Mr. Mujica:

Thank you for giving the San Bernardino County Department of Public Works the opportunity to comment on the above-referenced project. **We received this request on August 31, 2015** and pursuant to our review, the following comments are provided:

Water Resources Division (Mary Lou Mermilliod, PWE III, 909-387-8213):

1. We have reviewed the Draft Specific Plan for the proposed project. Due to a lack of information, we cannot comment at this time as the San Bernardino County Flood Control District's recommendations are most often made for site specific conditions. We would appreciate the opportunity to provide comments when more information becomes available.

Traffic Division (Eloy Ruvalcaba, PWE III, 909-387-1869):

1. Because the project-related traffic has the potential to cause circulation impacts, the Traffic Impact Analysis for this project should consider analyzing the following County maintained traffic signals: 1) Third St at Lena Rd; 2) Tippecanoe Ave at 5th St; 3) Tippecanoe at 6th St; 4) Del Rosa Drive at Pacific St 5) Sterling Ave at Pumalo St; and 6) Sterling Ave at Date St.

Environmental Management Division (Erma Hurse, Senior Planner, 909-387-1864):

1. This is a huge project and there is no mention of feasibility studies, the number of phases it will take to develop the plan and/or number of years it will take to construct and complete the project. More information is needed to ascertain major environmental concerns. Please provide the Draft Environmental Impact Report when it becomes available.

If you have any questions, please contact the individuals who provided the specific comment, as listed above.

Sincerely,

NIDHAM ARAM ALRAYES, MSCE, PE, QSD/P
Public Works Engineer III
Environmental Management

NAA:PE:sr/CEQAComment_SanBdno_NOP_WatermanBaselineSP_2015-09-30.docx

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CalEEMod Project Characteristics Inputs

Name:	Waterman + Baseline Neighborhood Transformation Specific Plan
Project Address:	Various
Project Location:	SoCAB
Climate Zone:	10
Land Use Setting:	Urban
Operational Year:	2035
Electricity Company:	Southern California Edison
Air Basin:	South Coast Air Basin
Air District:	SCAQMD
SRA:	34
Notes:	
	Doesn't included permitted (SCAQMD) sources of emissions (industrial sources)

Existing

	Acres	DU	Retail SQFT	Office SQFT	Church	Industrial SQFT	Square Footage TOTAL	Employment	Population
Single-Family	134	757							2,642
Single-Family-MH	40	515							1,797
Multi-Family	58	669							2,335
Retail - Auto	73		390,326				390,326	651	
Retail - Restaurant	10		44,175				44,175	74	
Retail - Supermarket	23		214,118				214,118	263	
Retail - Gas Station	1		3,249				3,249	5	
Retail - Shopping Center	135		559,141				559,141	688	
Office - Medical/Dental Office	39			1,091,802			1,091,802	1,820	
Office	15			32,578			32,578	40	
Church	2				1,211		1,211	2	
Industrial	10					29,785	29,785	37	
School	20						0		
Park + Ag + OS	46						0		
Other - Cemetery	34						0		
Other - FC + OS + Parking	71						0		
Total Existing:	711	1,941	1,211,009	1,124,380	1,211	29,785	2,366,385	3,579	6,774

Notes

1 Population based on 3.49 persons per household

1 Employment assumes an employment density of 600 SQFT/employee for retail - gas stations, auto, and restaurants; medical office; and institutional; and 813 square feet per employee for retail - supermarkets and shopping center; office buildings; and industrial.

CalEEMod Project Characteristics Inputs

Name:	Waterman + Baseline Neighborhood Transformation Specific Plan
Project Address:	Various
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SRA:	34
Notes:	

Doesn't included permitted (SCAQMD) sources of emissions (industrial sources)

Project

	DU	Retail SQFT	Office SQFT	Church	Industrial SQFT	Square Footage TOTAL	Employment	Population
Single-Family	1,029							3,591
Single-Family-MH	443							1,546
Multi-Family	2,869							10,013
Retail		3,249,454				3,249,454	4,778	
Office			143,591			143,591	211	
Church				20,369		20,369	30	
Industrial					157,034	157,034	231	
Total Project	4,341	3,249,454	143,591	20,369	157,034	3,570,448	5,250	15,150
NET	2,400	2,038,445	-980,789	19,158	127,249	1,204,063	1,671	8,376
						51%	680	

Notes

TRIP GENERATION

Source: Fehr & Peers, 2016.

	Existing	Project	Net
Gross Trip Ends	74,765	86,789	12,024
VMT	669,787	766,085	96,298
Avg Trip Length (all trip types)	8.96	8.83	-0.13
VMT/SP	64.69	37.55	-27.14

100% Primary = TDM memorandum accounts for trip internalization in the VMT estimates.

CalEEMod Project Characteristics Inputs

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Notes:	
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TRIP GENERATION RATES

CalEEMod Land Use	Units	Code	ITE Weekday Rates[1]	ITE Saturday Rates[1]	ITE Sunday Rates[1]	Existing Calibrated Trip Rates Saturday	Existing Calibrated Trip Rates Sunday	Project Calibrated Trip Rates Saturday	Project Calibrated Trip Rates Sunday
Low Rise Residential (3 or less stories)	DU	220	6.65	4.99	4.20	2.52	2.12	2.52	2.12
Single Family Housing	DU	210	9.52	9.91	8.62	5.01	4.36	5.00	4.35
Mobile Home Park (SF)	DU	240	4.99	3.43	2.94	1.73	1.49	1.73	1.48
Elementary School	Students	520	1.29	0	0	0.00	0.00	0.00	0.00
High School	Students	530	1.71	0.61	0.25	0.31	0.13	0.31	0.13
Regional Shopping Center	TSF	820	42.70	49.97	25.24	25.25	12.75	25.22	12.74
Fast Food Restaurant	TSF	934	496.12	722.03	542.72	364.79	274.20		
Grocery Store	TSF	850	102.24	177.59	166.44	89.72	84.09		
General Office Building	TSF	710	11.03	2.46	1.05	1.24	0.53	1.24	0.53
Medical Office Building	TSF	720	36.13	8.96	1.55	4.53	0.78		
Auto-Repair	TSF	843 / 942	61.91	23.72	23.72	11.98	11.98		
General Light Industrial[2]	TSF	110	6.97	1.32	0.68	0.67	0.34	0.67	0.34
Church	TSF	560	9.11	10.37	36.63	5.24	18.51	5.23	18.49
Cemetery (modeled as Golf)	Acre	566	4.73	5.94	7.62	3.00	3.85	3.00	3.85
City Park	Acre	411	1.89	16.74	16.74	8.46	8.46	8.45	8.45
Parking-Other Asphalt Surfaces	Acre	NA	NA	NA	NA				

Notes

1 Based on the 9th Edition ITE Trip Generation Rates

2 Assumes same trip rate on weekends as weekday

3 Auto repair and gas station weekday rates are based on automobile sales since ITE does not provide daily weekday trips for gas stations/service centers.

CalEEMod Project Characteristics Inputs

Name:	Waterman + Baseline Neighborhood Transformation Specific Plan
Project Address:	Various
Project Location:	SoCAB
Climate Zone:	10
Land Use Setting:	Urban
Operational Year:	2035
Electricity Company:	Southern California Edison
Air Basin:	South Coast Air Basin
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SRA:	34
Notes:	
	Doesn't included permitted (SCAQMD) sources of emissions (industrial sources)

CalEEMod Inputs (assumes weekday and weekend changes from defaults are similar)

CalEEMod Land Use	Units	Exiting Units	Existing Trips	Existing Calibrated Trips	Existing Calibrated Trip Rates	Project Units	Project Trips	Project Calibrated Trips	Project Calibrated Trip Rates
Multi-Family	DU	669	4,449	2,248	3.36	2,869	19,079	9,629	3.36
Single Family Housing	DU	757	7,207	3,641	4.81	443	4,217	2,129	4.80
Mobile Home Park (SF)	DU	515	2,570	1,298	2.52	1,029	5,135	2,591	2.52
Elementary School	Students	509	657	332	0.65	509	657	331	0.65
High School	Students	420	718	363	0.86	420	718	362	0.86
Regional Shopping Center	TSF	559.141	23,875	12,062	21.57	3,249.454	138,752	70,028	21.55
Fast Food Restaurant	TSF	44.175	21,916	11,073	250.65	NA		0	
Grocery Store	TSF	214.118	21,891	11,060	51.65	NA		0	
General Office Building	TSF	32.578	359	182	5.57	143.591	1,584	799	5.57
Medical Office Building	TSF	1,091.802	39,447	19,930	18.25	NA		0	
Auto-Repair	TSF	393.575	24,366	12,310	31.28	NA		0	
Church	TSF	1.211	8	4	3.52	20.369	142	72	3.52
General Light Industrial	TSF	29.785	271	137	4.60	157.034	1,431	722	4.60
Cemetery	Acre	34.000	161	81	2.39	34	161	81	2.39
City Park	Acre	46.00	87	44	0.95	46	87	44	0.95
Parking-Other Asphalt Surfaces	Acre	71.00				71			
			147,983	74,765			171,962	86,789	
		Rate	-49%				-50%		

Notes

1 Based on the 9th Edition ITE Trip Generation Rates

2 Assumes same trip rate on weekends as weekday

CalEEMod Project Characteristics Inputs

Name:	Waterman + Baseline Neighborhood Transformation Specific Plan
Project Address:	Various
Project Location:	SoCAB
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Land Use Setting:	Urban
Operational Year:	2035
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SRA:	34
Notes:	

Doesn't included permitted (SCAQMD) sources of emissions (industrial sources)

Water Use and Wastewater Generation: 100% Tertiary Treated Wastewater

Source: Revised Water Supply Assessment for the Waterman + Baseline Neighborhood Transformation Plan. 2016, March 30. Prepared by Parsons Brinkerhoff.

Septic Tank	0%
Aerobic	100%
Facultative Lagoons	0%

Water Demand Rates in the WSA

Table 1: Existing	Acres	GPD/Acre Demand Factor	Existing-SBMWD Portion GPD	Table 2: Project	Acres	GPD/Acre Demand Factor	Project SBMWD Portion GPD	
Residential (R)	218.74	5,427	1,187,102	Corridor Mixed-Use (CMU)	162.44	5,904	959,046	
Commercial Office (CO)	119.10	3,204	381,596	Employment (E)	70.38	3,204	225,498	
Public Facilities/Parks (PF)	125.81	3,204	403,095	Urban Mixed-Use (UMU)	149.33	6,991	1,043,966	
Industrial/Auto-Related (I/A)	74.11	1,126	83,448	Neighborhood Residential (NR)	148.83	5,427	807,700	
Vacant	67.93	0	0	Open Space Public Facility (PF)	74.71	3,204	239,371	NET
	605.7		2,055,241		605.7		3,275,581	1,220,339

Water Duty Factors

	GPD/Acre
Residential Suburban (RS)	2,971
Residential Urban (RU)	3,174
Residential Medium (RM)	5,427
Residential Medium High (RMH)	5,904
Residential High (RH)	6,991
Commercial Office (CO)	3,204
General Commercial (GC3)	3,418
Commercial Weighted Average (GC-avg)	2,580
Public Facilities (PF)	3,204
Industrial Light (LT)	2,323

Wastewater Duty Factors (Specific Plan Jan 2016)

	Units	GPD/unit	GPY/unit	Existing	Project	Net
Residential	DU	210.75	76923.75	149,308,999	333,925,999	184,617,000
Non-Residential	TSF	230	83950	198,658,021	299,739,110	101,081,089
			Total	347,967,020	633,665,108	285,698,089
			% Indoor	46%	53%	

Notes

1 The PB report is based on water duty factors in the San Bernardino Municipal Water District's 2015 Water Facilities Master Plan.

CalEEMod Project Characteristics Inputs

Name:	Waterman + Baseline Neighborhood Transformation Specific Plan
Project Address:	Various
Project Location:	SoCAB
Climate Zone:	10
Land Use Setting:	Urban
Operational Year:	2035
Electricity Company:	Southern California Edison
Air Basin:	South Coast Air Basin
Air District:	SCAQMD
SRA:	34
Notes:	
	Doesn't included permitted (SCAQMD) sources of emissions (industrial sources)

Water/Wastewater CalEEMod Inputs

CalEEMod Land Use	Acres	Based on SBMWD Duty Factor	Water Rate Adjusted based on WSA and Duty Factors	Existing Water GPD	Existing Water GPY	Existing Wastewater GPY	Existing Outdoor
Multi-Family	58	RM	5,427	314,766	114,889,590	53,292,125	61,597,465
Single Family Housing	134	RS	2,971	398,114	145,311,610	67,403,535	77,908,075
Mobile Home Park (SF)	40	RU	3,174	126,960	46,340,400	21,495,232	24,845,168
Elementary School	9	PF	3,204	28,836	10,525,140	4,882,140	5,643,000
High School	11	PF	3,204	35,244	12,864,060	5,967,060	6,897,000
Regional Shopping Center	135	GC3	3,418	461,430	168,421,950	78,123,385	90,298,565
Fast Food Restaurant	10	CO-avg	2,580	25,800	9,417,000	4,368,124	5,048,876
Grocery Store	23	CO-avg	2,580	59,340	21,659,100	10,046,685	11,612,415
General Office Building	15	CO	3,204	48,060	17,541,900	8,136,900	9,405,000
Medical Office Building	39	CO	3,204	124,956	45,608,940	21,155,941	24,452,999
Auto-Repair	74	LT	2,323	171,902	62,744,230	29,104,233	33,639,997
Church	2	PF	3,204	6,408	2,338,920	1,084,920	1,254,000
General Light Industrial	10	LT	2,323	23,230	8,478,950	3,933,004	4,545,946
Cemetery	34	PF	3,204	108,936	39,761,640	18,443,641	21,317,999
City Park	46	PF	3,204	147,384	53,795,160	24,953,161	28,841,999
Parking-Other Asphalt Surfaces	71						
	711			2,081,366	759,698,590	352,390,087	407,308,503
					2,081,366	965,452	1,115,914

Notes:

1 The water rates by CalEEMod category were adjusted using the more refined SBMWD Duty Factors (which was the source of the rates in the WSA) so that the total water demand corresponds to the water demand in the WSA.

2 Assumes that 50 percent of the school water use is indoor water use.

CalEEMod Project Characteristics Inputs

Name:	Waterman + Baseline Neighborhood Transformation Specific Plan
Project Address:	Various
Project Location:	SoCAB
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Land Use Setting:	Urban
Operational Year:	2035
Electricity Company:	Southern California Edison
Air Basin:	South Coast Air Basin
Air District:	SCAQMD
SRA:	34
Notes:	

Doesn't included permitted (SCAQMD) sources of emissions (industrial sources)

CalEEMod Land Use	Acres	Based on PB Rates	Water Rate Adjusted based on WSA and Duty Factors	Project Water GPD	Project Water GPY	Project Wastewater GPY	Project Outdoor
Multi-Family	77	CMU	5,904	454,608	165,931,920	87,944,480	77,987,440
Single Family Housing	134	NR	5,427	727,218	265,434,570	140,681,221	124,753,349
Mobile Home Park (SF)	15	NR	5,427	80,482	29,376,080	15,569,422	13,806,658
Elementary School	9	PF	3,204	28,836	10,525,140	5,578,360	4,946,780
High School	11	PF	3,204	35,244	12,864,060	6,817,995	6,046,065
Regional Shopping Center	152	CMU	5,904	898,707	328,028,011	173,855,957	154,172,054
General Office Building	149	UMU	6,991	1,043,966	381,047,601	201,956,519	179,091,082
Church	2	NR	5,427	10,854	3,961,710	2,099,720	1,861,990
General Light Industrial	81	E	3,204	260,229	94,983,541	50,341,599	44,641,943
Cemetery	34	PF	3,204	108,936	39,761,640	21,073,804	18,687,836
City Park	46	PF	3,204	147,384	53,795,160	28,511,617	25,283,543
Parking-Other Asphalt Surfaces							
	711			3,796,464	1,385,709,433	734,430,692	651,278,741
NET INCREASE				1,715,098	626,010,843	382,040,606	243,970,237
Notes:				1,715,098	1,046,687	668,412	

1 The water rates by CalEEMod category were adjusted so that the total water demand corresponds to the water demand in the WSA . Modeling is conservative since it assumes slightly higher water increases than identified in the WSA.

2 Assumes that 50 percent of the school water use is indoor water use.

CalEEMod Project Characteristics Inputs

Name:	Waterman + Baseline Neighborhood Transformation Specific Plan
Project Address:	Various
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Solid Waste: DEIR Section 5.17, Utilities and Service Systems

Source: DEIR Section 5.16, Utilities and Service Systems and CalEEMod

RATES	Unit	lbs/Unit
Multi-Family Residential	DU	5.31
Single Family Residential	DU	10
Non-Residential	TSF	6
School	Student	CalEEMod Default
Cemetery	Acre	CalEEMod Default
City Park	Acre	CalEEMod Default

CalEEMod Land Use	Units	Rate	Existing Units	Existing Waste lbs/day	Existing Waste tons/yr	Project Units	Project Waste lbs/day	Project Waste tons/yr	Net lbs/day
Multi-Family	DU	5.31	669	3,552	648	2,869	15,234	2,780	11,682
Single Family Housing	DU	10	757	7,570	1,382	443	4,430	808	-3,140
Mobile Home Park (SF)	DU	10	515	5,150	940	1,029	10,290	1,878	5,140
Elementary School	Students		509	0	93	509	0	93	0
High School	Students		420	0	77	420	0	77	0
Regional Shopping Center	TSF	6	559.141	3,355	612	3,249.454	19,497	3,558	16,142
Fast Food Restaurant	TSF	6	44.175	265	48	NA			-265
Grocery Store	TSF	6	214.118	1,285	234	NA			-1,285
General Office Building	TSF	6	32.578	195	36	143.591	862	157	666
Medical Office Building	TSF	6	1,091.802	6,551	1,196	NA			-6,551
Auto-Repair	TSF	6	393.575	2,361	431	NA			-2,361
Church	TSF	6	1.211	7	1	20.369	122	22	115
General Light Industrial	TSF	6	29.785	179	33	157.034	942	172	763
Cemetery	Acre		34	0	32	34	0	32	0
City Park	Acre		46	0	4	46	0	4	0
Parking-Other Asphalt Surfaces	NA		71	0	0	71	0	0	0
				30,471	5,766		51,377	9,581	20,906
								tons/year	3,815

CalEEMod Project Characteristics Inputs

Name:	Waterman + Baseline Neighborhood Transformation Specific Plan
Project Address:	Various
Project Location:	SoCAB
Climate Zone:	10
Land Use Setting:	Urban
Operational Year:	2035
Electricity Company:	Southern California Edison
Air Basin:	South Coast Air Basin
Air District:	SCAQMD
SRA:	34
Notes:	
	Doesn't included permitted (SCAQMD) sources of emissions (industrial sources)

Energy

Existing Energy

Existing residential and non-residential modeled using historic energy demand rates. This is conservative because the majority of the building stock was built in the 1960s and nearly all of it is pre-2005 building codes. Therefore, modeling is conservative because the net increase in energy use due to the project is likely smaller than reflected due to improved building energy efficiency between the project and existing land uses.

Project Energy

Modeling is conservative because it does not account for additional reductions from the 33% RPS and 50% RPS under Executive Order B-30-15.

Buildings constructed after January 1, 2014 are required to meet the 2013 Building and Energy Efficiency Standards. The 2013 Standards are 30% more energy efficient for non-residential buildings and 25% more energy efficient for residential buildings than the 2008 Building and Energy Efficiency Standards.

Residential Exceed Title 24	25%	Improvement over 2008
Non-Residential Exceed Title 24	30%	Improvement over 2008

2016 Building and Energy Efficiency Standards

Residential Exceed Title 24	28%	Improvement over 2013[1]
Residential Exceed Title 24	46.0%	Improvement over 2008
Non-Residential Exceed Title 24	5%	Improvement over 2013[1]
Non-Residential Exceed Title 24	33.5%	Improvement over 2008

Sources:

[1] California Energy Commission. 2015a. 2016 Building Energy Efficiency Standards, Adoption Hearing Presentation. http://www.energy.ca.gov/title24/2016standards/rulemaking/documents/ June 10.

**Multi-family of 4 stories and higher are treated as non-residential for the Building and Energy Efficiency Standards.*

CalEEMod Project Characteristics Inputs

Name:	Waterman + Baseline Neighborhood Transformation Specific Plan
Project Address:	Various
Project Location:	SoCAB
Climate Zone:	10
Land Use Setting:	Urban
Operational Year:	2035
Electricity Company:	Southern California Edison
Air Basin:	South Coast Air Basin
Air District:	SCAQMD
SRA:	34
Notes:	

Doesn't included permitted (SCAQMD) sources of emissions (industrial sources)

Energy Rates

EnergyUseLandUseSubType	E-2005 T24E	E-2005 T24NG	E-2008 T24E	E-2008 T24NG	P-2016 T24E	P-2016 T24NG	Blended-2005+2016 T24E	Blended-2005+2016 T24NG
Apartments Low Rise	792.75	12069.03	636.58	11224.2	343.75	6061.07	658.05	10266.64
Automobile Care Center	2.89	16.76	2.69	16.16	1.79	10.75	2.01	11.95
City Park	0	0	0	0	0.00	0.00	0.00	0.00
Elementary School	3.64	8.05	3.4	7.34	2.26	4.88	3.64	8.05
Fast Food Restaurant with Drive Thru	16.13	83.58	15.13	81.74	10.06	54.36	11.28	60.20
General Light Industry	2.89	16.76	2.69	16.16	1.79	10.75	2.01	11.95
General Office Building	4.03	4.2	3.75	3.65	2.49	2.43	2.80	2.78
Golf Course	0	0	0	0	0.00	0.00	0.00	0.00
High School	3.64	8.05	3.4	7.34	2.26	4.88	3.64	8.05
Medical Office Building	4.03	4.2	3.75	3.65	2.49	2.43	2.80	2.78
Mobile Home Park	1211.87	20580.56	973.13	19139.92	525.49	10335.56	1211.87	20580.56
Other Asphalt Surfaces	0	0	0	0	0.00	0.00	0.00	0.00
Place of Worship	2.89	16.76	2.69	16.16	1.79	10.75	2.01	11.95
Regional Shopping Center1	5.95	2.29	5.6	2.02	3.72	1.34	4.01	3.58
Single Family Housing	1269.07	30907.53	980.99	27816.78	529.73	15021.06	1047.27	26141.59
Supermarket	7.92	15.07	7.42	13.31	4.93	8.85	7.02	13.20

Notes

Blended rate multiplies the 2005 and 2016 Title 24 (T24) electricity (E) and natural gas (NG) rates by the proportion that are existing and new, respectively. Modeling assumes approximately 80% of the non-residential land uses would be redeveloped and only 30% of the single-family and multi-family residential land uses would be redeveloped. The Elementary School, High School, and Mobile Homes would not be redeveloped.

1 For energy, assumes retail could include 12% automobile and 1% restaurant

CalEEMod Project Characteristics Inputs

Name:	Waterman + Baseline Neighborhood Transformation Specific Plan
Project Address:	Various
Project Location:	SoCAB
Climate Zone:	10
Land Use Setting:	Urban
Operational Year:	2035
Electricity Company:	Southern California Edison
Air Basin:	South Coast Air Basin
Air District:	SCAQMD
SRA:	34
Notes:	
	Doesn't included permitted (SCAQMD) sources of emissions (industrial sources)

Fire Places

Existing

Multi-Family - assumes no gas or wood burning fireplaces (less existing emissions is conservative)
Mobile -Home - assumes no gas or wood burning fireplaces
Single-Family - assumes CalEEMod default

	MF	SF	MH
Wood	0	38	0
Gas	0	643	0
None	669	76	515

Assumes no woodstoves

Project

Multi-Family - no change for existing. All new have Gas
Mobile -Home - assumes no gas or wood burning fireplaces
Single-Family -no change from existing. All new have gas.

	MF	SF	MH
Wood	0	38	0
Gas	2,170	915	0
None	699	76	443
Assumes no woodstoves	2869	1029	443

CalEEMod Project Characteristics Inputs - Construction

Name:	Waterman + Baseline Neighborhood Transformation Specific Plan
Project Address:	Various
Project Location:	SoCAB
Climate Zone:	10
Land Use Setting:	Urban
Operational Year:	2035
Electricity Company:	Southern California Edison
Air Basin:	South Coast Air Basin
Air District:	SCAQMD
SRA:	34
Notes:	

Assumptions

430.3	Acres	
5,520,827	SQFT	Assumes 70% to 100% of existing square footage would be redeveloped.
35.5	acres	50% of the ROW would be disturbed for utility improvements, traffic improvements, and repaving.
		assumes surface parking lots only
		Assumes subphases of construction could overlap at any given time due to multiple projects occurring within the Specific Plan
		CalEEMod default assumptions are modified for the building construction and architectural coating phases to account for the way modeling was conducted for this programmatic evaluation. Because all phases were assumed to overlap, modeling assumes 100 employees and vendors (200 employee and vendor trips per day) for building construction and 20 employees (40 trips per day) for architectural coatings.

CalEEMod Project Characteristics Inputs - Construction

Name:	Waterman + Baseline Neighborhood Transformation Specific Plan
Project Address:	Various
Project Location:	SoCAB
Climate Zone:	10
Land Use Setting:	Urban
Operational Year:	2035
Electricity Company:	Southern California Edison
Air Basin:	South Coast Air Basin
Air District:	SCAQMD
SRA:	34

	Acres	Acres Disturbed	Square Footage Project	Square Footage Demolished	
	NA	NA			
Single-Family	134.0	93.8	1,852,200	953,820	70% Redeveloped
Single-Family-MH	40.0	28.0	0	558,180	
Multi-Family	58.0	40.6	2,869,000	468,300	70% Redeveloped
Retail	242.0	169.4	3,249,454	847,706	70% Redeveloped
Office	54.0	54.0	143,591	1,124,380	100% Redeveloped
Church	2.0	2.0	20,369	1,211	100% Redeveloped
Industrial	10.0	7.0	157,034	20,850	70% Redeveloped
School	20.0	0.0	0	0	
Park + Ag + OS	46.0	0.0	0	0	
Other - Cemetery	34.0	0.0	0	0	
Other - FC + OS + Parking	71.0	35.5		1,546,380	asphalt
Total Area Disturbed	711.0	430.3	8,291,648	5,520,827	

Demo SQFT/Day	Tons/Day	Trucks per day
11042	508	25

CalEEMod Project Characteristics Inputs - Construction

Name:	Waterman + Baseline Neighborhood Transformation Specific Plan
Project Address:	Various
Project Location:	SoCAB
Climate Zone:	10
Land Use Setting:	Urban
Operational Year:	2035
Electricity Company:	Southern California Edison
Air Basin:	South Coast Air Basin
Air District:	SCAQMD
SRA:	34
	CalEEMod default
MF SQFT/DU	1000
SF SQFT/DU	1800

CalEEMod Land Use	Units	Existing Remaining	Demo	Project	New Construction	Acres for Model
Parking-Other Asphalt Surfaces	Acres	35.5	35.5	35.5	35.5	35.5
Single Family Housing	DU	227	530	802	802	121.8
Apartments Low Rise	DU	201	468	2,668	2,668	40.6
General Office Building	TSF	0.00	1,124.38	143.591	143.591	54.0
Place of Worship	TSF	0.00	1.21	20.369	20.369	2.0
General Light Industry	TSF	8.94	20.85	177.884	177.884	7.0
Regional Shopping Center	TSF	3,612.76	847.706	4,097.160	4,097.160	169.4
				Non-Residential	4,439,004	267.9
				Residential	4,111,720	162.4

CalEEMod Project Characteristics Inputs - Construction

Name:	Waterman + Baseline Neighborhood Transformation Specific Plan
Project Address:	Various
Project Location:	SoCAB
Climate Zone:	10
Land Use Setting:	Urban
Operational Year:	2035
Electricity Company:	Southern California Edison
Air Basin:	South Coast Air Basin
Air District:	SCAQMD
SRA:	34

Construction -

SCAQMD Rule 403

Replace Ground Cover	PM10:	5	% Reduction
	PM25:	5	% Reduction
Water Exposed Area	Frequency:	2	per day
	PM10:	55	% Reduction
	PM25:	55	% Reduction
Unpaved Roads	Vehicle Speed:	15	mph

SCAQMD Rule 1186

Clean Paved Road 9 % PM Reduction

Architectural Coating

SCAQMD Rule 1113

Exterior Paint VOC content:	100	grams per liter
Interior Paint VOC content:	50	grams per liter

CalEEMod Project Characteristics Inputs - Construction

Name:	Waterman + Baseline Neighborhood Transformation Specific Plan
Project Address:	Various
Project Location:	SoCAB
Climate Zone:	10
Land Use Setting:	Urban
Operational Year:	2035
Electricity Company:	Southern California Edison
Air Basin:	South Coast Air Basin
Air District:	SCAQMD
SRA:	34

CalEEMod Default Durations

PhaseName	NumDays	PhaseStartDate	
Demolition	500	2017/01/01	
Site Preparation	300	2017/01/01	
Grading	775	2017/01/01	
Building Construction	7750	2017/01/01	changed to 4,950 so ends in 2035
Paving	550	2017/01/01	
Architectural Coating	550	2017/01/01	

CONSTRUCTON WORKSHEET

Worst-Case Construction Day

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Demolition	5	56	45	0	8	3
Site Preparation	5	52	40	0	11	7
Grading	6	70	48	0	7	5
Building Construction	5	44	50	0	5	3
Paving	2	20	17	0	2	1
Architectural Coating	125	6	47	0	9	3
Worst-Case Overlap	149	248	248	0	42	21
SCAQMD Threshold	75	100	550	150	150	55
Exceeds Threshold	Yes	Yes	No	No	No	No

CalEEMod

3.2 Demolition - 2017

Mitigated Construction On-Site

		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Category	lb/day						
Fugitive Dust						4.65	0.70
Off-Road		4.05	42.70	33.89	0.04	2.13	1.98
Hauling		0.87	13.21	10.62	0.04	1.57	0.54
Vendor		0.00	0.00	0.00	0.00	0.00	0.00
Worker		0.05	0.08	0.79	0.00	0.16	0.04
Total		4.97	55.98	45.31	0.08	8.50	3.27

3.3 Site Preparation - 2017
Mitigated Construction On-Site

Category	lb/day	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Fugitive Dust						7.72	4.25
Off-Road		4.84	51.75	39.40	0.04	2.75	2.53
Hauling		0.00	0.00	0.00	0.00	0.00	0.00
Vendor		0.00	0.00	0.00	0.00	0.00	0.00
Worker		0.06	0.09	0.95	0.00	0.19	0.05
Total		4.90	51.84	40.35	0.04	10.66	6.83

3.4 Grading - 2017
Mitigated Construction On-Site

Category	lb/day	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Fugitive Dust						3.71	1.54
Off-Road		6.10	69.59	46.81	0.06	3.32	3.05
Hauling		0.00	0.00	0.00	0.00	0.00	0.00
Vendor		0.00	0.00	0.00	0.00	0.00	0.00
Worker		0.07	0.10	1.06	0.00	0.21	0.06
Total		6.17	69.69	47.86	0.06	7.23	4.65

3.5 Building Construction - 2017
Mitigated Construction On-Site

Category	lb/day	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Off-Road		3.10	26.41	18.13	0.03	1.78	1.67
Hauling		0.00	0.00	0.00	0.00	0.00	0.00
Vendor		1.66	16.30	21.77	0.04	1.43	0.58
Worker		0.72	1.00	10.55	0.03	2.08	0.56
Total		5.48	43.71	50.45	0.10	5.29	2.82

3.6 Paving - 2017
Mitigated Construction On-Site

Category	lb/day	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Off-Road		1.91	20.30	14.73	0.02	1.14	1.05
Paving		0.17				0.00	0.00
Hauling		0.00	0.00	0.00	0.00	0.00	0.00
Vendor		0.00	0.00	0.00	0.00	0.00	0.00
Worker		0.14	0.20	2.11	0.01	0.42	0.11
Total		2.22	20.50	16.84	0.03	1.55	1.16

3.7 Architectural Coating - 2017
Mitigated Construction On-Site

Category	lb/day	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Archit. Coating		121.52				0.00	0.00
Off-Road		0.33	2.19	1.87	0.00	0.17	0.17
Hauling		0.00	0.00	0.00	0.00	0.00	0.00
Vendor		0.00	0.00	0.00	0.00	0.00	0.00
Worker		3.08	4.30	45.37	0.11	8.93	2.43
Total		124.93	6.49	47.24	0.11	9.10	2.60

Criteria Air Pollutant - Operational Phase Summary

2015 Existing

Summer

Mitigated Operational

Category	lb/day	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Area		478	4	359	0	29	29
Energy		3	23	14	0	2	2
Mobile		404	1,229	4,759	10	644	183
Total		885	1,255	5,132	10	674	213

Winter

Mitigated Operational

Category	lb/day	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Area		478	4	359	0	29	29
Energy		3	23	14	0	2	2
Mobile		392	1,284	4,398	9	644	183
Total		873	1,311	4,771	9	674	214

MAX

Mitigated Operational

Category	lb/day	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Area		478	4	359	0	29	29
Energy		3	23	14	0	2	2
Mobile		404	1,284	4,759	10	644	183
Total		885	1,311	5,132	10	674	214

2035 Existing

Summer

Mitigated Operational

Category	lb/day	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Area		478	4	356	0	29	29
Energy		3	23	14	0	2	2
Mobile		193	483	2,280	10	641	180
Total		673	510	2,649	10	671	210

Winter

Mitigated Operational

Category	lb/day	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Area		478	4	356	0	29	29
Energy		3	23	14	0	2	2
Mobile		187	501	2,162	9	641	180
Total		668	528	2,531	10	671	210

MAX

Mitigated Operational

Category	lb/day	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Area		478	4	356	0	29	29
Energy		3	23	14	0	2	2
Mobile		193	501	2,280	10	641	180
Total		673	528	2,649	10	671	210

2035 Project

Summer

Mitigated Operational

Category	lb/day	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Area		521	6	553	0	33	33
Energy		3	24	12	0	2	2
Mobile		211	525	2,478	11	694	195
Total		734	555	3,044	11	729	230

Winter

Mitigated Operational

Category	lb/day	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Area		521	6	553	0	33	33
Energy		3	24	12	0	2	2
Mobile		205	545	2,353	10	694	195
Total		728	575	2,919	10	729	230

MAX

Mitigated Operational

Category	lb/day	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Area		521	6	553	0	33	33
Energy		3	24	12	0	2	2
Mobile		211	545	2,478	11	694	195
Total		734	575	3,044	11	729	230

Net Increase from No Project

MAX

Mitigated Operational

Category lb/day	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Area	43	2	198	0	4	4
Energy	0	1	-2	0	0	0
Mobile	18	43	199	1	53	15
Total	61	47	395	1	58	19
SCAQMD Threshold	55	55	550	150	150	55
Exceeds Threshold	Yes	No	No	No	No	No

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Construction	149	248	248	0	42	21
Construction + Operation	210	295	643	1	100	41
SCAQMD Threshold	55	55	550	150	150	55
Exceeds Threshold	Yes	Yes	Yes	No	No	No

Greenhouse Gas Emissions Summary

Existing 2015

	$MTCO_2e$	Percent
Area	220	0%
Energy	19,245	15%
Mobile	103,764	81%
Waste	2,623	2%
Water	2,836	2%
Construction		0%
Total	128,688	100%

Service Population	10,353
MTCO2e/SP	12.4

Construction

Year	$MTCO_2e$
2017	4,667
2018	4,093
2019	1,897
2020	999
2021	994
2022	986
2023	981
2024	992
2025	986
2026	984
2027	982
2028	977
2029	979
2030	1,017
2031	1,018
2032	1,022
2033	1,013
2034	1,013
2035	993
Total	26,591
30-year Amortized Emissions	886

2035 Project

	$MTCO_2e$	Percent	Net
Area	851	1%	631
Energy	25,351	18%	6,106
Mobile	102,059	74%	-1,706
Waste	4,359	3%	1,735
Water	5,279	4%	2,444
Annual Amortized Construction	886	1%	886
Total	138,785	100%	10,097
Service Population	20,400	97%	10,047
MTCO2e/SP	6.8	-5.6	
Threshold	2.2	-45%	
change in SP	10,047		

STATEWIDE TRAJECTORY FOR INTERIM GHG TARGET

2035 CALIFORNIA SERVICE POPULATION (ESTIMATE)

Employment	
	Total Employment
2020	17,588,090
2030	19,234,600
2035	20,062,090
2040	20,895,900
2050	22,563,520

California Department of Transportation. Long-Term Socio-Economic Forecasts by County. http://www.dot.ca.gov/hq/tpp/offices/eab/socio_economic.html

Population	
2020	40,619,346
2030	44,085,600
2035	45,747,645
2040	47,233,240
2050	49,779,362

California Department of Finance. 2014, December. Report P-1 (County): State and County Total Population Projections, 2010-2060 (5 -year increments). http://www.dof.ca.gov/research/demographic/reports/projections/P-1/

Service Population (SP)	
2020 SP	58,207,436
2030 SP	63,320,200
2035 SP	65,809,735
2040 SP	68,129,140
2050 SP	72,342,882

FORECASTING THE POST-2020 GHG REDUCTION TARGETS - EFFICIENCY METRIC

	Source	MTCO2e (SAR)	MTCO2e/SP	
	BAAQMD & SCAQMD: Land Use Sector Inventory			
2020	2008 Scoping Plan	295,530,000	5.1	
2030	40% Below 1990 Levels	177,318,000	2.8	
2050	80% Below 1990 Levels	59,106,000	0.8	
2035	Forecast (2030-2050)	147,765,000	2.2	50%
2040	Forecast (2030-2050)	118,212,000	1.7	60%

1990 Inventory - Land Use Only

Sector	Notes	MTCOe2
Electricity	Removed Industrial	96,100,000
Transportation	On-Road Only	137,990,000
Landfills	Landfill Extracted from Industrial	6,260,000
Wastewater	Wastewater Treatment Extracted from Industrial	3,170,000
Commercial	Removed National Security	13,860,000
Residential	Includes all	29,660,000
TOTAL LAND USE		**287,040,000**

	Source	MTCO2e (SAR)	MTCO2e/SP
2020	1990 Land Use Sector Inventory	287,040,000	4.9
2030	40% Below 1990 Levels	172,224,000	2.7
2050	80% Below 1990 Levels	57,408,000	0.8
2035	Forecast (2030-2050)	143,520,000	2.2
2040	Forecast (2030-2050)	114,816,000	1.7

California Air Resources Board. 2007, November. California Greenhouse Gas Inventory (millions of metric tonnes of CO2 equivalent) — Summary by Economic Sector.

Energy Calculation

Summary

	Natural Gas Existing MBTU/yr	Project	Net	% Increase
Residential	49,329	74,180	24,851	50%
Non-Residential	38,509	19,133	-19,376	-50%
Total	87,837	93,313	5,475	6%

	Electricity Existing MWh/Yr	Project	Net	% Increase
Residential	11,734	20,926	9,192	78%
Non-Residential	38,841	49,878	11,037	28%
Total	50,575	70,804	20,229	40%

Source: CalEEMod Version 2013.2.2.

Notes

Existing residential and non-residential building energy use modeled using historic energy demand rates in CalEEMod. Historic rates are based on the 2005 Building Energy Efficiency Standards. This is conservative because the majority of the building stock is pre-2005; and therefore, the net increase due to the project is likely smaller than reflected due to improved building energy efficiency.

Does not include energy use associated with industrial processes.

Building energy use for new structures is based on the 2016 Building Energy Standards and do not take into consideration additional building energy reductions associated with future triennial updates to the California Building and Energy Efficiency Standards.

Existing

	Natural Gas Use kBTU/yr	Electricity Use kWh/yr
Residential	49,328,640	11,733,550
Non-Residential	38,508,703	38,841,210
Total	87,837,343	50,574,760

Land Use	Natural Gas Use kBTU/yr	Electricity Use kWh/yr
Apartments Low Rise	9,745,340	2,832,540
Automobile Care Center	13,338,300	4,537,920
City Park	0	0
Elementary School	418,733	410,647
Fast Food Restaurant with Drive Thru	12,340,300	2,390,750
General Light Industry	1,009,410	343,421
General Office Building	136,828	367,154
Golf Course	0	0
High School	548,261	537,675
Medical Office Building	4,585,570	12,304,600
Mobile Home Park	11,682,000	2,869,450
Other Asphalt Surfaces	0	0
Place of Worship	41,041	13,963
Regional Shopping Center	1,448,180	9,276,150
Single Family Housing	27,901,300	6,031,560
Supermarket	4,642,080	8,658,930
Total	87,837,343	50,574,760

PROJECT

	Natural Gas Use kBTU/yr	Electricity Use kWh/yr
Residential	74,179,800	20,925,660
Non-Residential	19,132,958	49,878,469
Total	93,312,758	70,804,129

Land Use	Natural Gas Use kBTU/yr	Electricity Use kWh/yr
Apartments Low Rise	36,621,800	11,760,900
City Park	0	0
Elementary School	418,733	397,030
General Light Industry	4,566,550	1,631,580
General Office Building	399,183	1,398,580
Golf Course	0	0
High School	548,261	519,845
Mobile Home Park	23,341,400	5,733,320
Other Asphalt Surfaces	0	0
Place of Worship	592,331	211,634
Regional Shopping Center	12,607,900	45,719,800
Single Family Housing	14,216,600	3,431,440
Total	93,312,758	70,804,129

CalEEMod – Existing (2015)

Existing_WatermanSP

San Bernardino-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	32.58	1000sqft	15.00	32,578.00	0
Medical Office Building	1,091.80	1000sqft	39.00	1,091,802.00	0
Elementary School	509.00	Student	15.00	42,554.12	0
High School	420.00	Student	5.00	55,717.61	0
Place of Worship	1.21	1000sqft	2.00	1,211.00	0
General Light Industry	29.79	1000sqft	10.00	29,785.00	0
Other Asphalt Surfaces	71.00	Acre	71.00	3,092,760.00	0
City Park	46.00	Acre	46.00	2,003,760.00	0
Fast Food Restaurant with Drive Thru	44.17	1000sqft	10.00	44,175.00	0
Golf Course	34.00	Acre	34.00	1,481,040.00	0
Apartments Low Rise	669.00	Dwelling Unit	58.00	669,000.00	2118
Mobile Home Park	515.00	Dwelling Unit	40.00	618,000.00	1630
Single Family Housing	757.00	Dwelling Unit	134.00	1,362,600.00	2396
Automobile Care Center	393.57	1000sqft	73.00	393,575.00	0
Regional Shopping Center	559.14	1000sqft	135.00	559,141.00	0
Supermarket	214.12	1000sqft	23.00	214,118.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2015
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - See Assumptions

Construction Phase - Existing - no construction

Off-road Equipment - Existing no construction

Trips and VMT - Existing no construction

Architectural Coating - Existing no construction

Vehicle Trips - See Assumptions

Vechicle Emission Factors -

Vechicle Emission Factors -

Vechicle Emission Factors -

Woodstoves - See Assumptions

Area Coating -

Energy Use -

Water And Wastewater - See assumptions

Water Mitigation - Water Use based on WSA and so additional reductions are not applied.

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San Bernardino-South Coast County, Summer

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	0.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	0.00
tblArchitecturalCoating	EF_Residential_Exterior	100.00	0.00
tblArchitecturalCoating	EF_Residential_Interior	50.00	0.00
tblConstructionPhase	NumDays	880.00	1.00
tblFireplaces	NumberGas	568.65	0.00
tblFireplaces	NumberGas	437.75	0.00
tblFireplaces	NumberGas	643.45	643.00
tblFireplaces	NumberNoFireplace	66.90	669.00
tblFireplaces	NumberNoFireplace	51.50	515.00
tblFireplaces	NumberNoFireplace	75.70	76.00
tblFireplaces	NumberWood	33.45	0.00
tblFireplaces	NumberWood	25.75	0.00
tblFireplaces	NumberWood	37.85	38.00
tblLandUse	LandUseSquareFeet	32,580.00	32,578.00
tblLandUse	LandUseSquareFeet	1,091,800.00	1,091,802.00
tblLandUse	LandUseSquareFeet	1,210.00	1,211.00
tblLandUse	LandUseSquareFeet	29,790.00	29,785.00
tblLandUse	LandUseSquareFeet	44,170.00	44,175.00
tblLandUse	LandUseSquareFeet	393,570.00	393,575.00
tblLandUse	LandUseSquareFeet	559,140.00	559,141.00
tblLandUse	LandUseSquareFeet	214,120.00	214,118.00
tblLandUse	LotAcreage	0.75	15.00
tblLandUse	LotAcreage	25.06	39.00
tblLandUse	LotAcreage	0.98	15.00
tblLandUse	LotAcreage	1.28	5.00
tblLandUse	LotAcreage	0.03	2.00
tblLandUse	LotAcreage	0.68	10.00
tblLandUse	LotAcreage	1.01	10.00
tblLandUse	LotAcreage	41.81	58.00
tblLandUse	LotAcreage	64.88	40.00
tblLandUse	LotAcreage	245.78	134.00
tblLandUse	LotAcreage	9.04	73.00
tblLandUse	LotAcreage	12.84	135.00
tblLandUse	LotAcreage	4.92	23.00
tblLandUse	Population	1,913.00	2,118.00
tblLandUse	Population	1,473.00	1,630.00
tblLandUse	Population	2,165.00	2,396.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblProjectCharacteristics	OperationalYear	2014	2015
tblSolidWaste	SolidWasteGenerationRate	307.74	648.00
tblSolidWaste	SolidWasteGenerationRate	1,503.44	431.00
tblSolidWaste	SolidWasteGenerationRate	508.79	48.00
tblSolidWaste	SolidWasteGenerationRate	36.94	33.00
tblSolidWaste	SolidWasteGenerationRate	30.30	36.00

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San Bernardino-South Coast County, Summer

tblSolidWaste	SolidWasteGenerationRate	11,791.44	1,196.00
tblSolidWaste	SolidWasteGenerationRate	236.90	940.00
tblSolidWaste	SolidWasteGenerationRate	6.90	1.00
tblSolidWaste	SolidWasteGenerationRate	587.10	612.00
tblSolidWaste	SolidWasteGenerationRate	982.36	1,382.00
tblSolidWaste	SolidWasteGenerationRate	1,207.64	234.00
tblTripsAndVMT	WorkerTripNumber	939.00	0.00
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CNW_TL	6.90	8.96
tblVehicleTrips	CNW_TL	6.90	8.96
tblVehicleTrips	CNW_TL	6.90	8.96
tblVehicleTrips	CNW_TL	6.90	8.96
tblVehicleTrips	CNW_TL	6.90	8.96
tblVehicleTrips	CNW_TL	6.90	8.96
tblVehicleTrips	CNW_TL	6.90	8.96
tblVehicleTrips	CNW_TL	6.90	8.96
tblVehicleTrips	CNW_TL	6.90	8.96
tblVehicleTrips	CNW_TL	6.90	8.96
tblVehicleTrips	CNW_TL	6.90	8.96
tblVehicleTrips	CNW_TL	6.90	8.96
tblVehicleTrips	CNW_TL	6.90	8.96
tblVehicleTrips	CW_TL	16.60	8.96
tblVehicleTrips	CW_TL	16.60	8.96
tblVehicleTrips	CW_TL	16.60	8.96
tblVehicleTrips	CW_TL	16.60	8.96
tblVehicleTrips	CW_TL	16.60	8.96
tblVehicleTrips	CW_TL	16.60	8.96
tblVehicleTrips	CW_TL	16.60	8.96
tblVehicleTrips	CW_TL	16.60	8.96
tblVehicleTrips	CW_TL	16.60	8.96
tblVehicleTrips	CW_TL	16.60	8.96
tblVehicleTrips	CW_TL	16.60	8.96
tblVehicleTrips	CW_TL	16.60	8.96
tblVehicleTrips	DV_TP	11.00	0.00

Existing_WatermanSP

San Bernardino-South Coast County, Summer

tblVehicleTrips	DV_TP	51.00	0.00
tblVehicleTrips	DV_TP	28.00	0.00
tblVehicleTrips	DV_TP	25.00	0.00
tblVehicleTrips	DV_TP	21.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	DV_TP	19.00	0.00
tblVehicleTrips	DV_TP	39.00	0.00
tblVehicleTrips	DV_TP	19.00	0.00
tblVehicleTrips	DV_TP	30.00	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	25.00	0.00
tblVehicleTrips	DV_TP	35.00	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	30.00	0.00
tblVehicleTrips	HO_TL	8.70	8.96
tblVehicleTrips	HO_TL	8.70	8.96
tblVehicleTrips	HO_TL	8.70	8.96
tblVehicleTrips	HS_TL	5.90	8.96
tblVehicleTrips	HS_TL	5.90	8.96
tblVehicleTrips	HS_TL	5.90	8.96
tblVehicleTrips	HW_TL	14.70	8.96
tblVehicleTrips	HW_TL	14.70	8.96
tblVehicleTrips	HW_TL	14.70	8.96
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	28.00	0.00
tblVehicleTrips	PB_TP	6.00	0.00
tblVehicleTrips	PB_TP	12.00	0.00
tblVehicleTrips	PB_TP	50.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	4.00	0.00
tblVehicleTrips	PB_TP	9.00	0.00
tblVehicleTrips	PB_TP	6.00	0.00
tblVehicleTrips	PB_TP	10.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	36.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	21.00	100.00
tblVehicleTrips	PR_TP	66.00	100.00
tblVehicleTrips	PR_TP	63.00	100.00
tblVehicleTrips	PR_TP	29.00	100.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	PR_TP	77.00	100.00
tblVehicleTrips	PR_TP	52.00	100.00
tblVehicleTrips	PR_TP	75.00	100.00

Existing_WatermanSP

San Bernardino-South Coast County, Summer

tblVehicleTrips	PR_TP	60.00	100.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	64.00	100.00
tblVehicleTrips	PR_TP	54.00	100.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	34.00	100.00
tblVehicleTrips	ST_TR	7.16	2.52
tblVehicleTrips	ST_TR	62.00	11.98
tblVehicleTrips	ST_TR	1.59	8.46
tblVehicleTrips	ST_TR	722.03	364.79
tblVehicleTrips	ST_TR	1.32	0.67
tblVehicleTrips	ST_TR	2.37	1.24
tblVehicleTrips	ST_TR	5.82	3.00
tblVehicleTrips	ST_TR	0.61	0.31
tblVehicleTrips	ST_TR	8.96	4.53
tblVehicleTrips	ST_TR	5.00	1.73
tblVehicleTrips	ST_TR	10.37	5.24
tblVehicleTrips	ST_TR	49.97	25.25
tblVehicleTrips	ST_TR	10.08	5.01
tblVehicleTrips	ST_TR	177.59	89.72
tblVehicleTrips	SU_TR	6.07	2.12
tblVehicleTrips	SU_TR	62.00	11.98
tblVehicleTrips	SU_TR	1.59	8.46
tblVehicleTrips	SU_TR	542.72	274.20
tblVehicleTrips	SU_TR	0.68	0.34
tblVehicleTrips	SU_TR	0.98	0.53
tblVehicleTrips	SU_TR	5.88	3.85
tblVehicleTrips	SU_TR	0.25	0.13
tblVehicleTrips	SU_TR	1.55	0.78
tblVehicleTrips	SU_TR	4.36	1.49
tblVehicleTrips	SU_TR	36.63	18.51
tblVehicleTrips	SU_TR	25.24	12.75
tblVehicleTrips	SU_TR	8.77	4.36
tblVehicleTrips	SU_TR	166.44	84.09
tblVehicleTrips	WD_TR	6.59	3.36
tblVehicleTrips	WD_TR	62.00	31.28
tblVehicleTrips	WD_TR	1.59	0.95
tblVehicleTrips	WD_TR	1.29	0.65
tblVehicleTrips	WD_TR	496.12	250.65
tblVehicleTrips	WD_TR	6.97	4.60
tblVehicleTrips	WD_TR	11.01	5.57
tblVehicleTrips	WD_TR	5.04	2.39
tblVehicleTrips	WD_TR	1.71	0.86
tblVehicleTrips	WD_TR	36.13	18.25
tblVehicleTrips	WD_TR	4.99	2.52
tblVehicleTrips	WD_TR	9.11	3.52
tblVehicleTrips	WD_TR	42.94	21.57

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San Bernardino-South Coast County, Summer

tblVehicleTrips	WD_TR	9.57	4.81
tblVehicleTrips	WD_TR	102.24	51.65
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	IndoorWaterUseRate	43,588,043.14	53,292,125.49
tblWater	IndoorWaterUseRate	37,027,501.46	29,104,232.84
tblWater	IndoorWaterUseRate	0.00	24,953,160.83
tblWater	IndoorWaterUseRate	1,233,938.16	4,882,140.16
tblWater	IndoorWaterUseRate	13,407,084.08	4,368,123.74
tblWater	IndoorWaterUseRate	6,888,937.50	3,933,004.44
tblWater	IndoorWaterUseRate	5,790,565.51	8,136,900.27
tblWater	IndoorWaterUseRate	0.00	18,443,640.62
tblWater	IndoorWaterUseRate	1,850,083.20	5,967,060.20
tblWater	IndoorWaterUseRate	136,999,650.91	21,155,940.71
tblWater	IndoorWaterUseRate	33,554,323.20	21,495,232.18
tblWater	IndoorWaterUseRate	37,859.58	1,084,920.04
tblWater	IndoorWaterUseRate	41,416,909.66	78,123,385.19

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San Bernardino-South Coast County, Summer

tblWater	IndoorWaterUseRate	49,321,597.40	67,403,535.47
tblWater	IndoorWaterUseRate	26,394,190.17	10,046,684.61
tblWater	OutdoorWaterUseRate	27,479,418.50	61,597,464.51
tblWater	OutdoorWaterUseRate	22,694,275.09	33,639,997.16
tblWater	OutdoorWaterUseRate	54,808,142.08	28,841,999.17
tblWater	OutdoorWaterUseRate	3,172,983.84	5,642,999.84
tblWater	OutdoorWaterUseRate	855,771.32	5,048,876.26
tblWater	OutdoorWaterUseRate	0.00	4,545,945.56
tblWater	OutdoorWaterUseRate	3,549,056.28	9,404,999.73
tblWater	OutdoorWaterUseRate	40,510,365.89	21,317,999.38
tblWater	OutdoorWaterUseRate	4,757,356.80	6,896,999.80
tblWater	OutdoorWaterUseRate	26,095,171.60	24,452,999.29
tblWater	OutdoorWaterUseRate	21,153,812.45	24,845,167.82
tblWater	OutdoorWaterUseRate	59,216.26	1,253,999.96
tblWater	OutdoorWaterUseRate	25,384,557.54	90,298,564.81
tblWater	OutdoorWaterUseRate	31,094,050.53	77,908,074.53
tblWater	OutdoorWaterUseRate	816,315.16	11,612,415.39
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	NumberCatalytic	33.45	0.00
tblWoodstoves	NumberCatalytic	25.75	0.00
tblWoodstoves	NumberCatalytic	37.85	0.00
tblWoodstoves	NumberNoncatalytic	33.45	0.00
tblWoodstoves	NumberNoncatalytic	25.75	0.00
tblWoodstoves	NumberNoncatalytic	37.85	0.00

Existing_WatermanSP

San Bernardino-South Coast County, Summer

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	478.4725	3.9394	359.2317	8.4800e-003		28.5381	28.5381		28.5290	28.5290	2,633.6128	13,905.5649	16,539.1777	0.5630	0.4820	16,700.4250
Energy	2.5953	22.7982	13.9884	0.1416		1.7931	1.7931		1.7931	1.7931		28,311.7722	28,311.7722	0.5426	0.5191	28,484.0730
Mobile	404.0032	1,228.5544	4,759.1520	9.5498	626.3034	17.2699	643.5733	167.2488	15.8675	183.1163		862,990.3124	862,990.3124	34.3427		863,711.5093
Total	**885.0709**	**1,255.2919**	**5,132.3720**	**9.6998**	**626.3034**	**47.6011**	**673.9045**	**167.2488**	**46.1896**	**213.4384**	**2,633.6128**	**905,207.6495**	**907,841.2623**	**35.4484**	**1.0011**	**908,896.0072**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	478.4725	3.9394	359.2317	8.4800e-003		28.5381	28.5381		28.5290	28.5290	2,633.6128	13,905.5649	16,539.1777	0.5630	0.4820	16,700.4250
Energy	2.5953	22.7982	13.9884	0.1416		1.7931	1.7931		1.7931	1.7931		28,311.7722	28,311.7722	0.5426	0.5191	28,484.0730
Mobile	404.0032	1,228.5544	4,759.1520	9.5498	626.3034	17.2699	643.5733	167.2488	15.8675	183.1163		862,990.3124	862,990.3124	34.3427		863,711.5093
Total	**885.0709**	**1,255.2919**	**5,132.3720**	**9.6998**	**626.3034**	**47.6011**	**673.9045**	**167.2488**	**46.1896**	**213.4384**	**2,633.6128**	**905,207.6495**	**907,841.2623**	**35.4484**	**1.0011**	**908,896.0072**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	404.0032	1,228.5544	4,759.1520	9.5498	626.3034	17.2699	643.5733	167.2488	15.8675	183.1163		862,990.3124	862,990.3124	34.3427		863,711.5093
Unmitigated	404.0032	1,228.5544	4,759.1520	9.5498	626.3034	17.2699	643.5733	167.2488	15.8675	183.1163		862,990.3124	862,990.3124	34.3427		863,711.5093

Existing_WatermanSP

San Bernardino-South Coast County, Summer

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	2,247.84	1,685.88	1418.28	6,682,858	6,682,858
Automobile Care Center	12,310.87	4,714.97	4714.97	33,072,998	33,072,998
City Park	43.70	389.16	389.16	464,438	464,438
Elementary School	330.85	0.00	0.00	770,748	770,748
Fast Food Restaurant with Drive Thru	11,071.21	16,112.77	12111.41	38,941,706	38,941,706
General Light Industry	137.03	19.96	10.13	333,253	333,253
General Office Building	181.47	40.40	17.27	449,622	449,622
Golf Course	81.26	102.00	130.90	297,816	297,816
High School	361.20	130.20	54.60	927,554	927,554
Medical Office Building	19,925.35	4,945.85	851.60	49,119,247	49,119,247
Mobile Home Park	1,297.80	890.95	767.35	3,795,990	3,795,990
Other Asphalt Surfaces	0.00	0.00	0.00		
Place of Worship	4.26	6.34	22.40	23,312	23,312
Regional Shopping Center	12,060.65	14,118.29	7129.04	37,996,041	37,996,041
Single Family Housing	3,641.17	3,792.57	3300.52	11,787,282	11,787,282
Supermarket	11,059.30	19,210.85	18005.35	43,103,511	43,103,511
Total	74,753.96	66,160.19	48,922.98	227,766,376	227,766,376

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	8.96	8.96	8.96	40.20	19.20	40.60	100	0	0
Automobile Care Center	8.96	8.96	8.96	33.00	48.00	19.00	100	0	0
City Park	8.96	8.96	8.96	33.00	48.00	19.00	100	0	0
Elementary School	8.96	8.96	8.96	65.00	30.00	5.00	100	0	0
Fast Food Restaurant with Drive Thru	8.96	8.96	8.96	2.20	78.80	19.00	100	0	0
General Light Industry	8.96	8.96	8.96	59.00	28.00	13.00	100	0	0
General Office Building	8.96	8.96	8.96	33.00	48.00	19.00	100	0	0
Golf Course	8.96	8.96	8.96	33.00	48.00	19.00	100	0	0
High School	8.96	8.96	8.96	77.80	17.20	5.00	100	0	0
Medical Office Building	8.96	8.96	8.96	29.60	51.40	19.00	100	0	0
Mobile Home Park	8.96	8.96	8.96	40.20	19.20	40.60	100	0	0
Other Asphalt Surfaces	8.96	8.96	8.96	0.00	0.00	0.00	0	0	0
Place of Worship	8.96	8.96	8.96	0.00	95.00	5.00	100	0	0
Regional Shopping Center	8.96	8.96	8.96	16.30	64.70	19.00	100	0	0
Single Family Housing	8.96	8.96	8.96	40.20	19.20	40.60	100	0	0
Supermarket	8.96	8.96	8.96	6.50	74.50	19.00	100	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.474745	0.065936	0.172132	0.156409	0.055843	0.009120	0.016202	0.038647	0.001119	0.001338	0.004871	0.000723	0.002914

Existing_WatermanSP

San Bernardino-South Coast County, Summer

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	2.5953	22.7982	13.9884	0.1416		1.7931	1.7931		1.7931	1.7931		28,311.7722	28,311.7722	0.5426	0.5191	28,484.0730
NaturalGas Unmitigated	2.5953	22.7982	13.9884	0.1416		1.7931	1.7931		1.7931	1.7931		28,311.7722	28,311.7722	0.5426	0.5191	28,484.0730

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Automobile Care Center	36543.2	0.3941	3.5827	3.0094	0.0215		0.2723	0.2723		0.2723	0.2723		4,299.1964	4,299.1964	0.0824	0.0788	4,325.3606
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Elementary School	1147.21	0.0124	0.1125	0.0945	6.7000e-004		8.5500e-003	8.5500e-003		8.5500e-003	8.5500e-003		134.9662	134.9662	2.5900e-003	2.4700e-003	135.7876
Fast Food Restaurant with Drive Thru	33809	0.3646	3.3146	2.7843	0.0199		0.2519	0.2519		0.2519	0.2519		3,977.5298	3,977.5298	0.0762	0.0729	4,001.7364
General Light Industry	2765.52	0.0298	0.2711	0.2278	1.6300e-003		0.0206	0.0206		0.0206	0.0206		325.3549	325.3549	6.2400e-003	5.9600e-003	327.3350
General Office Building	374.87	4.0400e-003	0.0368	0.0309	2.2000e-004		2.7900e-003	2.7900e-003		2.7900e-003	2.7900e-003		44.1024	44.1024	8.5000e-004	8.1000e-004	44.3708
Golf Course	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
High School	1502.09	0.0162	0.1473	0.1237	8.8000e-004		0.0112	0.0112		0.0112	0.0112		176.7160	176.7160	3.3900e-003	3.2400e-003	177.7914
Medical Office Building	12563.2	0.1355	1.2317	1.0346	7.3900e-003		0.0936	0.0936		0.0936	0.0936		1,478.0237	1,478.0237	0.0283	0.0271	1,487.0187
Mobile Home Park	32005.6	0.3452	2.9495	1.2551	0.0188		0.2385	0.2385		0.2385	0.2385		3,765.3613	3,765.3613	0.0722	0.0690	3,788.2767
Apartments Low Rise	26699.6	0.2879	2.4606	1.0470	0.0157		0.1989	0.1989		0.1989	0.1989		3,141.1259	3,141.1259	0.0602	0.0576	3,160.2423
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Place of Worship	112.441	1.2100e-003	0.0110	9.2600e-003	7.0000e-005		8.4000e-004	8.4000e-004		8.4000e-004	8.4000e-004		13.2283	13.2283	2.5000e-004	2.4000e-004	13.3088
Regional Shopping Center	3967.6	0.0428	0.3890	0.3267	2.3300e-003		0.0296	0.0296		0.0296	0.0296		466.7769	466.7769	8.9500e-003	8.5600e-003	469.6176
Single Family Housing	76441.8	0.8244	7.0446	2.9977	0.0450		0.5696	0.5696		0.5696	0.5696		8,993.1527	8,993.1527	0.1724	0.1649	9,047.8835
Supermarket	12718	0.1372	1.2469	1.0474	7.4800e-003		0.0948	0.0948		0.0948	0.0948		1,496.2380	1,496.2380	0.0287	0.0274	1,505.3438
Total		**2.5953**	**22.7982**	**13.9884**	**0.1416**		**1.7931**	**1.7931**		**1.7931**	**1.7931**		**28,311.7722**	**28,311.7722**	**0.5427**	**0.5190**	**28,484.0730**

Existing_WatermanSP

San Bernardino-South Coast County, Summer

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Automobile Care Center	36.5432	0.3941	3.5827	3.0094	0.0215		0.2723	0.2723		0.2723	0.2723		4,299.1964	4,299.1964	0.0824	0.0788	4,325.3606
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Elementary School	1.14721	0.0124	0.1125	0.0945	6.7000e-004		8.5500e-003	8.5500e-003		8.5500e-003	8.5500e-003		134.9662	134.9662	2.5900e-003	2.4700e-003	135.7876
Fast Food Restaurant with Drive Thru	33.809	0.3646	3.3146	2.7843	0.0199		0.2519	0.2519		0.2519	0.2519		3,977.5298	3,977.5298	0.0762	0.0729	4,001.7364
General Light Industry	2.76552	0.0298	0.2711	0.2278	1.6300e-003		0.0206	0.0206		0.0206	0.0206		325.3549	325.3549	6.2400e-003	5.9600e-003	327.3350
General Office Building	0.37487	4.0400e-003	0.0368	0.0309	2.2000e-004		2.7900e-003	2.7900e-003		2.7900e-003	2.7900e-003		44.1024	44.1024	8.5000e-004	8.1000e-004	44.3708
Golf Course	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
High School	1.50209	0.0162	0.1473	0.1237	8.8000e-004		0.0112	0.0112		0.0112	0.0112		176.7160	176.7160	3.3900e-003	3.2400e-003	177.7914
Medical Office Building	12.5632	0.1355	1.2317	1.0346	7.3900e-003		0.0936	0.0936		0.0936	0.0936		1,478.0237	1,478.0237	0.0283	0.0271	1,487.0187
Mobile Home Park	32.0056	0.3452	2.9495	1.2551	0.0188		0.2385	0.2385		0.2385	0.2385		3,765.3613	3,765.3613	0.0722	0.0690	3,788.2767
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Apartments Low Rise	26.6996	0.2879	2.4606	1.0470	0.0157		0.1989	0.1989		0.1989	0.1989		3,141.1259	3,141.1259	0.0602	0.0576	3,160.2423
Place of Worship	0.112441	1.2100e-003	0.0110	9.2600e-003	7.0000e-005		8.4000e-004	8.4000e-004		8.4000e-004	8.4000e-004		13.2283	13.2283	2.5000e-004	2.4000e-004	13.3088
Regional Shopping Center	3.9676	0.0428	0.3890	0.3267	2.3300e-003		0.0296	0.0296		0.0296	0.0296		466.7769	466.7769	8.9500e-003	8.5600e-003	469.6176
Single Family Housing	76.4418	0.8244	7.0446	2.9977	0.0450		0.5696	0.5696		0.5696	0.5696		8,993.1527	8,993.1527	0.1724	0.1649	9,047.8835
Supermarket	12.718	0.1372	1.2469	1.0474	7.4800e-003		0.0948	0.0948		0.0948	0.0948		1,496.2380	1,496.2380	0.0287	0.0274	1,505.3438
Total		**2.5953**	**22.7982**	**13.9884**	**0.1416**		**1.7931**	**1.7931**		**1.7931**	**1.7931**		**28,311.7722**	**28,311.7722**	**0.5427**	**0.5190**	**28,484.0730**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	478.4725	3.9394	359.2317	8.4800e-003		28.5381	28.5381		28.5290	28.5290	2,633.6128	13,905.5649	16,539.1777	0.5630	0.4820	16,700.4250
Unmitigated	478.4725	3.9394	359.2317	8.4800e-003		28.5381	28.5381		28.5290	28.5290	2,633.6128	13,905.5649	16,539.1777	0.5630	0.4820	16,700.4250

Existing_WatermanSP

San Bernardino-South Coast County, Summer

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	63.0897					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	231.4980					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	178.6297	2.0140	195.7300	0.0000		27.6633	27.6633		27.6542	27.6542	2,633.6128	13,616.4706	16,250.0834	0.2610	0.4820	16,404.9880
Landscaping	5.2551	1.9254	163.5017	8.4800e-003		0.8748	0.8748		0.8748	0.8748		289.0943	289.0943	0.3020		295.4370
Total	**478.4725**	**3.9394**	**359.2317**	**8.4800e-003**		**28.5381**	**28.5381**		**28.5290**	**28.5290**	**2,633.6128**	**13,905.5649**	**16,539.1777**	**0.5630**	**0.4820**	**16,700.4250**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	63.0897					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	231.4980					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	178.6297	2.0140	195.7300	0.0000		27.6633	27.6633		27.6542	27.6542	2,633.6128	13,616.4706	16,250.0834	0.2610	0.4820	16,404.9880
Landscaping	5.2551	1.9254	163.5017	8.4800e-003		0.8748	0.8748		0.8748	0.8748		289.0943	289.0943	0.3020		295.4370
Total	**478.4725**	**3.9394**	**359.2317**	**8.4800e-003**		**28.5381**	**28.5381**		**28.5290**	**28.5290**	**2,633.6128**	**13,905.5649**	**16,539.1777**	**0.5630**	**0.4820**	**16,700.4250**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Existing_WatermanSP

San Bernardino-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	32.58	1000sqft	15.00	32,578.00	0
Medical Office Building	1,091.80	1000sqft	39.00	1,091,802.00	0
Elementary School	509.00	Student	15.00	42,554.12	0
High School	420.00	Student	5.00	55,717.61	0
Place of Worship	1.21	1000sqft	2.00	1,211.00	0
General Light Industry	29.79	1000sqft	10.00	29,785.00	0
Other Asphalt Surfaces	71.00	Acre	71.00	3,092,760.00	0
City Park	46.00	Acre	46.00	2,003,760.00	0
Fast Food Restaurant with Drive Thru	44.17	1000sqft	10.00	44,175.00	0
Golf Course	34.00	Acre	34.00	1,481,040.00	0
Apartments Low Rise	669.00	Dwelling Unit	58.00	669,000.00	2118
Mobile Home Park	515.00	Dwelling Unit	40.00	618,000.00	1630
Single Family Housing	757.00	Dwelling Unit	134.00	1,362,600.00	2396
Automobile Care Center	393.57	1000sqft	73.00	393,575.00	0
Regional Shopping Center	559.14	1000sqft	135.00	559,141.00	0
Supermarket	214.12	1000sqft	23.00	214,118.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2015
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - See Assumptions

Construction Phase - Existing - no construction

Off-road Equipment - Existing no construction

Trips and VMT - Existing no construction

Architectural Coating - Existing no construction

Vehicle Trips - See Assumptions

Vechicle Emission Factors -

Vechicle Emission Factors -

Vechicle Emission Factors -

Woodstoves - See Assumptions

Area Coating -

Energy Use -

Water And Wastewater - See assumptions

Water Mitigation - Water Use based on WSA and so additional reductions are not applied.

Existing_WatermanSP

San Bernardino-South Coast County, Winter

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	0.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	0.00
tblArchitecturalCoating	EF_Residential_Exterior	100.00	0.00
tblArchitecturalCoating	EF_Residential_Interior	50.00	0.00
tblConstructionPhase	NumDays	880.00	1.00
tblFireplaces	NumberGas	568.65	0.00
tblFireplaces	NumberGas	437.75	0.00
tblFireplaces	NumberGas	643.45	643.00
tblFireplaces	NumberNoFireplace	66.90	669.00
tblFireplaces	NumberNoFireplace	51.50	515.00
tblFireplaces	NumberNoFireplace	75.70	76.00
tblFireplaces	NumberWood	33.45	0.00
tblFireplaces	NumberWood	25.75	0.00
tblFireplaces	NumberWood	37.85	38.00
tblLandUse	LandUseSquareFeet	32,580.00	32,578.00
tblLandUse	LandUseSquareFeet	1,091,800.00	1,091,802.00
tblLandUse	LandUseSquareFeet	1,210.00	1,211.00
tblLandUse	LandUseSquareFeet	29,790.00	29,785.00
tblLandUse	LandUseSquareFeet	44,170.00	44,175.00
tblLandUse	LandUseSquareFeet	393,570.00	393,575.00
tblLandUse	LandUseSquareFeet	559,140.00	559,141.00
tblLandUse	LandUseSquareFeet	214,120.00	214,118.00
tblLandUse	LotAcreage	0.75	15.00
tblLandUse	LotAcreage	25.06	39.00
tblLandUse	LotAcreage	0.98	15.00
tblLandUse	LotAcreage	1.28	5.00
tblLandUse	LotAcreage	0.03	2.00
tblLandUse	LotAcreage	0.68	10.00
tblLandUse	LotAcreage	1.01	10.00
tblLandUse	LotAcreage	41.81	58.00
tblLandUse	LotAcreage	64.88	40.00
tblLandUse	LotAcreage	245.78	134.00
tblLandUse	LotAcreage	9.04	73.00
tblLandUse	LotAcreage	12.84	135.00
tblLandUse	LotAcreage	4.92	23.00
tblLandUse	Population	1,913.00	2,118.00
tblLandUse	Population	1,473.00	1,630.00
tblLandUse	Population	2,165.00	2,396.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblProjectCharacteristics	OperationalYear	2014	2015
tblSolidWaste	SolidWasteGenerationRate	307.74	648.00
tblSolidWaste	SolidWasteGenerationRate	1,503.44	431.00
tblSolidWaste	SolidWasteGenerationRate	508.79	48.00
tblSolidWaste	SolidWasteGenerationRate	36.94	33.00
tblSolidWaste	SolidWasteGenerationRate	30.30	36.00

Existing_WatermanSP

San Bernardino-South Coast County, Winter

tblSolidWaste	SolidWasteGenerationRate	11,791.44	1,196.00
tblSolidWaste	SolidWasteGenerationRate	236.90	940.00
tblSolidWaste	SolidWasteGenerationRate	6.90	1.00
tblSolidWaste	SolidWasteGenerationRate	587.10	612.00
tblSolidWaste	SolidWasteGenerationRate	982.36	1,382.00
tblSolidWaste	SolidWasteGenerationRate	1,207.64	234.00
tblTripsAndVMT	WorkerTripNumber	939.00	0.00
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CNW_TL	6.90	8.96
tblVehicleTrips	CNW_TL	6.90	8.96
tblVehicleTrips	CNW_TL	6.90	8.96
tblVehicleTrips	CNW_TL	6.90	8.96
tblVehicleTrips	CNW_TL	6.90	8.96
tblVehicleTrips	CNW_TL	6.90	8.96
tblVehicleTrips	CNW_TL	6.90	8.96
tblVehicleTrips	CNW_TL	6.90	8.96
tblVehicleTrips	CNW_TL	6.90	8.96
tblVehicleTrips	CNW_TL	6.90	8.96
tblVehicleTrips	CNW_TL	6.90	8.96
tblVehicleTrips	CNW_TL	6.90	8.96
tblVehicleTrips	CNW_TL	6.90	8.96
tblVehicleTrips	CW_TL	16.60	8.96
tblVehicleTrips	CW_TL	16.60	8.96
tblVehicleTrips	CW_TL	16.60	8.96
tblVehicleTrips	CW_TL	16.60	8.96
tblVehicleTrips	CW_TL	16.60	8.96
tblVehicleTrips	CW_TL	16.60	8.96
tblVehicleTrips	CW_TL	16.60	8.96
tblVehicleTrips	CW_TL	16.60	8.96
tblVehicleTrips	CW_TL	16.60	8.96
tblVehicleTrips	CW_TL	16.60	8.96
tblVehicleTrips	CW_TL	16.60	8.96
tblVehicleTrips	CW_TL	16.60	8.96
tblVehicleTrips	DV_TP	11.00	0.00

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San Bernardino-South Coast County, Winter

tblVehicleTrips	DV_TP	51.00	0.00
tblVehicleTrips	DV_TP	28.00	0.00
tblVehicleTrips	DV_TP	25.00	0.00
tblVehicleTrips	DV_TP	21.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	DV_TP	19.00	0.00
tblVehicleTrips	DV_TP	39.00	0.00
tblVehicleTrips	DV_TP	19.00	0.00
tblVehicleTrips	DV_TP	30.00	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	25.00	0.00
tblVehicleTrips	DV_TP	35.00	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	30.00	0.00
tblVehicleTrips	HO_TL	8.70	8.96
tblVehicleTrips	HO_TL	8.70	8.96
tblVehicleTrips	HO_TL	8.70	8.96
tblVehicleTrips	HS_TL	5.90	8.96
tblVehicleTrips	HS_TL	5.90	8.96
tblVehicleTrips	HS_TL	5.90	8.96
tblVehicleTrips	HW_TL	14.70	8.96
tblVehicleTrips	HW_TL	14.70	8.96
tblVehicleTrips	HW_TL	14.70	8.96
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	28.00	0.00
tblVehicleTrips	PB_TP	6.00	0.00
tblVehicleTrips	PB_TP	12.00	0.00
tblVehicleTrips	PB_TP	50.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	4.00	0.00
tblVehicleTrips	PB_TP	9.00	0.00
tblVehicleTrips	PB_TP	6.00	0.00
tblVehicleTrips	PB_TP	10.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	36.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	21.00	100.00
tblVehicleTrips	PR_TP	66.00	100.00
tblVehicleTrips	PR_TP	63.00	100.00
tblVehicleTrips	PR_TP	29.00	100.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	PR_TP	77.00	100.00
tblVehicleTrips	PR_TP	52.00	100.00
tblVehicleTrips	PR_TP	75.00	100.00

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San Bernardino-South Coast County, Winter

tblVehicleTrips	PR_TP	60.00	100.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	64.00	100.00
tblVehicleTrips	PR_TP	54.00	100.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	34.00	100.00
tblVehicleTrips	ST_TR	7.16	2.52
tblVehicleTrips	ST_TR	62.00	11.98
tblVehicleTrips	ST_TR	1.59	8.46
tblVehicleTrips	ST_TR	722.03	364.79
tblVehicleTrips	ST_TR	1.32	0.67
tblVehicleTrips	ST_TR	2.37	1.24
tblVehicleTrips	ST_TR	5.82	3.00
tblVehicleTrips	ST_TR	0.61	0.31
tblVehicleTrips	ST_TR	8.96	4.53
tblVehicleTrips	ST_TR	5.00	1.73
tblVehicleTrips	ST_TR	10.37	5.24
tblVehicleTrips	ST_TR	49.97	25.25
tblVehicleTrips	ST_TR	10.08	5.01
tblVehicleTrips	ST_TR	177.59	89.72
tblVehicleTrips	SU_TR	6.07	2.12
tblVehicleTrips	SU_TR	62.00	11.98
tblVehicleTrips	SU_TR	1.59	8.46
tblVehicleTrips	SU_TR	542.72	274.20
tblVehicleTrips	SU_TR	0.68	0.34
tblVehicleTrips	SU_TR	0.98	0.53
tblVehicleTrips	SU_TR	5.88	3.85
tblVehicleTrips	SU_TR	0.25	0.13
tblVehicleTrips	SU_TR	1.55	0.78
tblVehicleTrips	SU_TR	4.36	1.49
tblVehicleTrips	SU_TR	36.63	18.51
tblVehicleTrips	SU_TR	25.24	12.75
tblVehicleTrips	SU_TR	8.77	4.36
tblVehicleTrips	SU_TR	166.44	84.09
tblVehicleTrips	WD_TR	6.59	3.36
tblVehicleTrips	WD_TR	62.00	31.28
tblVehicleTrips	WD_TR	1.59	0.95
tblVehicleTrips	WD_TR	1.29	0.65
tblVehicleTrips	WD_TR	496.12	250.65
tblVehicleTrips	WD_TR	6.97	4.60
tblVehicleTrips	WD_TR	11.01	5.57
tblVehicleTrips	WD_TR	5.04	2.39
tblVehicleTrips	WD_TR	1.71	0.86
tblVehicleTrips	WD_TR	36.13	18.25
tblVehicleTrips	WD_TR	4.99	2.52
tblVehicleTrips	WD_TR	9.11	3.52
tblVehicleTrips	WD_TR	42.94	21.57

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tblVehicleTrips	WD_TR	9.57	4.81
tblVehicleTrips	WD_TR	102.24	51.65
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	IndoorWaterUseRate	43,588,043.14	53,292,125.49
tblWater	IndoorWaterUseRate	37,027,501.46	29,104,232.84
tblWater	IndoorWaterUseRate	0.00	24,953,160.83
tblWater	IndoorWaterUseRate	1,233,938.16	4,882,140.16
tblWater	IndoorWaterUseRate	13,407,084.08	4,368,123.74
tblWater	IndoorWaterUseRate	6,888,937.50	3,933,004.44
tblWater	IndoorWaterUseRate	5,790,565.51	8,136,900.27
tblWater	IndoorWaterUseRate	0.00	18,443,640.62
tblWater	IndoorWaterUseRate	1,850,083.20	5,967,060.20
tblWater	IndoorWaterUseRate	136,999,650.91	21,155,940.71
tblWater	IndoorWaterUseRate	33,554,323.20	21,495,232.18
tblWater	IndoorWaterUseRate	37,859.58	1,084,920.04
tblWater	IndoorWaterUseRate	41,416,909.66	78,123,385.19

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San Bernardino-South Coast County, Winter

tblWater	IndoorWaterUseRate	49,321,597.40	67,403,535.47
tblWater	IndoorWaterUseRate	26,394,190.17	10,046,684.61
tblWater	OutdoorWaterUseRate	27,479,418.50	61,597,464.51
tblWater	OutdoorWaterUseRate	22,694,275.09	33,639,997.16
tblWater	OutdoorWaterUseRate	54,808,142.08	28,841,999.17
tblWater	OutdoorWaterUseRate	3,172,983.84	5,642,999.84
tblWater	OutdoorWaterUseRate	855,771.32	5,048,876.26
tblWater	OutdoorWaterUseRate	0.00	4,545,945.56
tblWater	OutdoorWaterUseRate	3,549,056.28	9,404,999.73
tblWater	OutdoorWaterUseRate	40,510,365.89	21,317,999.38
tblWater	OutdoorWaterUseRate	4,757,356.80	6,896,999.80
tblWater	OutdoorWaterUseRate	26,095,171.60	24,452,999.29
tblWater	OutdoorWaterUseRate	21,153,812.45	24,845,167.82
tblWater	OutdoorWaterUseRate	59,216.26	1,253,999.96
tblWater	OutdoorWaterUseRate	25,384,557.54	90,298,564.81
tblWater	OutdoorWaterUseRate	31,094,050.53	77,908,074.53
tblWater	OutdoorWaterUseRate	816,315.16	11,612,415.39
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	NumberCatalytic	33.45	0.00
tblWoodstoves	NumberCatalytic	25.75	0.00
tblWoodstoves	NumberCatalytic	37.85	0.00
tblWoodstoves	NumberNoncatalytic	33.45	0.00
tblWoodstoves	NumberNoncatalytic	25.75	0.00
tblWoodstoves	NumberNoncatalytic	37.85	0.00

Existing_WatermanSP

San Bernardino-South Coast County, Winter

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	478.4725	3.9394	359.2317	8.4800e-003		28.5381	28.5381		28.5290	28.5290	2,633.6128	13,905.5649	16,539.1777	0.5630	0.4820	16,700.4250
Energy	2.5953	22.7982	13.9884	0.1416		1.7931	1.7931		1.7931	1.7931		28,311.7722	28,311.7722	0.5426	0.5191	28,484.0730
Mobile	391.6746	1,284.3815	4,398.1196	8.8920	626.3034	17.3717	643.6751	167.2488	15.9611	183.2099		805,880.8189	805,880.8189	34.3727		806,602.6459
Total	**872.7423**	**1,311.1190**	**4,771.3396**	**9.0420**	**626.3034**	**47.7028**	**674.0062**	**167.2488**	**46.2832**	**213.5320**	**2,633.6128**	**848,098.1560**	**850,731.7688**	**35.4784**	**1.0011**	**851,787.1439**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	478.4725	3.9394	359.2317	8.4800e-003		28.5381	28.5381		28.5290	28.5290	2,633.6128	13,905.5649	16,539.1777	0.5630	0.4820	16,700.4250
Energy	2.5953	22.7982	13.9884	0.1416		1.7931	1.7931		1.7931	1.7931		28,311.7722	28,311.7722	0.5426	0.5191	28,484.0730
Mobile	391.6746	1,284.3815	4,398.1196	8.8920	626.3034	17.3717	643.6751	167.2488	15.9611	183.2099		805,880.8189	805,880.8189	34.3727		806,602.6459
Total	**872.7423**	**1,311.1190**	**4,771.3396**	**9.0420**	**626.3034**	**47.7028**	**674.0062**	**167.2488**	**46.2832**	**213.5320**	**2,633.6128**	**848,098.1560**	**850,731.7688**	**35.4784**	**1.0011**	**851,787.1439**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	391.6746	1,284.3815	4,398.1196	8.8920	626.3034	17.3717	643.6751	167.2488	15.9611	183.2099		805,880.8189	805,880.8189	34.3727		806,602.6459
Unmitigated	391.6746	1,284.3815	4,398.1196	8.8920	626.3034	17.3717	643.6751	167.2488	15.9611	183.2099		805,880.8189	805,880.8189	34.3727		806,602.6459

Existing_WatermanSP

San Bernardino-South Coast County, Winter

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	2,247.84	1,685.88	1418.28	6,682,858	6,682,858
Automobile Care Center	12,310.87	4,714.97	4714.97	33,072,998	33,072,998
City Park	43.70	389.16	389.16	464,438	464,438
Elementary School	330.85	0.00	0.00	770,748	770,748
Fast Food Restaurant with Drive Thru	11,071.21	16,112.77	12111.41	38,941,706	38,941,706
General Light Industry	137.03	19.96	10.13	333,253	333,253
General Office Building	181.47	40.40	17.27	449,622	449,622
Golf Course	81.26	102.00	130.90	297,816	297,816
High School	361.20	130.20	54.60	927,554	927,554
Medical Office Building	19,925.35	4,945.85	851.60	49,119,247	49,119,247
Mobile Home Park	1,297.80	890.95	767.35	3,795,990	3,795,990
Other Asphalt Surfaces	0.00	0.00	0.00		
Place of Worship	4.26	6.34	22.40	23,312	23,312
Regional Shopping Center	12,060.65	14,118.29	7129.04	37,996,041	37,996,041
Single Family Housing	3,641.17	3,792.57	3300.52	11,787,282	11,787,282
Supermarket	11,059.30	19,210.85	18005.35	43,103,511	43,103,511
Total	74,753.96	66,160.19	48,922.98	227,766,376	227,766,376

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	8.96	8.96	8.96	40.20	19.20	40.60	100	0	0
Automobile Care Center	8.96	8.96	8.96	33.00	48.00	19.00	100	0	0
City Park	8.96	8.96	8.96	33.00	48.00	19.00	100	0	0
Elementary School	8.96	8.96	8.96	65.00	30.00	5.00	100	0	0
Fast Food Restaurant with Drive Thru	8.96	8.96	8.96	2.20	78.80	19.00	100	0	0
General Light Industry	8.96	8.96	8.96	59.00	28.00	13.00	100	0	0
General Office Building	8.96	8.96	8.96	33.00	48.00	19.00	100	0	0
Golf Course	8.96	8.96	8.96	33.00	48.00	19.00	100	0	0
High School	8.96	8.96	8.96	77.80	17.20	5.00	100	0	0
Medical Office Building	8.96	8.96	8.96	29.60	51.40	19.00	100	0	0
Mobile Home Park	8.96	8.96	8.96	40.20	19.20	40.60	100	0	0
Other Asphalt Surfaces	8.96	8.96	8.96	0.00	0.00	0.00	0	0	0
Place of Worship	8.96	8.96	8.96	0.00	95.00	5.00	100	0	0
Regional Shopping Center	8.96	8.96	8.96	16.30	64.70	19.00	100	0	0
Single Family Housing	8.96	8.96	8.96	40.20	19.20	40.60	100	0	0
Supermarket	8.96	8.96	8.96	6.50	74.50	19.00	100	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.474745	0.065936	0.172132	0.156409	0.055843	0.009120	0.016202	0.038647	0.001119	0.001338	0.004871	0.000723	0.002914

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: Y

5.1 Mitigation Measures Energy

Existing_WatermanSP

San Bernardino-South Coast County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	2.5953	22.7982	13.9884	0.1416		1.7931	1.7931		1.7931	1.7931		28,311.7722	28,311.7722	0.5426	0.5191	28,484.0730
NaturalGas Unmitigated	2.5953	22.7982	13.9884	0.1416		1.7931	1.7931		1.7931	1.7931		28,311.7722	28,311.7722	0.5426	0.5191	28,484.0730

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Automobile Care Center	36543.2	0.3941	3.5827	3.0094	0.0215		0.2723	0.2723		0.2723	0.2723		4,299.1964	4,299.1964	0.0824	0.0788	4,325.3606
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Elementary School	1147.21	0.0124	0.1125	0.0945	6.7000e-004		8.5500e-003	8.5500e-003		8.5500e-003	8.5500e-003		134.9662	134.9662	2.5900e-003	2.4700e-003	135.7876
Fast Food Restaurant with Drive-Thru	33809	0.3646	3.3146	2.7843	0.0199		0.2519	0.2519		0.2519	0.2519		3,977.5298	3,977.5298	0.0762	0.0729	4,001.7364
General Light Industry	2765.52	0.0298	0.2711	0.2278	1.6300e-003		0.0206	0.0206		0.0206	0.0206		325.3549	325.3549	6.2400e-003	5.9600e-003	327.3350
General Office Building	374.87	4.0400e-003	0.0368	0.0309	2.2000e-004		2.7900e-003	2.7900e-003		2.7900e-003	2.7900e-003		44.1024	44.1024	8.5000e-004	8.1000e-004	44.3708
Golf Course	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
High School	1502.09	0.0162	0.1473	0.1237	8.8000e-004		0.0112	0.0112		0.0112	0.0112		176.7160	176.7160	3.3900e-003	3.2400e-003	177.7914
Medical Office Building	12563.2	0.1355	1.2317	1.0346	7.3900e-003		0.0936	0.0936		0.0936	0.0936		1,478.0237	1,478.0237	0.0283	0.0271	1,487.0187
Mobile Home Park	32005.6	0.3452	2.9495	1.2551	0.0188		0.2385	0.2385		0.2385	0.2385		3,765.3613	3,765.3613	0.0722	0.0690	3,788.2767
Apartments Low Rise	26699.6	0.2879	2.4606	1.0470	0.0157		0.1989	0.1989		0.1989	0.1989		3,141.1259	3,141.1259	0.0602	0.0576	3,160.2423
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Place of Worship	112.441	1.2100e-003	0.0110	9.2600e-003	7.0000e-005		8.4000e-004	8.4000e-004		8.4000e-004	8.4000e-004		13.2283	13.2283	2.5000e-004	2.4000e-004	13.3088
Regional Shopping Center	3967.6	0.0428	0.3890	0.3267	2.3300e-003		0.0296	0.0296		0.0296	0.0296		466.7769	466.7769	8.9500e-003	8.5600e-003	469.6176
Single Family Housing	76441.8	0.8244	7.0446	2.9977	0.0450		0.5696	0.5696		0.5696	0.5696		8,993.1527	8,993.1527	0.1724	0.1649	9,047.8835
Supermarket	12718	0.1372	1.2469	1.0474	7.4800e-003		0.0948	0.0948		0.0948	0.0948		1,496.2380	1,496.2380	0.0287	0.0274	1,505.3438
Total		**2.5953**	**22.7982**	**13.9884**	**0.1416**		**1.7931**	**1.7931**		**1.7931**	**1.7931**		**28,311.7722**	**28,311.7722**	**0.5427**	**0.5190**	**28,484.0730**

Existing_WatermanSP

San Bernardino-South Coast County, Winter

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Automobile Care Center	36.5432	0.3941	3.5827	3.0094	0.0215		0.2723	0.2723		0.2723	0.2723		4,299.1964	4,299.1964	0.0824	0.0788	4,325.3606
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Elementary School	1.14721	0.0124	0.1125	0.0945	6.7000e-004		8.5500e-003	8.5500e-003		8.5500e-003	8.5500e-003		134.9662	134.9662	2.5900e-003	2.4700e-003	135.7876
Fast Food Restaurant with Drive Thru	33.809	0.3646	3.3146	2.7843	0.0199		0.2519	0.2519		0.2519	0.2519		3,977.5298	3,977.5298	0.0762	0.0729	4,001.7364
General Light Industry	2.76552	0.0298	0.2711	0.2278	1.6300e-003		0.0206	0.0206		0.0206	0.0206		325.3549	325.3549	6.2400e-003	5.9600e-003	327.3350
General Office Building	0.37487	4.0400e-003	0.0368	0.0309	2.2000e-004		2.7900e-003	2.7900e-003		2.7900e-003	2.7900e-003		44.1024	44.1024	8.5000e-004	8.1000e-004	44.3708
Golf Course	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
High School	1.50209	0.0162	0.1473	0.1237	8.8000e-004		0.0112	0.0112		0.0112	0.0112		176.7160	176.7160	3.3900e-003	3.2400e-003	177.7914
Medical Office Building	12.5632	0.1355	1.2317	1.0346	7.3900e-003		0.0936	0.0936		0.0936	0.0936		1,478.0237	1,478.0237	0.0283	0.0271	1,487.0187
Mobile Home Park	32.0056	0.3452	2.9495	1.2551	0.0188		0.2385	0.2385		0.2385	0.2385		3,765.3613	3,765.3613	0.0722	0.0690	3,788.2767
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Apartments Low Rise	26.6996	0.2879	2.4606	1.0470	0.0157		0.1989	0.1989		0.1989	0.1989		3,141.1259	3,141.1259	0.0602	0.0576	3,160.2423
Place of Worship	0.112441	1.2100e-003	0.0110	9.2600e-003	7.0000e-005		8.4000e-004	8.4000e-004		8.4000e-004	8.4000e-004		13.2283	13.2283	2.5000e-004	2.4000e-004	13.3088
Regional Shopping Center	3.9676	0.0428	0.3890	0.3267	2.3300e-003		0.0296	0.0296		0.0296	0.0296		466.7769	466.7769	8.9500e-003	8.5600e-003	469.6176
Single Family Housing	76.4418	0.8244	7.0446	2.9977	0.0450		0.5696	0.5696		0.5696	0.5696		8,993.1527	8,993.1527	0.1724	0.1649	9,047.8835
Supermarket	12.718	0.1372	1.2469	1.0474	7.4800e-003		0.0948	0.0948		0.0948	0.0948		1,496.2380	1,496.2380	0.0287	0.0274	1,505.3438
Total		**2.5953**	**22.7982**	**13.9884**	**0.1416**		**1.7931**	**1.7931**		**1.7931**	**1.7931**		**28,311.7722**	**28,311.7722**	**0.5427**	**0.5190**	**28,484.0730**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	478.4725	3.9394	359.2317	8.4800e-003		28.5381	28.5381		28.5290	28.5290	2,633.6128	13,905.5649	16,539.1777	0.5630	0.4820	16,700.4250
Unmitigated	478.4725	3.9394	359.2317	8.4800e-003		28.5381	28.5381		28.5290	28.5290	2,633.6128	13,905.5649	16,539.1777	0.5630	0.4820	16,700.4250

Existing_WatermanSP

San Bernardino-South Coast County, Winter

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	63.0897					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	231.4980					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	178.6297	2.0140	195.7300	0.0000		27.6633	27.6633		27.6542	27.6542	2,633.6128	13,616.4706	16,250.0834	0.2610	0.4820	16,404.9880
Landscaping	5.2551	1.9254	163.5017	8.4800e-003		0.8748	0.8748		0.8748	0.8748		289.0943	289.0943	0.3020		295.4370
Total	**478.4725**	**3.9394**	**359.2317**	**8.4800e-003**		**28.5381**	**28.5381**		**28.5290**	**28.5290**	**2,633.6128**	**13,905.5649**	**16,539.1777**	**0.5630**	**0.4820**	**16,700.4250**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	63.0897					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	231.4980					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	178.6297	2.0140	195.7300	0.0000		27.6633	27.6633		27.6542	27.6542	2,633.6128	13,616.4706	16,250.0834	0.2610	0.4820	16,404.9880
Landscaping	5.2551	1.9254	163.5017	8.4800e-003		0.8748	0.8748		0.8748	0.8748		289.0943	289.0943	0.3020		295.4370
Total	**478.4725**	**3.9394**	**359.2317**	**8.4800e-003**		**28.5381**	**28.5381**		**28.5290**	**28.5290**	**2,633.6128**	**13,905.5649**	**16,539.1777**	**0.5630**	**0.4820**	**16,700.4250**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	32.58	1000sqft	15.00	32,578.00	0
Medical Office Building	1,091.80	1000sqft	39.00	1,091,802.00	0
Elementary School	509.00	Student	15.00	42,554.12	0
High School	420.00	Student	5.00	55,717.61	0
Place of Worship	1.21	1000sqft	2.00	1,211.00	0
General Light Industry	29.79	1000sqft	10.00	29,785.00	0
Other Asphalt Surfaces	71.00	Acre	71.00	3,092,760.00	0
City Park	46.00	Acre	46.00	2,003,760.00	0
Fast Food Restaurant with Drive Thru	44.17	1000sqft	10.00	44,175.00	0
Golf Course	34.00	Acre	34.00	1,481,040.00	0
Apartments Low Rise	669.00	Dwelling Unit	58.00	669,000.00	2118
Mobile Home Park	515.00	Dwelling Unit	40.00	618,000.00	1630
Single Family Housing	757.00	Dwelling Unit	134.00	1,362,600.00	2396
Automobile Care Center	393.57	1000sqft	73.00	393,575.00	0
Regional Shopping Center	559.14	1000sqft	135.00	559,141.00	0
Supermarket	214.12	1000sqft	23.00	214,118.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2015
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - See Assumptions

Construction Phase - Existing - no construction

Off-road Equipment - Existing no construction

Trips and VMT - Existing no construction

Architectural Coating - Existing no construction

Vehicle Trips - See Assumptions

Vechicle Emission Factors -

Vechicle Emission Factors -

Vechicle Emission Factors -

Woodstoves - See Assumptions

Area Coating -

Energy Use -

Water And Wastewater - See assumptions

Water Mitigation - Water Use based on WSA and so additional reductions are not applied.

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Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	0.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	0.00
tblArchitecturalCoating	EF_Residential_Exterior	100.00	0.00
tblArchitecturalCoating	EF_Residential_Interior	50.00	0.00
tblConstructionPhase	NumDays	880.00	1.00
tblFireplaces	NumberGas	568.65	0.00
tblFireplaces	NumberGas	437.75	0.00
tblFireplaces	NumberGas	643.45	643.00
tblFireplaces	NumberNoFireplace	66.90	669.00
tblFireplaces	NumberNoFireplace	51.50	515.00
tblFireplaces	NumberNoFireplace	75.70	76.00
tblFireplaces	NumberWood	33.45	0.00
tblFireplaces	NumberWood	25.75	0.00
tblFireplaces	NumberWood	37.85	38.00
tblLandUse	LandUseSquareFeet	32,580.00	32,578.00
tblLandUse	LandUseSquareFeet	1,091,800.00	1,091,802.00
tblLandUse	LandUseSquareFeet	1,210.00	1,211.00
tblLandUse	LandUseSquareFeet	29,790.00	29,785.00
tblLandUse	LandUseSquareFeet	44,170.00	44,175.00
tblLandUse	LandUseSquareFeet	393,570.00	393,575.00
tblLandUse	LandUseSquareFeet	559,140.00	559,141.00
tblLandUse	LandUseSquareFeet	214,120.00	214,118.00
tblLandUse	LotAcreage	0.75	15.00
tblLandUse	LotAcreage	25.06	39.00
tblLandUse	LotAcreage	0.98	15.00
tblLandUse	LotAcreage	1.28	5.00
tblLandUse	LotAcreage	0.03	2.00
tblLandUse	LotAcreage	0.68	10.00
tblLandUse	LotAcreage	1.01	10.00
tblLandUse	LotAcreage	41.81	58.00
tblLandUse	LotAcreage	64.88	40.00
tblLandUse	LotAcreage	245.78	134.00
tblLandUse	LotAcreage	9.04	73.00
tblLandUse	LotAcreage	12.84	135.00
tblLandUse	LotAcreage	4.92	23.00
tblLandUse	Population	1,913.00	2,118.00
tblLandUse	Population	1,473.00	1,630.00
tblLandUse	Population	2,165.00	2,396.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblProjectCharacteristics	OperationalYear	2014	2015
tblSolidWaste	SolidWasteGenerationRate	307.74	648.00
tblSolidWaste	SolidWasteGenerationRate	1,503.44	431.00
tblSolidWaste	SolidWasteGenerationRate	508.79	48.00
tblSolidWaste	SolidWasteGenerationRate	36.94	33.00
tblSolidWaste	SolidWasteGenerationRate	30.30	36.00

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tblSolidWaste	SolidWasteGenerationRate	11,791.44	1,196.00
tblSolidWaste	SolidWasteGenerationRate	236.90	940.00
tblSolidWaste	SolidWasteGenerationRate	6.90	1.00
tblSolidWaste	SolidWasteGenerationRate	587.10	612.00
tblSolidWaste	SolidWasteGenerationRate	982.36	1,382.00
tblSolidWaste	SolidWasteGenerationRate	1,207.64	234.00
tblTripsAndVMT	WorkerTripNumber	939.00	0.00
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CC_TL	8.40	8.96
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tblVehicleTrips	CW_TL	16.60	8.96
tblVehicleTrips	CW_TL	16.60	8.96
tblVehicleTrips	CW_TL	16.60	8.96
tblVehicleTrips	CW_TL	16.60	8.96
tblVehicleTrips	DV_TP	11.00	0.00

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tblVehicleTrips	DV_TP	51.00	0.00
tblVehicleTrips	DV_TP	28.00	0.00
tblVehicleTrips	DV_TP	25.00	0.00
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tblVehicleTrips	DV_TP	19.00	0.00
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tblVehicleTrips	HO_TL	8.70	8.96
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tblVehicleTrips	HO_TL	8.70	8.96
tblVehicleTrips	HS_TL	5.90	8.96
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tblVehicleTrips	HS_TL	5.90	8.96
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tblVehicleTrips	PB_TP	3.00	0.00
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tblVehicleTrips	PB_TP	11.00	0.00
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tblVehicleTrips	PR_TP	86.00	100.00
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tblVehicleTrips	PR_TP	52.00	100.00
tblVehicleTrips	PR_TP	75.00	100.00

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tblVehicleTrips	PR_TP	60.00	100.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	64.00	100.00
tblVehicleTrips	PR_TP	54.00	100.00
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tblVehicleTrips	ST_TR	62.00	11.98
tblVehicleTrips	ST_TR	1.59	8.46
tblVehicleTrips	ST_TR	722.03	364.79
tblVehicleTrips	ST_TR	1.32	0.67
tblVehicleTrips	ST_TR	2.37	1.24
tblVehicleTrips	ST_TR	5.82	3.00
tblVehicleTrips	ST_TR	0.61	0.31
tblVehicleTrips	ST_TR	8.96	4.53
tblVehicleTrips	ST_TR	5.00	1.73
tblVehicleTrips	ST_TR	10.37	5.24
tblVehicleTrips	ST_TR	49.97	25.25
tblVehicleTrips	ST_TR	10.08	5.01
tblVehicleTrips	ST_TR	177.59	89.72
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tblVehicleTrips	SU_TR	0.98	0.53
tblVehicleTrips	SU_TR	5.88	3.85
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tblVehicleTrips	SU_TR	1.55	0.78
tblVehicleTrips	SU_TR	4.36	1.49
tblVehicleTrips	SU_TR	36.63	18.51
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tblVehicleTrips	WD_TR	1.59	0.95
tblVehicleTrips	WD_TR	1.29	0.65
tblVehicleTrips	WD_TR	496.12	250.65
tblVehicleTrips	WD_TR	6.97	4.60
tblVehicleTrips	WD_TR	11.01	5.57
tblVehicleTrips	WD_TR	5.04	2.39
tblVehicleTrips	WD_TR	1.71	0.86
tblVehicleTrips	WD_TR	36.13	18.25
tblVehicleTrips	WD_TR	4.99	2.52
tblVehicleTrips	WD_TR	9.11	3.52
tblVehicleTrips	WD_TR	42.94	21.57

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tblVehicleTrips	WD_TR	9.57	4.81
tblVehicleTrips	WD_TR	102.24	51.65
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	IndoorWaterUseRate	43,588,043.14	53,292,125.49
tblWater	IndoorWaterUseRate	37,027,501.46	29,104,232.84
tblWater	IndoorWaterUseRate	0.00	24,953,160.83
tblWater	IndoorWaterUseRate	1,233,938.16	4,882,140.16
tblWater	IndoorWaterUseRate	13,407,084.08	4,368,123.74
tblWater	IndoorWaterUseRate	6,888,937.50	3,933,004.44
tblWater	IndoorWaterUseRate	5,790,565.51	8,136,900.27
tblWater	IndoorWaterUseRate	0.00	18,443,640.62
tblWater	IndoorWaterUseRate	1,850,083.20	5,967,060.20
tblWater	IndoorWaterUseRate	136,999,650.91	21,155,940.71
tblWater	IndoorWaterUseRate	33,554,323.20	21,495,232.18
tblWater	IndoorWaterUseRate	37,859.58	1,084,920.04
tblWater	IndoorWaterUseRate	41,416,909.66	78,123,385.19

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tblWater	IndoorWaterUseRate	49,321,597.40	67,403,535.47
tblWater	IndoorWaterUseRate	26,394,190.17	10,046,684.61
tblWater	OutdoorWaterUseRate	27,479,418.50	61,597,464.51
tblWater	OutdoorWaterUseRate	22,694,275.09	33,639,997.16
tblWater	OutdoorWaterUseRate	54,808,142.08	28,841,999.17
tblWater	OutdoorWaterUseRate	3,172,983.84	5,642,999.84
tblWater	OutdoorWaterUseRate	855,771.32	5,048,876.26
tblWater	OutdoorWaterUseRate	0.00	4,545,945.56
tblWater	OutdoorWaterUseRate	3,549,056.28	9,404,999.73
tblWater	OutdoorWaterUseRate	40,510,365.89	21,317,999.38
tblWater	OutdoorWaterUseRate	4,757,356.80	6,896,999.80
tblWater	OutdoorWaterUseRate	26,095,171.60	24,452,999.29
tblWater	OutdoorWaterUseRate	21,153,812.45	24,845,167.82
tblWater	OutdoorWaterUseRate	59,216.26	1,253,999.96
tblWater	OutdoorWaterUseRate	25,384,557.54	90,298,564.81
tblWater	OutdoorWaterUseRate	31,094,050.53	77,908,074.53
tblWater	OutdoorWaterUseRate	816,315.16	11,612,415.39
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	NumberCatalytic	33.45	0.00
tblWoodstoves	NumberCatalytic	25.75	0.00
tblWoodstoves	NumberCatalytic	37.85	0.00
tblWoodstoves	NumberNoncatalytic	33.45	0.00
tblWoodstoves	NumberNoncatalytic	25.75	0.00
tblWoodstoves	NumberNoncatalytic	37.85	0.00

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2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	56.6520	0.2659	22.8843	1.0600e-003		0.4551	0.4551		0.4550	0.4550	29.8647	187.1909	217.0556	0.0372	5.4700e-003	219.5314
Energy	0.4736	4.1607	2.5529	0.0258		0.3272	0.3272		0.3272	0.3272	0.0000	19,160.1561	19,160.1561	0.7551	0.2236	19,245.3221
Mobile	52.9403	184.1045	636.5968	1.2617	86.2431	2.4267	88.6698	23.0661	2.2297	25.2957	0.0000	103,672.4041	103,672.4041	4.3686	0.0000	103,764.1449
Waste						0.0000	0.0000		0.0000	0.0000	1,170.4703	0.0000	1,170.4703	69.1728	0.0000	2,623.0993
Water						0.0000	0.0000		0.0000	0.0000	124.6762	2,608.0303	2,732.7064	0.5490	0.2959	2,835.9748
Total	**110.0659**	**188.5310**	**662.0341**	**1.2886**	**86.2431**	**3.2091**	**89.4522**	**23.0661**	**3.0119**	**26.0780**	**1,325.0111**	**125,627.7813**	**126,952.7924**	**74.8827**	**0.5250**	**128,688.0724**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	56.6520	0.2659	22.8843	1.0600e-003		0.4551	0.4551		0.4550	0.4550	29.8647	187.1909	217.0556	0.0372	5.4700e-003	219.5314
Energy	0.4736	4.1607	2.5529	0.0258		0.3272	0.3272		0.3272	0.3272	0.0000	19,160.1561	19,160.1561	0.7551	0.2236	19,245.3221
Mobile	52.9403	184.1045	636.5968	1.2617	86.2431	2.4267	88.6698	23.0661	2.2297	25.2957	0.0000	103,672.4041	103,672.4041	4.3686	0.0000	103,764.1449
Waste						0.0000	0.0000		0.0000	0.0000	1,170.4703	0.0000	1,170.4703	69.1728	0.0000	2,623.0993
Water						0.0000	0.0000		0.0000	0.0000	124.6762	2,608.0303	2,732.7064	0.5467	0.2955	2,835.7759
Total	**110.0659**	**188.5310**	**662.0341**	**1.2886**	**86.2431**	**3.2091**	**89.4522**	**23.0661**	**3.0119**	**26.0780**	**1,325.0111**	**125,627.7813**	**126,952.7924**	**74.8804**	**0.5245**	**128,687.8735**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.09**	**0.00**

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4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	52.9403	184.1045	636.5968	1.2617	86.2431	2.4267	88.6698	23.0661	2.2297	25.2957	0.0000	103,672.4041	103,672.4041	4.3686	0.0000	103,764.1449
Unmitigated	52.9403	184.1045	636.5968	1.2617	86.2431	2.4267	88.6698	23.0661	2.2297	25.2957	0.0000	103,672.4041	103,672.4041	4.3686	0.0000	103,764.1449

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	2,247.84	1,685.88	1418.28	6,682,858	6,682,858
Automobile Care Center	12,310.87	4,714.97	4714.97	33,072,998	33,072,998
City Park	43.70	389.16	389.16	464,438	464,438
Elementary School	330.85	0.00	0.00	770,748	770,748
Fast Food Restaurant with Drive Thru	11,071.21	16,112.77	12111.41	38,941,706	38,941,706
General Light Industry	137.03	19.96	10.13	333,253	333,253
General Office Building	181.47	40.40	17.27	449,622	449,622
Golf Course	81.26	102.00	130.90	297,816	297,816
High School	361.20	130.20	54.60	927,554	927,554
Medical Office Building	19,925.35	4,945.85	851.60	49,119,247	49,119,247
Mobile Home Park	1,297.80	890.95	767.35	3,795,990	3,795,990
Other Asphalt Surfaces	0.00	0.00	0.00		
Place of Worship	4.26	6.34	22.40	23,312	23,312
Regional Shopping Center	12,060.65	14,118.29	7129.04	37,996,041	37,996,041
Single Family Housing	3,641.17	3,792.57	3300.52	11,787,282	11,787,282
Supermarket	11,059.30	19,210.85	18005.35	43,103,511	43,103,511
Total	74,753.96	66,160.19	48,922.98	227,766,376	227,766,376

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4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	8.96	8.96	8.96	40.20	19.20	40.60	100	0	0
Automobile Care Center	8.96	8.96	8.96	33.00	48.00	19.00	100	0	0
City Park	8.96	8.96	8.96	33.00	48.00	19.00	100	0	0
Elementary School	8.96	8.96	8.96	65.00	30.00	5.00	100	0	0
Fast Food Restaurant with Drive Thru	8.96	8.96	8.96	2.20	78.80	19.00	100	0	0
General Light Industry	8.96	8.96	8.96	59.00	28.00	13.00	100	0	0
General Office Building	8.96	8.96	8.96	33.00	48.00	19.00	100	0	0
Golf Course	8.96	8.96	8.96	33.00	48.00	19.00	100	0	0
High School	8.96	8.96	8.96	77.80	17.20	5.00	100	0	0
Medical Office Building	8.96	8.96	8.96	29.60	51.40	19.00	100	0	0
Mobile Home Park	8.96	8.96	8.96	40.20	19.20	40.60	100	0	0
Other Asphalt Surfaces	8.96	8.96	8.96	0.00	0.00	0.00	0	0	0
Place of Worship	8.96	8.96	8.96	0.00	95.00	5.00	100	0	0
Regional Shopping Center	8.96	8.96	8.96	16.30	64.70	19.00	100	0	0
Single Family Housing	8.96	8.96	8.96	40.20	19.20	40.60	100	0	0
Supermarket	8.96	8.96	8.96	6.50	74.50	19.00	100	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.474745	0.065936	0.172132	0.156409	0.055843	0.009120	0.016202	0.038647	0.001119	0.001338	0.004871	0.000723	0.002914

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	14,472.8247	14,472.8247	0.6653	0.1376	14,529.4643
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	14,472.8247	14,472.8247	0.6653	0.1376	14,529.4643
NaturalGas Mitigated	0.4736	4.1607	2.5529	0.0258		0.3272	0.3272		0.3272	0.3272	0.0000	4,687.3314	4,687.3314	0.0898	0.0859	4,715.8577
NaturalGas Unmitigated	0.4736	4.1607	2.5529	0.0258		0.3272	0.3272		0.3272	0.3272	0.0000	4,687.3314	4,687.3314	0.0898	0.0859	4,715.8577

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5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	9.74534e+006	0.0526	0.4491	0.1911	2.8700e-003		0.0363	0.0363		0.0363	0.0363	0.0000	520.0486	520.0486	9.9700e-003	9.5300e-003	523.2136
Automobile Care Center	1.33383e+007	0.0719	0.6538	0.5492	3.9200e-003		0.0497	0.0497		0.0497	0.0497	0.0000	711.7802	711.7802	0.0136	0.0131	716.1120
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Elementary School	418733	2.2600e-003	0.0205	0.0172	1.2000e-004		1.5600e-003	1.5600e-003		1.5600e-003	1.5600e-003	0.0000	22.3452	22.3452	4.3000e-004	4.1000e-004	22.4812
Fast Food Restaurant with Drive Thru	1.23403e+007	0.0665	0.6049	0.5081	3.6300e-003		0.0460	0.0460		0.0460	0.0460	0.0000	658.5247	658.5247	0.0126	0.0121	662.5323
General Light Industry	1.00941e+006	5.4400e-003	0.0495	0.0416	3.0000e-004		3.7600e-003	3.7600e-003		3.7600e-003	3.7600e-003	0.0000	53.8662	53.8662	1.0300e-003	9.9000e-004	54.1940
General Office Building	136828	7.4000e-004	6.7100e-003	5.6300e-003	4.0000e-005		5.1000e-004	5.1000e-004		5.1000e-004	5.1000e-004	0.0000	7.3016	7.3016	1.4000e-004	1.3000e-004	7.3461
Golf Course	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
High School	548261	2.9600e-003	0.0269	0.0226	1.6000e-004		2.0400e-003	2.0400e-003		2.0400e-003	2.0400e-003	0.0000	29.2573	29.2573	5.6000e-004	5.4000e-004	29.4354
Medical Office Building	4.58557e+006	0.0247	0.2248	0.1888	1.3500e-003		0.0171	0.0171		0.0171	0.0171	0.0000	244.7034	244.7034	4.6900e-003	4.4900e-003	246.1926
Mobile Home Park	1.1682e+007	0.0630	0.5383	0.2291	3.4400e-003		0.0435	0.0435		0.0435	0.0435	0.0000	623.3978	623.3978	0.0120	0.0114	627.1917
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Place of Worship	41040.8	2.2000e-004	2.0100e-003	1.6900e-003	1.0000e-005		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004	0.0000	2.1901	2.1901	4.0000e-005	4.0000e-005	2.2034
Regional Shopping Center	1.44818e+006	7.8100e-003	0.0710	0.0596	4.3000e-004		5.4000e-003	5.4000e-003		5.4000e-003	5.4000e-003	0.0000	77.2801	77.2801	1.4800e-003	1.4200e-003	77.7505
Single Family Housing	2.79013e+007	0.1505	1.2857	0.5471	8.2100e-003		0.1040	0.1040		0.1040	0.1040	0.0000	1,488.9173	1,488.9173	0.0285	0.0273	1,497.9786
Supermarket	4.64208e+006	0.0250	0.2276	0.1911	1.3700e-003		0.0173	0.0173		0.0173	0.0173	0.0000	247.7190	247.7190	4.7500e-003	4.5400e-003	249.2266
Total		**0.4736**	**4.1607**	**2.5529**	**0.0259**		**0.3272**	**0.3272**		**0.3272**	**0.3272**	**0.0000**	**4,687.3314**	**4,687.3314**	**0.0898**	**0.0859**	**4,715.8578**

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Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Automobile Care Center	1.33383e+007	0.0719	0.6538	0.5492	3.9200e-003		0.0497	0.0497		0.0497	0.0497	0.0000	711.7802	711.7802	0.0136	0.0131	716.1120
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Elementary School	418733	2.2600e-003	0.0205	0.0172	1.2000e-004		1.5600e-003	1.5600e-003		1.5600e-003	1.5600e-003	0.0000	22.3452	22.3452	4.3000e-004	4.1000e-004	22.4812
Fast Food Restaurant with Drive Thru	1.23403e+007	0.0665	0.6049	0.5081	3.6300e-003		0.0460	0.0460		0.0460	0.0460	0.0000	658.5247	658.5247	0.0126	0.0121	662.5323
General Light Industry	1.00941e+006	5.4400e-003	0.0495	0.0416	3.0000e-004		3.7600e-003	3.7600e-003		3.7600e-003	3.7600e-003	0.0000	53.8662	53.8662	1.0300e-003	9.9000e-004	54.1940
General Office Building	136828	7.4000e-004	6.7100e-003	5.6300e-003	4.0000e-005		5.1000e-004	5.1000e-004		5.1000e-004	5.1000e-004	0.0000	7.3016	7.3016	1.4000e-004	1.3000e-004	7.3461
Golf Course	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
High School	548261	2.9600e-003	0.0269	0.0226	1.6000e-004		2.0400e-003	2.0400e-003		2.0400e-003	2.0400e-003	0.0000	29.2573	29.2573	5.6000e-004	5.4000e-004	29.4354
Medical Office Building	4.58557e+006	0.0247	0.2248	0.1888	1.3500e-003		0.0171	0.0171		0.0171	0.0171	0.0000	244.7034	244.7034	4.6900e-003	4.4900e-003	246.1926
Mobile Home Park	1.1682e+007	0.0630	0.5383	0.2291	3.4400e-003		0.0435	0.0435		0.0435	0.0435	0.0000	623.3978	623.3978	0.0120	0.0114	627.1917
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Apartments Low Rise	9.74534e+006	0.0526	0.4491	0.1911	2.8700e-003		0.0363	0.0363		0.0363	0.0363	0.0000	520.0486	520.0486	9.9700e-003	9.5300e-003	523.2136
Place of Worship	41040.8	2.2000e-004	2.0100e-003	1.6900e-003	1.0000e-005		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004	0.0000	2.1901	2.1901	4.0000e-005	4.0000e-005	2.2034
Regional Shopping Center	1.44818e+006	7.8100e-003	0.0710	0.0596	4.3000e-004		5.4000e-003	5.4000e-003		5.4000e-003	5.4000e-003	0.0000	77.2801	77.2801	1.4800e-003	1.4200e-003	77.7505
Single Family Housing	2.79013e+007	0.1505	1.2857	0.5471	8.2100e-003		0.1040	0.1040		0.1040	0.1040	0.0000	1,488.9173	1,488.9173	0.0285	0.0273	1,497.9786
Supermarket	4.64208e+006	0.0250	0.2276	0.1911	1.3700e-003		0.0173	0.0173		0.0173	0.0173	0.0000	247.7190	247.7190	4.7500e-003	4.5400e-003	249.2266
Total		**0.4736**	**4.1607**	**2.5529**	**0.0259**		**0.3272**	**0.3272**		**0.3272**	**0.3272**	**0.0000**	**4,687.3314**	**4,687.3314**	**0.0898**	**0.0859**	**4,715.8578**

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5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	2.83254e+006	810.5790	0.0373	7.7100e-003	813.7512
Automobile Care Center	4.53792e+006	1,298.6024	0.0597	0.0124	1,303.6845
City Park	0	0.0000	0.0000	0.0000	0.0000
Elementary School	410647	117.5137	5.4000e-003	1.1200e-003	117.9735
Fast Food Restaurant with Drive Thru	2.39075e+006	684.1538	0.0315	6.5100e-003	686.8312
General Light Industry	343421	98.2757	4.5200e-003	9.3000e-004	98.6603
General Office Building	367154	105.0673	4.8300e-003	1.0000e-003	105.4785
Golf Course	0	0.0000	0.0000	0.0000	0.0000
High School	537675	153.8648	7.0700e-003	1.4600e-003	154.4669
Medical Office Building	1.23046e+007	3,521.1716	0.1619	0.0335	3,534.9517
Mobile Home Park	2.86945e+006	821.1405	0.0378	7.8100e-003	824.3540
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Place of Worship	13962.8	3.9957	1.8000e-004	4.0000e-005	4.0113
Regional Shopping Center	9.27615e+006	2,654.5268	0.1220	0.0253	2,664.9153
Single Family Housing	6.03156e+006	1,726.0339	0.0793	0.0164	1,732.7888
Supermarket	8.65893e+006	2,477.8996	0.1139	0.0236	2,487.5969
Total		**14,472.8247**	**0.6653**	**0.1377**	**14,529.4643**

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Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	2.83254e+006	810.5790	0.0373	7.7100e-003	813.7512
Automobile Care Center	4.53792e+006	1,298.6024	0.0597	0.0124	1,303.6845
City Park	0	0.0000	0.0000	0.0000	0.0000
Elementary School	410647	117.5137	5.4000e-003	1.1200e-003	117.9735
Fast Food Restaurant with Drive Thru	2.39075e+006	684.1538	0.0315	6.5100e-003	686.8312
General Light Industry	343421	98.2757	4.5200e-003	9.3000e-004	98.6603
General Office Building	367154	105.0673	4.8300e-003	1.0000e-003	105.4785
Golf Course	0	0.0000	0.0000	0.0000	0.0000
High School	537675	153.8648	7.0700e-003	1.4600e-003	154.4669
Medical Office Building	1.23046e+007	3,521.1716	0.1619	0.0335	3,534.9517
Mobile Home Park	2.86945e+006	821.1405	0.0378	7.8100e-003	824.3540
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Place of Worship	13962.8	3.9957	1.8000e-004	4.0000e-005	4.0113
Regional Shopping Center	9.27615e+006	2,654.5268	0.1220	0.0253	2,664.9153
Single Family Housing	6.03156e+006	1,726.0339	0.0793	0.0164	1,732.7888
Supermarket	8.65893e+006	2,477.8996	0.1139	0.0236	2,487.5969
Total		**14,472.8247**	**0.6653**	**0.1377**	**14,529.4643**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	56.6520	0.2659	22.8843	1.0600e-003		0.4551	0.4551		0.4550	0.4550	29.8647	187.1909	217.0556	0.0372	5.4700e-003	219.5314
Unmitigated	56.6520	0.2659	22.8843	1.0600e-003		0.4551	0.4551		0.4550	0.4550	29.8647	187.1909	217.0556	0.0372	5.4700e-003	219.5314

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6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	11.5139					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	42.2484					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	2.2329	0.0252	2.4466	0.0000		0.3458	0.3458		0.3457	0.3457	29.8647	154.4082	184.2729	2.9600e-003	5.4700e-003	186.0294
Landscaping	0.6569	0.2407	20.4377	1.0600e-003		0.1094	0.1094		0.1094	0.1094	0.0000	32.7827	32.7827	0.0343	0.0000	33.5020
Total	**56.6520**	**0.2658**	**22.8843**	**1.0600e-003**		**0.4551**	**0.4551**		**0.4550**	**0.4550**	**29.8647**	**187.1909**	**217.0556**	**0.0372**	**5.4700e-003**	**219.5314**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	11.5139					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	42.2484					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	2.2329	0.0252	2.4466	0.0000		0.3458	0.3458		0.3457	0.3457	29.8647	154.4082	184.2729	2.9600e-003	5.4700e-003	186.0294
Landscaping	0.6569	0.2407	20.4377	1.0600e-003		0.1094	0.1094		0.1094	0.1094	0.0000	32.7827	32.7827	0.0343	0.0000	33.5020
Total	**56.6520**	**0.2658**	**22.8843**	**1.0600e-003**		**0.4551**	**0.4551**		**0.4550**	**0.4550**	**29.8647**	**187.1909**	**217.0556**	**0.0372**	**5.4700e-003**	**219.5314**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	2,732.7064	0.5467	0.2955	2,835.7759
Unmitigated	2,732.7064	0.5490	0.2959	2,835.9748

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7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	53.2921 / 61.5975	413.2685	0.0830	0.0448	428.8859
Automobile Care Center	29.1042 / 33.64	225.6968	0.0453	0.0244	234.2259
City Park	24.9532 / 28.842	193.5062	0.0389	0.0210	200.8188
Elementary School	4.88214 / 5.643	37.8599	7.6100e-003	4.1000e-003	39.2906
Fast Food Restaurant with Drive Thru	4.36812 / 5.04888	33.8738	6.8100e-003	3.6700e-003	35.1539
General Light Industry	3.933 / 4.54595	30.4996	6.1300e-003	3.3000e-003	31.6521
General Office Building	8.1369 / 9.405	63.0998	0.0127	6.8300e-003	65.4844
Golf Course	18.4436 / 21.318	143.0263	0.0287	0.0155	148.4313
High School	5.96706 / 6.897	46.2732	9.3000e-003	5.0100e-003	48.0219
Medical Office Building	21.1559 / 24.453	164.0596	0.0330	0.0178	170.2594
Mobile Home Park	21.4952 / 24.8452	166.6907	0.0335	0.0181	172.9899
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Place of Worship	1.08492 / 1.254	8.4133	1.6900e-003	9.1000e-004	8.7313
Regional Shopping Center	78.1234 / 90.2986	605.8294	0.1217	0.0656	628.7236
Single Family Housing	67.4035 / 77.9081	522.6994	0.1050	0.0566	542.4521
Supermarket	10.0467 / 11.6124	77.9098	0.0157	8.4400e-003	80.8540
Total		**2,732.7064**	**0.5490**	**0.2959**	**2,835.9748**

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Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	53.2921 / 61.5975	413.2685	0.0827	0.0447	428.8558
Automobile Care Center	29.1042 / 33.64	225.6968	0.0452	0.0244	234.2094
City Park	24.9532 / 28.842	193.5062	0.0387	0.0209	200.8047
Elementary School	4.88214 / 5.643	37.8599	7.5700e-003	4.0900e-003	39.2879
Fast Food Restaurant with Drive Thru	4.36812 / 5.04888	33.8738	6.7800e-003	3.6600e-003	35.1514
General Light Industry	3.933 / 4.54595	30.4996	6.1000e-003	3.3000e-003	31.6499
General Office Building	8.1369 / 9.405	63.0998	0.0126	6.8200e-003	65.4798
Golf Course	18.4436 / 21.318	143.0263	0.0286	0.0155	148.4208
High School	5.96706 / 6.897	46.2732	9.2600e-003	5.0000e-003	48.0185
Medical Office Building	21.1559 / 24.453	164.0596	0.0328	0.0177	170.2474
Mobile Home Park	21.4952 / 24.8452	166.6907	0.0334	0.0180	172.9778
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Place of Worship	1.08492 / 1.254	8.4133	1.6800e-003	9.1000e-004	8.7306
Regional Shopping Center	78.1234 / 90.2986	605.8294	0.1212	0.0655	628.6795
Single Family Housing	67.4035 / 77.9081	522.6994	0.1046	0.0565	542.4140
Supermarket	10.0467 / 11.6124	77.9098	0.0156	8.4200e-003	80.8483
Total		**2,732.7064**	**0.5467**	**0.2954**	**2,835.7759**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Unmitigated	1,170.4703	69.1728	0.0000	2,623.0993
Mitigated	1,170.4703	69.1728	0.0000	2,623.0993

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8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	648	131.5381	7.7737	0.0000	294.7855
Automobile Care Center	431	87.4891	5.1705	0.0000	196.0687
City Park	3.96	0.8038	0.0475	0.0000	1.8015
Elementary School	92.89	18.8558	1.1144	0.0000	42.2571
Fast Food Restaurant with Drive Thru	48	9.7436	0.5758	0.0000	21.8360
General Light Industry	33	6.6987	0.3959	0.0000	15.0122
General Office Building	36	7.3077	0.4319	0.0000	16.3770
Golf Course	31.62	6.4186	0.3793	0.0000	14.3844
High School	76.65	15.5593	0.9195	0.0000	34.8693
Medical Office Building	1196	242.7772	14.3477	0.0000	544.0793
Mobile Home Park	940	190.8115	11.2766	0.0000	427.6209
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Place of Worship	1	0.2030	0.0120	0.0000	0.4549
Regional Shopping Center	612	124.2305	7.3418	0.0000	278.4085
Single Family Housing	1382	280.5335	16.5791	0.0000	628.6937
Supermarket	234	47.4999	2.8072	0.0000	106.4503
Total		**1,170.4702**	**69.1728**	**0.0000**	**2,623.0993**

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Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	648	131.5381	7.7737	0.0000	294.7855
Automobile Care Center	431	87.4891	5.1705	0.0000	196.0687
City Park	3.96	0.8038	0.0475	0.0000	1.8015
Elementary School	92.89	18.8558	1.1144	0.0000	42.2571
Fast Food Restaurant with Drive Thru	48	9.7436	0.5758	0.0000	21.8360
General Light Industry	33	6.6987	0.3959	0.0000	15.0122
General Office Building	36	7.3077	0.4319	0.0000	16.3770
Golf Course	31.62	6.4186	0.3793	0.0000	14.3844
High School	76.65	15.5593	0.9195	0.0000	34.8693
Medical Office Building	1196	242.7772	14.3477	0.0000	544.0793
Mobile Home Park	940	190.8115	11.2766	0.0000	427.6209
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Place of Worship	1	0.2030	0.0120	0.0000	0.4549
Regional Shopping Center	612	124.2305	7.3418	0.0000	278.4085
Single Family Housing	1382	280.5335	16.5791	0.0000	628.6937
Supermarket	234	47.4999	2.8072	0.0000	106.4503
Total		**1,170.4702**	**69.1728**	**0.0000**	**2,623.0993**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

CalEEMod Version: CalEEMod.2013.2.2

Date: 5/2/2016 5:02 PM

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Construction Mitigation Summary

Phase	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

OFFROAD Equipment Mitigation

Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPF	Oxidation Catalyst
Air Compressors	Diesel	No Change	0	0	No Change	0.00

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Unmitigated tons/yr						Unmitigated mt/yr					
Air Compressors	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Mitigated tons/yr						Mitigated mt/yr					
Air Compressors	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Air Compressors	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000

Fugitive Dust Mitigation

Yes/No	Mitigation Measure	Mitigation Input		Mitigation Input		Mitigation Input	
No	Soil Stabilizer for unpaved Roads	PM10 Reduction		PM2.5 Reduction			
No	Replace Ground Cover of Area Disturbed	PM10 Reduction		PM2.5 Reduction			
No	Water Exposed Area	PM10 Reduction		PM2.5 Reduction		Frequency (per day)	
No	Unpaved Road Mitigation	Moisture Content %		Vehicle Speed (mph)			
No	Clean Paved Road	% PM Reduction	0.00				

		Unmitigated		Mitigated		Percent Reduction	
Phase	Source	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Architectural Coating	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Architectural Coating	Roads	0.00	0.00	0.00	0.00	0.00	0.00

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Operational Percent Reduction Summary

Category	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43	0.17	0.01
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Operational Mobile Mitigation

Project Setting:

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value 3
No	Land Use	Increase Density	0.00			
No	Land Use	Increase Diversity	0.30	0.69		
No	Land Use	Improve Walkability Design	0.00			
No	Land Use	Improve Destination Accessibility	0.00			
No	Land Use	Increase Transit Accessibility	0.25			
No	Land Use	Integrate Below Market Rate Housing	0.00			
	Land Use	Land Use SubTotal	0.00			
No	Neighborhood Enhancements	Improve Pedestrian Network				
No	Neighborhood Enhancements	Provide Traffic Calming Measures				
No	Neighborhood Enhancements	Implement NEV Network	0.00			
	Neighborhood Enhancements	Neighborhood Enhancements Subtotal	0.00			
No	Parking Policy Pricing	Limit Parking Supply	0.00			
No	Parking Policy Pricing	Unbundle Parking Costs	0.00			
No	Parking Policy Pricing	On-street Market Pricing	0.00			
	Parking Policy Pricing	Parking Policy Pricing Subtotal	0.00			
No	Transit Improvements	Provide BRT System	0.00			
No	Transit Improvements	Expand Transit Network	0.00			
No	Transit Improvements	Increase Transit Frequency	0.00			
	Transit Improvements	Transit Improvements Subtotal	0.00			
		Land Use and Site Enhancement Subtotal	0.00			
No	Commute	Implement Trip Reduction Program				

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No	Commute	Transit Subsidy				
No	Commute	Implement Employee Parking "Cash Out"				
No	Commute	Workplace Parking Charge				
No	Commute	Encourage Telecommuting and Alternative Work Schedules	0.00			
No	Commute	Market Commute Trip Reduction Option	0.00			
No	Commute	Employee Vanpool/Shuttle	0.00		2.00	
No	Commute	Provide Ride Sharing Program				
	Commute	Commute Subtotal	0.00			
No	School Trip	Implement School Bus Program	0.00			
		Total VMT Reduction	0.00			

Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
No	Only Natural Gas Hearth	
No	No Hearth	
No	Use Low VOC Cleaning Supplies	
No	Use Low VOC Paint (Residential Interior)	50.00
No	Use Low VOC Paint (Residential Exterior)	100.00
No	Use Low VOC Paint (Non-residential Interior)	250.00
No	Use Low VOC Paint (Non-residential Exterior)	250.00
No	% Electric Lawnmower	
No	% Electric Leafblower	
No	% Electric Chainsaw	

Energy Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Exceed Title 24		
No	Install High Efficiency Lighting		
No	On-site Renewable		

Appliance Type	Land Use Subtype	% Improvement
ClothWasher		30.00
DishWasher		15.00
Fan		50.00
Refrigerator		15.00

Existing_WatermanSP

San Bernardino-South Coast County, Mitigation Report

Water Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Apply Water Conservation on Strategy	0.00	0.00
No	Use Reclaimed Water	0.00	0.00
No	Use Grey Water	0.00	
No	Install low-flow bathroom faucet	32.00	
No	Install low-flow Kitchen faucet	18.00	
No	Install low-flow Toilet	20.00	
No	Install low-flow Shower	20.00	
No	Turf Reduction	0.00	
No	Use Water Efficient Irrigation Systems	6.10	
No	Water Efficient Landscape	0.00	0.00

Solid Waste Mitigation

Mitigation Measures	Input Value
Institute Recycling and Composting Services	
Percent Reduction in Waste Disposed	

CalEEMod – Existing (No Project 2035)

Existing_WatermanSP2035Rates

San Bernardino-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	32.58	1000sqft	15.00	32,578.00	0
Medical Office Building	1,091.80	1000sqft	39.00	1,091,802.00	0
Elementary School	509.00	Student	15.00	42,554.12	0
High School	420.00	Student	5.00	55,717.61	0
Place of Worship	1.21	1000sqft	2.00	1,211.00	0
General Light Industry	29.79	1000sqft	10.00	29,785.00	0
Other Asphalt Surfaces	71.00	Acre	71.00	3,092,760.00	0
City Park	46.00	Acre	46.00	2,003,760.00	0
Fast Food Restaurant with Drive Thru	44.17	1000sqft	10.00	44,175.00	0
Golf Course	34.00	Acre	34.00	1,481,040.00	0
Apartments Low Rise	669.00	Dwelling Unit	58.00	669,000.00	2118
Mobile Home Park	515.00	Dwelling Unit	40.00	618,000.00	1630
Single Family Housing	757.00	Dwelling Unit	134.00	1,362,600.00	2396
Automobile Care Center	393.57	1000sqft	73.00	393,575.00	0
Regional Shopping Center	559.14	1000sqft	135.00	559,141.00	0
Supermarket	214.12	1000sqft	23.00	214,118.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2035
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - See Assumptions

Construction Phase - Existing - no construction

Off-road Equipment - Existing no construction

Trips and VMT - Existing no construction

Architectural Coating - Existing no construction

Vehicle Trips - See Assumptions

Vechicle Emission Factors -

Vechicle Emission Factors -

Vechicle Emission Factors -

Woodstoves - See Assumptions

Area Coating -

Energy Use -

Water And Wastewater - See assumptions

Water Mitigation - Water Use based on WSA and so additional reductions are not applied.

Existing_WatermanSP2035Rates

San Bernardino-South Coast County, Summer

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	0.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	0.00
tblArchitecturalCoating	EF_Residential_Exterior	100.00	0.00
tblArchitecturalCoating	EF_Residential_Interior	50.00	0.00
tblConstructionPhase	NumDays	880.00	1.00
tblFireplaces	NumberGas	568.65	0.00
tblFireplaces	NumberGas	437.75	0.00
tblFireplaces	NumberGas	643.45	643.00
tblFireplaces	NumberNoFireplace	66.90	669.00
tblFireplaces	NumberNoFireplace	51.50	515.00
tblFireplaces	NumberNoFireplace	75.70	76.00
tblFireplaces	NumberWood	33.45	0.00
tblFireplaces	NumberWood	25.75	0.00
tblFireplaces	NumberWood	37.85	38.00
tblLandUse	LandUseSquareFeet	32,580.00	32,578.00
tblLandUse	LandUseSquareFeet	1,091,800.00	1,091,802.00
tblLandUse	LandUseSquareFeet	1,210.00	1,211.00
tblLandUse	LandUseSquareFeet	29,790.00	29,785.00
tblLandUse	LandUseSquareFeet	44,170.00	44,175.00
tblLandUse	LandUseSquareFeet	393,570.00	393,575.00
tblLandUse	LandUseSquareFeet	559,140.00	559,141.00
tblLandUse	LandUseSquareFeet	214,120.00	214,118.00
tblLandUse	LotAcreage	0.75	15.00
tblLandUse	LotAcreage	25.06	39.00
tblLandUse	LotAcreage	0.98	15.00
tblLandUse	LotAcreage	1.28	5.00
tblLandUse	LotAcreage	0.03	2.00
tblLandUse	LotAcreage	0.68	10.00
tblLandUse	LotAcreage	1.01	10.00
tblLandUse	LotAcreage	41.81	58.00
tblLandUse	LotAcreage	64.88	40.00
tblLandUse	LotAcreage	245.78	134.00
tblLandUse	LotAcreage	9.04	73.00
tblLandUse	LotAcreage	12.84	135.00
tblLandUse	LotAcreage	4.92	23.00
tblLandUse	Population	1,913.00	2,118.00
tblLandUse	Population	1,473.00	1,630.00
tblLandUse	Population	2,165.00	2,396.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblProjectCharacteristics	OperationalYear	2014	2035
tblSolidWaste	SolidWasteGenerationRate	307.74	648.00
tblSolidWaste	SolidWasteGenerationRate	1,503.44	431.00
tblSolidWaste	SolidWasteGenerationRate	508.79	48.00
tblSolidWaste	SolidWasteGenerationRate	36.94	33.00
tblSolidWaste	SolidWasteGenerationRate	30.30	36.00
tblSolidWaste	SolidWasteGenerationRate	11,791.44	1,196.00

Existing_WatermanSP2035Rates

San Bernardino-South Coast County, Summer

tblSolidWaste	SolidWasteGenerationRate	236.90	940.00
tblSolidWaste	SolidWasteGenerationRate	6.90	1.00
tblSolidWaste	SolidWasteGenerationRate	587.10	612.00
tblSolidWaste	SolidWasteGenerationRate	982.36	1,382.00
tblSolidWaste	SolidWasteGenerationRate	1,207.64	234.00
tblTripsAndVMT	WorkerTripNumber	939.00	0.00
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CNW_TL	6.90	8.96
tblVehicleTrips	CNW_TL	6.90	8.96
tblVehicleTrips	CNW_TL	6.90	8.96
tblVehicleTrips	CNW_TL	6.90	8.96
tblVehicleTrips	CNW_TL	6.90	8.96
tblVehicleTrips	CNW_TL	6.90	8.96
tblVehicleTrips	CNW_TL	6.90	8.96
tblVehicleTrips	CNW_TL	6.90	8.96
tblVehicleTrips	CNW_TL	6.90	8.96
tblVehicleTrips	CNW_TL	6.90	8.96
tblVehicleTrips	CNW_TL	6.90	8.96
tblVehicleTrips	CNW_TL	6.90	8.96
tblVehicleTrips	CNW_TL	6.90	8.96
tblVehicleTrips	CNW_TL	6.90	8.96
tblVehicleTrips	CW_TL	16.60	8.96
tblVehicleTrips	CW_TL	16.60	8.96
tblVehicleTrips	CW_TL	16.60	8.96
tblVehicleTrips	CW_TL	16.60	8.96
tblVehicleTrips	CW_TL	16.60	8.96
tblVehicleTrips	CW_TL	16.60	8.96
tblVehicleTrips	CW_TL	16.60	8.96
tblVehicleTrips	CW_TL	16.60	8.96
tblVehicleTrips	CW_TL	16.60	8.96
tblVehicleTrips	CW_TL	16.60	8.96
tblVehicleTrips	CW_TL	16.60	8.96
tblVehicleTrips	CW_TL	16.60	8.96
tblVehicleTrips	CW_TL	16.60	8.96
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	51.00	0.00

Existing_WatermanSP2035Rates

San Bernardino-South Coast County, Summer

tblVehicleTrips	DV_TP	28.00	0.00
tblVehicleTrips	DV_TP	25.00	0.00
tblVehicleTrips	DV_TP	21.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	DV_TP	19.00	0.00
tblVehicleTrips	DV_TP	39.00	0.00
tblVehicleTrips	DV_TP	19.00	0.00
tblVehicleTrips	DV_TP	30.00	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	25.00	0.00
tblVehicleTrips	DV_TP	35.00	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	30.00	0.00
tblVehicleTrips	HO_TL	8.70	8.96
tblVehicleTrips	HO_TL	8.70	8.96
tblVehicleTrips	HO_TL	8.70	8.96
tblVehicleTrips	HS_TL	5.90	8.96
tblVehicleTrips	HS_TL	5.90	8.96
tblVehicleTrips	HS_TL	5.90	8.96
tblVehicleTrips	HW_TL	14.70	8.96
tblVehicleTrips	HW_TL	14.70	8.96
tblVehicleTrips	HW_TL	14.70	8.96
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	28.00	0.00
tblVehicleTrips	PB_TP	6.00	0.00
tblVehicleTrips	PB_TP	12.00	0.00
tblVehicleTrips	PB_TP	50.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	4.00	0.00
tblVehicleTrips	PB_TP	9.00	0.00
tblVehicleTrips	PB_TP	6.00	0.00
tblVehicleTrips	PB_TP	10.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	36.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	21.00	100.00
tblVehicleTrips	PR_TP	66.00	100.00
tblVehicleTrips	PR_TP	63.00	100.00
tblVehicleTrips	PR_TP	29.00	100.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	PR_TP	77.00	100.00
tblVehicleTrips	PR_TP	52.00	100.00
tblVehicleTrips	PR_TP	75.00	100.00
tblVehicleTrips	PR_TP	60.00	100.00

Existing_WatermanSP2035Rates

San Bernardino-South Coast County, Summer

tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	64.00	100.00
tblVehicleTrips	PR_TP	54.00	100.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	34.00	100.00
tblVehicleTrips	ST_TR	7.16	2.52
tblVehicleTrips	ST_TR	62.00	11.98
tblVehicleTrips	ST_TR	1.59	8.46
tblVehicleTrips	ST_TR	722.03	364.79
tblVehicleTrips	ST_TR	1.32	0.67
tblVehicleTrips	ST_TR	2.37	1.24
tblVehicleTrips	ST_TR	5.82	3.00
tblVehicleTrips	ST_TR	0.61	0.31
tblVehicleTrips	ST_TR	8.96	4.53
tblVehicleTrips	ST_TR	5.00	1.73
tblVehicleTrips	ST_TR	10.37	5.24
tblVehicleTrips	ST_TR	49.97	25.25
tblVehicleTrips	ST_TR	10.08	5.01
tblVehicleTrips	ST_TR	177.59	89.72
tblVehicleTrips	SU_TR	6.07	2.12
tblVehicleTrips	SU_TR	62.00	11.98
tblVehicleTrips	SU_TR	1.59	8.46
tblVehicleTrips	SU_TR	542.72	274.20
tblVehicleTrips	SU_TR	0.68	0.34
tblVehicleTrips	SU_TR	0.98	0.53
tblVehicleTrips	SU_TR	5.88	3.85
tblVehicleTrips	SU_TR	0.25	0.13
tblVehicleTrips	SU_TR	1.55	0.78
tblVehicleTrips	SU_TR	4.36	1.49
tblVehicleTrips	SU_TR	36.63	18.51
tblVehicleTrips	SU_TR	25.24	12.75
tblVehicleTrips	SU_TR	8.77	4.36
tblVehicleTrips	SU_TR	166.44	84.09
tblVehicleTrips	WD_TR	6.59	3.36
tblVehicleTrips	WD_TR	62.00	31.28
tblVehicleTrips	WD_TR	1.59	0.95
tblVehicleTrips	WD_TR	1.29	0.65
tblVehicleTrips	WD_TR	496.12	250.65
tblVehicleTrips	WD_TR	6.97	4.60
tblVehicleTrips	WD_TR	11.01	5.57
tblVehicleTrips	WD_TR	5.04	2.39
tblVehicleTrips	WD_TR	1.71	0.86
tblVehicleTrips	WD_TR	36.13	18.25
tblVehicleTrips	WD_TR	4.99	2.52
tblVehicleTrips	WD_TR	9.11	3.52
tblVehicleTrips	WD_TR	42.94	21.57
tblVehicleTrips	WD_TR	9.57	4.81

Existing_WatermanSP2035Rates

San Bernardino-South Coast County, Summer

tblVehicleTrips	WD_TR	102.24	51.65
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	IndoorWaterUseRate	43,588,043.14	53,292,125.49
tblWater	IndoorWaterUseRate	37,027,501.46	29,104,232.84
tblWater	IndoorWaterUseRate	0.00	24,953,160.83
tblWater	IndoorWaterUseRate	1,233,938.16	4,882,140.16
tblWater	IndoorWaterUseRate	13,407,084.08	4,368,123.74
tblWater	IndoorWaterUseRate	6,888,937.50	3,933,004.44
tblWater	IndoorWaterUseRate	5,790,565.51	8,136,900.27
tblWater	IndoorWaterUseRate	0.00	18,443,640.62
tblWater	IndoorWaterUseRate	1,850,083.20	5,967,060.20
tblWater	IndoorWaterUseRate	136,999,650.91	21,155,940.71
tblWater	IndoorWaterUseRate	33,554,323.20	21,495,232.18
tblWater	IndoorWaterUseRate	37,859.58	1,084,920.04
tblWater	IndoorWaterUseRate	41,416,909.66	78,123,385.19
tblWater	IndoorWaterUseRate	49,321,597.40	67,403,535.47

Existing_WatermanSP2035Rates

San Bernardino-South Coast County, Summer

tblWater	IndoorWaterUseRate	26,394,190.17	10,046,684.61
tblWater	OutdoorWaterUseRate	27,479,418.50	61,597,464.51
tblWater	OutdoorWaterUseRate	22,694,275.09	33,639,997.16
tblWater	OutdoorWaterUseRate	54,808,142.08	28,841,999.17
tblWater	OutdoorWaterUseRate	3,172,983.84	5,642,999.84
tblWater	OutdoorWaterUseRate	855,771.32	5,048,876.26
tblWater	OutdoorWaterUseRate	0.00	4,545,945.56
tblWater	OutdoorWaterUseRate	3,549,056.28	9,404,999.73
tblWater	OutdoorWaterUseRate	40,510,365.89	21,317,999.38
tblWater	OutdoorWaterUseRate	4,757,356.80	6,896,999.80
tblWater	OutdoorWaterUseRate	26,095,171.60	24,452,999.29
tblWater	OutdoorWaterUseRate	21,153,812.45	24,845,167.82
tblWater	OutdoorWaterUseRate	59,216.26	1,253,999.96
tblWater	OutdoorWaterUseRate	25,384,557.54	90,298,564.81
tblWater	OutdoorWaterUseRate	31,094,050.53	77,908,074.53
tblWater	OutdoorWaterUseRate	816,315.16	11,612,415.39
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	NumberCatalytic	33.45	0.00
tblWoodstoves	NumberCatalytic	25.75	0.00
tblWoodstoves	NumberCatalytic	37.85	0.00
tblWoodstoves	NumberNoncatalytic	33.45	0.00
tblWoodstoves	NumberNoncatalytic	25.75	0.00
tblWoodstoves	NumberNoncatalytic	37.85	0.00

Existing_WatermanSP2035Rates

San Bernardino-South Coast County, Summer

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	478.0205	3.8581	355.6520	8.4800e-003		28.5525	28.5525		28.5435	28.5435	2,633.6128	13,905.5649	16,539.1777	0.5374	0.4820	16,699.8872
Energy	2.5953	22.7982	13.9884	0.1416		1.7931	1.7931		1.7931	1.7931		28,311.7722	28,311.7722	0.5426	0.5191	28,484.0730
Mobile	192.8757	483.2653	2,279.5769	10.0293	627.3860	13.5223	640.9082	167.6067	12.4728	180.0795		721,815.2263	721,815.2263	17.2031		722,176.4919
Total	**673.4915**	**509.9216**	**2,649.2173**	**10.1793**	**627.3860**	**43.8679**	**671.2538**	**167.6067**	**42.8094**	**210.4161**	**2,633.6128**	**764,032.5633**	**766,666.1761**	**18.2832**	**1.0011**	**767,360.4521**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	478.0205	3.8581	355.6520	8.4800e-003		28.5525	28.5525		28.5435	28.5435	2,633.6128	13,905.5649	16,539.1777	0.5374	0.4820	16,699.8872
Energy	2.5953	22.7982	13.9884	0.1416		1.7931	1.7931		1.7931	1.7931		28,311.7722	28,311.7722	0.5426	0.5191	28,484.0730
Mobile	192.8757	483.2653	2,279.5769	10.0293	627.3860	13.5223	640.9082	167.6067	12.4728	180.0795		721,815.2263	721,815.2263	17.2031		722,176.4919
Total	**673.4915**	**509.9216**	**2,649.2173**	**10.1793**	**627.3860**	**43.8679**	**671.2538**	**167.6067**	**42.8094**	**210.4161**	**2,633.6128**	**764,032.5633**	**766,666.1761**	**18.2832**	**1.0011**	**767,360.4521**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	192.8757	483.2653	2,279.5769	10.0293	627.3860	13.5223	640.9082	167.6067	12.4728	180.0795		721,815.2263	721,815.2263	17.2031		722,176.4919
Unmitigated	192.8757	483.2653	2,279.5769	10.0293	627.3860	13.5223	640.9082	167.6067	12.4728	180.0795		721,815.2263	721,815.2263	17.2031		722,176.4919

Existing_WatermanSP2035Rates

San Bernardino-South Coast County, Summer

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	2,247.84	1,685.88	1418.28	6,682,858	6,682,858
Automobile Care Center	12,310.87	4,714.97	4714.97	33,072,998	33,072,998
City Park	43.70	389.16	389.16	464,438	464,438
Elementary School	330.85	0.00	0.00	770,748	770,748
Fast Food Restaurant with Drive Thru	11,071.21	16,112.77	12111.41	38,941,706	38,941,706
General Light Industry	137.03	19.96	10.13	333,253	333,253
General Office Building	181.47	40.40	17.27	449,622	449,622
Golf Course	81.26	102.00	130.90	297,816	297,816
High School	361.20	130.20	54.60	927,554	927,554
Medical Office Building	19,925.35	4,945.85	851.60	49,119,247	49,119,247
Mobile Home Park	1,297.80	890.95	767.35	3,795,990	3,795,990
Other Asphalt Surfaces	0.00	0.00	0.00		
Place of Worship	4.26	6.34	22.40	23,312	23,312
Regional Shopping Center	12,060.65	14,118.29	7129.04	37,996,041	37,996,041
Single Family Housing	3,641.17	3,792.57	3300.52	11,787,282	11,787,282
Supermarket	11,059.30	19,210.85	18005.35	43,103,511	43,103,511
Total	74,753.96	66,160.19	48,922.98	227,766,376	227,766,376

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	8.96	8.96	8.96	40.20	19.20	40.60	100	0	0
Automobile Care Center	8.96	8.96	8.96	33.00	48.00	19.00	100	0	0
City Park	8.96	8.96	8.96	33.00	48.00	19.00	100	0	0
Elementary School	8.96	8.96	8.96	65.00	30.00	5.00	100	0	0
Fast Food Restaurant with Drive Thru	8.96	8.96	8.96	2.20	78.80	19.00	100	0	0
General Light Industry	8.96	8.96	8.96	59.00	28.00	13.00	100	0	0
General Office Building	8.96	8.96	8.96	33.00	48.00	19.00	100	0	0
Golf Course	8.96	8.96	8.96	33.00	48.00	19.00	100	0	0
High School	8.96	8.96	8.96	77.80	17.20	5.00	100	0	0
Medical Office Building	8.96	8.96	8.96	29.60	51.40	19.00	100	0	0
Mobile Home Park	8.96	8.96	8.96	40.20	19.20	40.60	100	0	0
Other Asphalt Surfaces	8.96	8.96	8.96	0.00	0.00	0.00	0	0	0
Place of Worship	8.96	8.96	8.96	0.00	95.00	5.00	100	0	0
Regional Shopping Center	8.96	8.96	8.96	16.30	64.70	19.00	100	0	0
Single Family Housing	8.96	8.96	8.96	40.20	19.20	40.60	100	0	0
Supermarket	8.96	8.96	8.96	6.50	74.50	19.00	100	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.445160	0.068315	0.180257	0.161061	0.057208	0.009197	0.016142	0.050774	0.001074	0.001468	0.004084	0.000577	0.004683

Existing_WatermanSP2035Rates

San Bernardino-South Coast County, Summer

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	2.5953	22.7982	13.9884	0.1416		1.7931	1.7931		1.7931	1.7931		28,311.7722	28,311.7722	0.5426	0.5191	28,484.0730
NaturalGas Unmitigated	2.5953	22.7982	13.9884	0.1416		1.7931	1.7931		1.7931	1.7931		28,311.7722	28,311.7722	0.5426	0.5191	28,484.0730

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Automobile Care Center	36543.2	0.3941	3.5827	3.0094	0.0215		0.2723	0.2723		0.2723	0.2723		4,299.1964	4,299.1964	0.0824	0.0788	4,325.3606
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Elementary School	1147.21	0.0124	0.1125	0.0945	6.7000e-004		8.5500e-003	8.5500e-003		8.5500e-003	8.5500e-003		134.9662	134.9662	2.5900e-003	2.4700e-003	135.7876
Fast Food Restaurant with Drive Thru	33809	0.3646	3.3146	2.7843	0.0199		0.2519	0.2519		0.2519	0.2519		3,977.5298	3,977.5298	0.0762	0.0729	4,001.7364
General Light Industry	2765.52	0.0298	0.2711	0.2278	1.6300e-003		0.0206	0.0206		0.0206	0.0206		325.3549	325.3549	6.2400e-003	5.9600e-003	327.3350
General Office Building	374.87	4.0400e-003	0.0368	0.0309	2.2000e-004		2.7900e-003	2.7900e-003		2.7900e-003	2.7900e-003		44.1024	44.1024	8.5000e-004	8.1000e-004	44.3708
Golf Course	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
High School	1502.09	0.0162	0.1473	0.1237	8.8000e-004		0.0112	0.0112		0.0112	0.0112		176.7160	176.7160	3.3900e-003	3.2400e-003	177.7914
Medical Office Building	12563.2	0.1355	1.2317	1.0346	7.3900e-003		0.0936	0.0936		0.0936	0.0936		1,478.0237	1,478.0237	0.0283	0.0271	1,487.0187
Mobile Home Park	32005.6	0.3452	2.9495	1.2551	0.0188		0.2385	0.2385		0.2385	0.2385		3,765.3613	3,765.3613	0.0722	0.0690	3,788.2767
Apartments Low Rise	26699.6	0.2879	2.4606	1.0470	0.0157		0.1989	0.1989		0.1989	0.1989		3,141.1259	3,141.1259	0.0602	0.0576	3,160.2423
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Place of Worship	112.441	1.2100e-003	0.0110	9.2600e-003	7.0000e-005		8.4000e-004	8.4000e-004		8.4000e-004	8.4000e-004		13.2283	13.2283	2.5000e-004	2.4000e-004	13.3088
Regional Shopping Center	3967.6	0.0428	0.3890	0.3267	2.3300e-003		0.0296	0.0296		0.0296	0.0296		466.7769	466.7769	8.9500e-003	8.5600e-003	469.6176
Single Family Housing	76441.8	0.8244	7.0446	2.9977	0.0450		0.5696	0.5696		0.5696	0.5696		8,993.1527	8,993.1527	0.1724	0.1649	9,047.8835
Supermarket	12718	0.1372	1.2469	1.0474	7.4800e-003		0.0948	0.0948		0.0948	0.0948		1,496.2380	1,496.2380	0.0287	0.0274	1,505.3438
Total		**2.5953**	**22.7982**	**13.9884**	**0.1416**		**1.7931**	**1.7931**		**1.7931**	**1.7931**		**28,311.7722**	**28,311.7722**	**0.5427**	**0.5190**	**28,484.0730**

Existing_WatermanSP2035Rates

San Bernardino-South Coast County, Summer

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Automobile Care Center	36.5432	0.3941	3.5827	3.0094	0.0215		0.2723	0.2723		0.2723	0.2723		4,299.1964	4,299.1964	0.0824	0.0788	4,325.3606
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Elementary School	1.14721	0.0124	0.1125	0.0945	6.7000e-004		8.5500e-003	8.5500e-003		8.5500e-003	8.5500e-003		134.9662	134.9662	2.5900e-003	2.4700e-003	135.7876
Fast Food Restaurant with Drive Thru	33.809	0.3646	3.3146	2.7843	0.0199		0.2519	0.2519		0.2519	0.2519		3,977.5298	3,977.5298	0.0762	0.0729	4,001.7364
General Light Industry	2.76552	0.0298	0.2711	0.2278	1.6300e-003		0.0206	0.0206		0.0206	0.0206		325.3549	325.3549	6.2400e-003	5.9600e-003	327.3350
General Office Building	0.37487	4.0400e-003	0.0368	0.0309	2.2000e-004		2.7900e-003	2.7900e-003		2.7900e-003	2.7900e-003		44.1024	44.1024	8.5000e-004	8.1000e-004	44.3708
Golf Course	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
High School	1.50209	0.0162	0.1473	0.1237	8.8000e-004		0.0112	0.0112		0.0112	0.0112		176.7160	176.7160	3.3900e-003	3.2400e-003	177.7914
Medical Office Building	12.5632	0.1355	1.2317	1.0346	7.3900e-003		0.0936	0.0936		0.0936	0.0936		1,478.0237	1,478.0237	0.0283	0.0271	1,487.0187
Mobile Home Park	32.0056	0.3452	2.9495	1.2551	0.0188		0.2385	0.2385		0.2385	0.2385		3,765.3613	3,765.3613	0.0722	0.0690	3,788.2767
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Apartments Low Rise	26.6996	0.2879	2.4606	1.0470	0.0157		0.1989	0.1989		0.1989	0.1989		3,141.1259	3,141.1259	0.0602	0.0576	3,160.2423
Place of Worship	0.112441	1.2100e-003	0.0110	9.2600e-003	7.0000e-005		8.4000e-004	8.4000e-004		8.4000e-004	8.4000e-004		13.2283	13.2283	2.5000e-004	2.4000e-004	13.3088
Regional Shopping Center	3.9676	0.0428	0.3890	0.3267	2.3300e-003		0.0296	0.0296		0.0296	0.0296		466.7769	466.7769	8.9500e-003	8.5600e-003	469.6176
Single Family Housing	76.4418	0.8244	7.0446	2.9977	0.0450		0.5696	0.5696		0.5696	0.5696		8,993.1527	8,993.1527	0.1724	0.1649	9,047.8835
Supermarket	12.718	0.1372	1.2469	1.0474	7.4800e-003		0.0948	0.0948		0.0948	0.0948		1,496.2380	1,496.2380	0.0287	0.0274	1,505.3438
Total		**2.5953**	**22.7982**	**13.9884**	**0.1416**		**1.7931**	**1.7931**		**1.7931**	**1.7931**		**28,311.7722**	**28,311.7722**	**0.5427**	**0.5190**	**28,484.0730**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	478.0205	3.8581	355.6520	8.4800e-003		28.5525	28.5525		28.5435	28.5435	2,633.6128	13,905.5649	16,539.1777	0.5374	0.4820	16,699.8872
Unmitigated	478.0205	3.8581	355.6520	8.4800e-003		28.5525	28.5525		28.5435	28.5435	2,633.6128	13,905.5649	16,539.1777	0.5374	0.4820	16,699.8872

Existing_WatermanSP2035Rates

San Bernardino-South Coast County, Summer

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	63.0897					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	231.4980					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	178.6297	2.0140	195.7300	0.0000		27.6633	27.6633		27.6542	27.6542	2,633.6128	13,616.4706	16,250.0834	0.2610	0.4820	16,404.9880
Landscaping	4.8031	1.8442	159.9220	8.4800e-003		0.8893	0.8893		0.8893	0.8893		289.0943	289.0943	0.2764		294.8992
Total	**478.0205**	**3.8582**	**355.6520**	**8.4800e-003**		**28.5525**	**28.5525**		**28.5435**	**28.5435**	**2,633.6128**	**13,905.5649**	**16,539.1777**	**0.5374**	**0.4820**	**16,699.8872**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	63.0897					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	231.4980					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	178.6297	2.0140	195.7300	0.0000		27.6633	27.6633		27.6542	27.6542	2,633.6128	13,616.4706	16,250.0834	0.2610	0.4820	16,404.9880
Landscaping	4.8031	1.8442	159.9220	8.4800e-003		0.8893	0.8893		0.8893	0.8893		289.0943	289.0943	0.2764		294.8992
Total	**478.0205**	**3.8582**	**355.6520**	**8.4800e-003**		**28.5525**	**28.5525**		**28.5435**	**28.5435**	**2,633.6128**	**13,905.5649**	**16,539.1777**	**0.5374**	**0.4820**	**16,699.8872**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Existing_WatermanSP2035Rates

San Bernardino-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	32.58	1000sqft	15.00	32,578.00	0
Medical Office Building	1,091.80	1000sqft	39.00	1,091,802.00	0
Elementary School	509.00	Student	15.00	42,554.12	0
High School	420.00	Student	5.00	55,717.61	0
Place of Worship	1.21	1000sqft	2.00	1,211.00	0
General Light Industry	29.79	1000sqft	10.00	29,785.00	0
Other Asphalt Surfaces	71.00	Acre	71.00	3,092,760.00	0
City Park	46.00	Acre	46.00	2,003,760.00	0
Fast Food Restaurant with Drive Thru	44.17	1000sqft	10.00	44,175.00	0
Golf Course	34.00	Acre	34.00	1,481,040.00	0
Apartments Low Rise	669.00	Dwelling Unit	58.00	669,000.00	2118
Mobile Home Park	515.00	Dwelling Unit	40.00	618,000.00	1630
Single Family Housing	757.00	Dwelling Unit	134.00	1,362,600.00	2396
Automobile Care Center	393.57	1000sqft	73.00	393,575.00	0
Regional Shopping Center	559.14	1000sqft	135.00	559,141.00	0
Supermarket	214.12	1000sqft	23.00	214,118.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2035
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - See Assumptions

Construction Phase - Existing - no construction

Off-road Equipment - Existing no construction

Trips and VMT - Existing no construction

Architectural Coating - Existing no construction

Vehicle Trips - See Assumptions

Vechicle Emission Factors -

Vechicle Emission Factors -

Vechicle Emission Factors -

Woodstoves - See Assumptions

Area Coating -

Energy Use -

Water And Wastewater - See assumptions

Water Mitigation - Water Use based on WSA and so additional reductions are not applied.

Existing_WatermanSP2035Rates

San Bernardino-South Coast County, Winter

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	0.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	0.00
tblArchitecturalCoating	EF_Residential_Exterior	100.00	0.00
tblArchitecturalCoating	EF_Residential_Interior	50.00	0.00
tblConstructionPhase	NumDays	880.00	1.00
tblFireplaces	NumberGas	568.65	0.00
tblFireplaces	NumberGas	437.75	0.00
tblFireplaces	NumberGas	643.45	643.00
tblFireplaces	NumberNoFireplace	66.90	669.00
tblFireplaces	NumberNoFireplace	51.50	515.00
tblFireplaces	NumberNoFireplace	75.70	76.00
tblFireplaces	NumberWood	33.45	0.00
tblFireplaces	NumberWood	25.75	0.00
tblFireplaces	NumberWood	37.85	38.00
tblLandUse	LandUseSquareFeet	32,580.00	32,578.00
tblLandUse	LandUseSquareFeet	1,091,800.00	1,091,802.00
tblLandUse	LandUseSquareFeet	1,210.00	1,211.00
tblLandUse	LandUseSquareFeet	29,790.00	29,785.00
tblLandUse	LandUseSquareFeet	44,170.00	44,175.00
tblLandUse	LandUseSquareFeet	393,570.00	393,575.00
tblLandUse	LandUseSquareFeet	559,140.00	559,141.00
tblLandUse	LandUseSquareFeet	214,120.00	214,118.00
tblLandUse	LotAcreage	0.75	15.00
tblLandUse	LotAcreage	25.06	39.00
tblLandUse	LotAcreage	0.98	15.00
tblLandUse	LotAcreage	1.28	5.00
tblLandUse	LotAcreage	0.03	2.00
tblLandUse	LotAcreage	0.68	10.00
tblLandUse	LotAcreage	1.01	10.00
tblLandUse	LotAcreage	41.81	58.00
tblLandUse	LotAcreage	64.88	40.00
tblLandUse	LotAcreage	245.78	134.00
tblLandUse	LotAcreage	9.04	73.00
tblLandUse	LotAcreage	12.84	135.00
tblLandUse	LotAcreage	4.92	23.00
tblLandUse	Population	1,913.00	2,118.00
tblLandUse	Population	1,473.00	1,630.00
tblLandUse	Population	2,165.00	2,396.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblProjectCharacteristics	OperationalYear	2014	2035
tblSolidWaste	SolidWasteGenerationRate	307.74	648.00
tblSolidWaste	SolidWasteGenerationRate	1,503.44	431.00
tblSolidWaste	SolidWasteGenerationRate	508.79	48.00
tblSolidWaste	SolidWasteGenerationRate	36.94	33.00
tblSolidWaste	SolidWasteGenerationRate	30.30	36.00
tblSolidWaste	SolidWasteGenerationRate	11,791.44	1,196.00

Existing_WatermanSP2035Rates

San Bernardino-South Coast County, Winter

tblSolidWaste	SolidWasteGenerationRate	236.90	940.00
tblSolidWaste	SolidWasteGenerationRate	6.90	1.00
tblSolidWaste	SolidWasteGenerationRate	587.10	612.00
tblSolidWaste	SolidWasteGenerationRate	982.36	1,382.00
tblSolidWaste	SolidWasteGenerationRate	1,207.64	234.00
tblTripsAndVMT	WorkerTripNumber	939.00	0.00
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CNW_TL	6.90	8.96
tblVehicleTrips	CNW_TL	6.90	8.96
tblVehicleTrips	CNW_TL	6.90	8.96
tblVehicleTrips	CNW_TL	6.90	8.96
tblVehicleTrips	CNW_TL	6.90	8.96
tblVehicleTrips	CNW_TL	6.90	8.96
tblVehicleTrips	CNW_TL	6.90	8.96
tblVehicleTrips	CNW_TL	6.90	8.96
tblVehicleTrips	CNW_TL	6.90	8.96
tblVehicleTrips	CNW_TL	6.90	8.96
tblVehicleTrips	CNW_TL	6.90	8.96
tblVehicleTrips	CNW_TL	6.90	8.96
tblVehicleTrips	CNW_TL	6.90	8.96
tblVehicleTrips	CW_TL	16.60	8.96
tblVehicleTrips	CW_TL	16.60	8.96
tblVehicleTrips	CW_TL	16.60	8.96
tblVehicleTrips	CW_TL	16.60	8.96
tblVehicleTrips	CW_TL	16.60	8.96
tblVehicleTrips	CW_TL	16.60	8.96
tblVehicleTrips	CW_TL	16.60	8.96
tblVehicleTrips	CW_TL	16.60	8.96
tblVehicleTrips	CW_TL	16.60	8.96
tblVehicleTrips	CW_TL	16.60	8.96
tblVehicleTrips	CW_TL	16.60	8.96
tblVehicleTrips	CW_TL	16.60	8.96
tblVehicleTrips	CW_TL	16.60	8.96
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	51.00	0.00

Existing_WatermanSP2035Rates

San Bernardino-South Coast County, Winter

tblVehicleTrips	DV_TP	28.00	0.00
tblVehicleTrips	DV_TP	25.00	0.00
tblVehicleTrips	DV_TP	21.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	DV_TP	19.00	0.00
tblVehicleTrips	DV_TP	39.00	0.00
tblVehicleTrips	DV_TP	19.00	0.00
tblVehicleTrips	DV_TP	30.00	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	25.00	0.00
tblVehicleTrips	DV_TP	35.00	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	30.00	0.00
tblVehicleTrips	HO_TL	8.70	8.96
tblVehicleTrips	HO_TL	8.70	8.96
tblVehicleTrips	HO_TL	8.70	8.96
tblVehicleTrips	HS_TL	5.90	8.96
tblVehicleTrips	HS_TL	5.90	8.96
tblVehicleTrips	HS_TL	5.90	8.96
tblVehicleTrips	HW_TL	14.70	8.96
tblVehicleTrips	HW_TL	14.70	8.96
tblVehicleTrips	HW_TL	14.70	8.96
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	28.00	0.00
tblVehicleTrips	PB_TP	6.00	0.00
tblVehicleTrips	PB_TP	12.00	0.00
tblVehicleTrips	PB_TP	50.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	4.00	0.00
tblVehicleTrips	PB_TP	9.00	0.00
tblVehicleTrips	PB_TP	6.00	0.00
tblVehicleTrips	PB_TP	10.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	36.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	21.00	100.00
tblVehicleTrips	PR_TP	66.00	100.00
tblVehicleTrips	PR_TP	63.00	100.00
tblVehicleTrips	PR_TP	29.00	100.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	PR_TP	77.00	100.00
tblVehicleTrips	PR_TP	52.00	100.00
tblVehicleTrips	PR_TP	75.00	100.00
tblVehicleTrips	PR_TP	60.00	100.00

Existing_WatermanSP2035Rates

San Bernardino-South Coast County, Winter

tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	64.00	100.00
tblVehicleTrips	PR_TP	54.00	100.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	34.00	100.00
tblVehicleTrips	ST_TR	7.16	2.52
tblVehicleTrips	ST_TR	62.00	11.98
tblVehicleTrips	ST_TR	1.59	8.46
tblVehicleTrips	ST_TR	722.03	364.79
tblVehicleTrips	ST_TR	1.32	0.67
tblVehicleTrips	ST_TR	2.37	1.24
tblVehicleTrips	ST_TR	5.82	3.00
tblVehicleTrips	ST_TR	0.61	0.31
tblVehicleTrips	ST_TR	8.96	4.53
tblVehicleTrips	ST_TR	5.00	1.73
tblVehicleTrips	ST_TR	10.37	5.24
tblVehicleTrips	ST_TR	49.97	25.25
tblVehicleTrips	ST_TR	10.08	5.01
tblVehicleTrips	ST_TR	177.59	89.72
tblVehicleTrips	SU_TR	6.07	2.12
tblVehicleTrips	SU_TR	62.00	11.98
tblVehicleTrips	SU_TR	1.59	8.46
tblVehicleTrips	SU_TR	542.72	274.20
tblVehicleTrips	SU_TR	0.68	0.34
tblVehicleTrips	SU_TR	0.98	0.53
tblVehicleTrips	SU_TR	5.88	3.85
tblVehicleTrips	SU_TR	0.25	0.13
tblVehicleTrips	SU_TR	1.55	0.78
tblVehicleTrips	SU_TR	4.36	1.49
tblVehicleTrips	SU_TR	36.63	18.51
tblVehicleTrips	SU_TR	25.24	12.75
tblVehicleTrips	SU_TR	8.77	4.36
tblVehicleTrips	SU_TR	166.44	84.09
tblVehicleTrips	WD_TR	6.59	3.36
tblVehicleTrips	WD_TR	62.00	31.28
tblVehicleTrips	WD_TR	1.59	0.95
tblVehicleTrips	WD_TR	1.29	0.65
tblVehicleTrips	WD_TR	496.12	250.65
tblVehicleTrips	WD_TR	6.97	4.60
tblVehicleTrips	WD_TR	11.01	5.57
tblVehicleTrips	WD_TR	5.04	2.39
tblVehicleTrips	WD_TR	1.71	0.86
tblVehicleTrips	WD_TR	36.13	18.25
tblVehicleTrips	WD_TR	4.99	2.52
tblVehicleTrips	WD_TR	9.11	3.52
tblVehicleTrips	WD_TR	42.94	21.57
tblVehicleTrips	WD_TR	9.57	4.81

Existing_WatermanSP2035Rates

San Bernardino-South Coast County, Winter

tblVehicleTrips	WD_TR	102.24	51.65
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	IndoorWaterUseRate	43,588,043.14	53,292,125.49
tblWater	IndoorWaterUseRate	37,027,501.46	29,104,232.84
tblWater	IndoorWaterUseRate	0.00	24,953,160.83
tblWater	IndoorWaterUseRate	1,233,938.16	4,882,140.16
tblWater	IndoorWaterUseRate	13,407,084.08	4,368,123.74
tblWater	IndoorWaterUseRate	6,888,937.50	3,933,004.44
tblWater	IndoorWaterUseRate	5,790,565.51	8,136,900.27
tblWater	IndoorWaterUseRate	0.00	18,443,640.62
tblWater	IndoorWaterUseRate	1,850,083.20	5,967,060.20
tblWater	IndoorWaterUseRate	136,999,650.91	21,155,940.71
tblWater	IndoorWaterUseRate	33,554,323.20	21,495,232.18
tblWater	IndoorWaterUseRate	37,859.58	1,084,920.04
tblWater	IndoorWaterUseRate	41,416,909.66	78,123,385.19
tblWater	IndoorWaterUseRate	49,321,597.40	67,403,535.47

Existing_WatermanSP2035Rates

San Bernardino-South Coast County, Winter

tblWater	IndoorWaterUseRate	26,394,190.17	10,046,684.61
tblWater	OutdoorWaterUseRate	27,479,418.50	61,597,464.51
tblWater	OutdoorWaterUseRate	22,694,275.09	33,639,997.16
tblWater	OutdoorWaterUseRate	54,808,142.08	28,841,999.17
tblWater	OutdoorWaterUseRate	3,172,983.84	5,642,999.84
tblWater	OutdoorWaterUseRate	855,771.32	5,048,876.26
tblWater	OutdoorWaterUseRate	0.00	4,545,945.56
tblWater	OutdoorWaterUseRate	3,549,056.28	9,404,999.73
tblWater	OutdoorWaterUseRate	40,510,365.89	21,317,999.38
tblWater	OutdoorWaterUseRate	4,757,356.80	6,896,999.80
tblWater	OutdoorWaterUseRate	26,095,171.60	24,452,999.29
tblWater	OutdoorWaterUseRate	21,153,812.45	24,845,167.82
tblWater	OutdoorWaterUseRate	59,216.26	1,253,999.96
tblWater	OutdoorWaterUseRate	25,384,557.54	90,298,564.81
tblWater	OutdoorWaterUseRate	31,094,050.53	77,908,074.53
tblWater	OutdoorWaterUseRate	816,315.16	11,612,415.39
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	NumberCatalytic	33.45	0.00
tblWoodstoves	NumberCatalytic	25.75	0.00
tblWoodstoves	NumberCatalytic	37.85	0.00
tblWoodstoves	NumberNoncatalytic	33.45	0.00
tblWoodstoves	NumberNoncatalytic	25.75	0.00
tblWoodstoves	NumberNoncatalytic	37.85	0.00

Existing_WatermanSP2035Rates

San Bernardino-South Coast County, Winter

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	478.0205	3.8581	355.6520	8.4800e-003		28.5525	28.5525		28.5435	28.5435	2,633.6128	13,905.5649	16,539.1777	0.5374	0.4820	16,699.8872
Energy	2.5953	22.7982	13.9884	0.1416		1.7931	1.7931		1.7931	1.7931		28,311.7722	28,311.7722	0.5426	0.5191	28,484.0730
Mobile	187.3483	501.4777	2,161.7612	9.3553	627.3860	13.5665	640.9525	167.6067	12.5135	180.1202		678,231.5479	678,231.5479	17.2473		678,593.7418
Total	**667.9641**	**528.1340**	**2,531.4016**	**9.5054**	**627.3860**	**43.9121**	**671.2981**	**167.6067**	**42.8501**	**210.4568**	**2,633.6128**	**720,448.8850**	**723,082.4978**	**18.3274**	**1.0011**	**723,777.7020**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	478.0205	3.8581	355.6520	8.4800e-003		28.5525	28.5525		28.5435	28.5435	2,633.6128	13,905.5649	16,539.1777	0.5374	0.4820	16,699.8872
Energy	2.5953	22.7982	13.9884	0.1416		1.7931	1.7931		1.7931	1.7931		28,311.7722	28,311.7722	0.5426	0.5191	28,484.0730
Mobile	187.3483	501.4777	2,161.7612	9.3553	627.3860	13.5665	640.9525	167.6067	12.5135	180.1202		678,231.5479	678,231.5479	17.2473		678,593.7418
Total	**667.9641**	**528.1340**	**2,531.4016**	**9.5054**	**627.3860**	**43.9121**	**671.2981**	**167.6067**	**42.8501**	**210.4568**	**2,633.6128**	**720,448.8850**	**723,082.4978**	**18.3274**	**1.0011**	**723,777.7020**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	187.3483	501.4777	2,161.7612	9.3553	627.3860	13.5665	640.9525	167.6067	12.5135	180.1202		678,231.5479	678,231.5479	17.2473		678,593.7418
Unmitigated	187.3483	501.4777	2,161.7612	9.3553	627.3860	13.5665	640.9525	167.6067	12.5135	180.1202		678,231.5479	678,231.5479	17.2473		678,593.7418

Existing_WatermanSP2035Rates

San Bernardino-South Coast County, Winter

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	2,247.84	1,685.88	1418.28	6,682,858	6,682,858
Automobile Care Center	12,310.87	4,714.97	4714.97	33,072,998	33,072,998
City Park	43.70	389.16	389.16	464,438	464,438
Elementary School	330.85	0.00	0.00	770,748	770,748
Fast Food Restaurant with Drive Thru	11,071.21	16,112.77	12111.41	38,941,706	38,941,706
General Light Industry	137.03	19.96	10.13	333,253	333,253
General Office Building	181.47	40.40	17.27	449,622	449,622
Golf Course	81.26	102.00	130.90	297,816	297,816
High School	361.20	130.20	54.60	927,554	927,554
Medical Office Building	19,925.35	4,945.85	851.60	49,119,247	49,119,247
Mobile Home Park	1,297.80	890.95	767.35	3,795,990	3,795,990
Other Asphalt Surfaces	0.00	0.00	0.00		
Place of Worship	4.26	6.34	22.40	23,312	23,312
Regional Shopping Center	12,060.65	14,118.29	7129.04	37,996,041	37,996,041
Single Family Housing	3,641.17	3,792.57	3300.52	11,787,282	11,787,282
Supermarket	11,059.30	19,210.85	18005.35	43,103,511	43,103,511
Total	74,753.96	66,160.19	48,922.98	227,766,376	227,766,376

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	8.96	8.96	8.96	40.20	19.20	40.60	100	0	0
Automobile Care Center	8.96	8.96	8.96	33.00	48.00	19.00	100	0	0
City Park	8.96	8.96	8.96	33.00	48.00	19.00	100	0	0
Elementary School	8.96	8.96	8.96	65.00	30.00	5.00	100	0	0
Fast Food Restaurant with Drive Thru	8.96	8.96	8.96	2.20	78.80	19.00	100	0	0
General Light Industry	8.96	8.96	8.96	59.00	28.00	13.00	100	0	0
General Office Building	8.96	8.96	8.96	33.00	48.00	19.00	100	0	0
Golf Course	8.96	8.96	8.96	33.00	48.00	19.00	100	0	0
High School	8.96	8.96	8.96	77.80	17.20	5.00	100	0	0
Medical Office Building	8.96	8.96	8.96	29.60	51.40	19.00	100	0	0
Mobile Home Park	8.96	8.96	8.96	40.20	19.20	40.60	100	0	0
Other Asphalt Surfaces	8.96	8.96	8.96	0.00	0.00	0.00	0	0	0
Place of Worship	8.96	8.96	8.96	0.00	95.00	5.00	100	0	0
Regional Shopping Center	8.96	8.96	8.96	16.30	64.70	19.00	100	0	0
Single Family Housing	8.96	8.96	8.96	40.20	19.20	40.60	100	0	0
Supermarket	8.96	8.96	8.96	6.50	74.50	19.00	100	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.445160	0.068315	0.180257	0.161061	0.057208	0.009197	0.016142	0.050774	0.001074	0.001468	0.004084	0.000577	0.004683

Existing_WatermanSP2035Rates

San Bernardino-South Coast County, Winter

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	2.5953	22.7982	13.9884	0.1416		1.7931	1.7931		1.7931	1.7931		28,311.7722	28,311.7722	0.5426	0.5191	28,484.0730
NaturalGas Unmitigated	2.5953	22.7982	13.9884	0.1416		1.7931	1.7931		1.7931	1.7931		28,311.7722	28,311.7722	0.5426	0.5191	28,484.0730

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Automobile Care Center	36543.2	0.3941	3.5827	3.0094	0.0215		0.2723	0.2723		0.2723	0.2723		4,299.1964	4,299.1964	0.0824	0.0788	4,325.3606
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Elementary School	1147.21	0.0124	0.1125	0.0945	6.7000e-004		8.5500e-003	8.5500e-003		8.5500e-003	8.5500e-003		134.9662	134.9662	2.5900e-003	2.4700e-003	135.7876
Fast Food Restaurant with Drive Thru	33809	0.3646	3.3146	2.7843	0.0199		0.2519	0.2519		0.2519	0.2519		3,977.5298	3,977.5298	0.0762	0.0729	4,001.7364
General Light Industry	2765.52	0.0298	0.2711	0.2278	1.6300e-003		0.0206	0.0206		0.0206	0.0206		325.3549	325.3549	6.2400e-003	5.9600e-003	327.3350
General Office Building	374.87	4.0400e-003	0.0368	0.0309	2.2000e-004		2.7900e-003	2.7900e-003		2.7900e-003	2.7900e-003		44.1024	44.1024	8.5000e-004	8.1000e-004	44.3708
Golf Course	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
High School	1502.09	0.0162	0.1473	0.1237	8.8000e-004		0.0112	0.0112		0.0112	0.0112		176.7160	176.7160	3.3900e-003	3.2400e-003	177.7914
Medical Office Building	12563.2	0.1355	1.2317	1.0346	7.3900e-003		0.0936	0.0936		0.0936	0.0936		1,478.0237	1,478.0237	0.0283	0.0271	1,487.0187
Mobile Home Park	32005.6	0.3452	2.9495	1.2551	0.0188		0.2385	0.2385		0.2385	0.2385		3,765.3613	3,765.3613	0.0722	0.0690	3,788.2767
Apartments Low Rise	26699.6	0.2879	2.4606	1.0470	0.0157		0.1989	0.1989		0.1989	0.1989		3,141.1259	3,141.1259	0.0602	0.0576	3,160.2423
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Place of Worship	112.441	1.2100e-003	0.0110	9.2600e-003	7.0000e-005		8.4000e-004	8.4000e-004		8.4000e-004	8.4000e-004		13.2283	13.2283	2.5000e-004	2.4000e-004	13.3088
Regional Shopping Center	3967.6	0.0428	0.3890	0.3267	2.3300e-003		0.0296	0.0296		0.0296	0.0296		466.7769	466.7769	8.9500e-003	8.5600e-003	469.6176
Single Family Housing	76441.8	0.8244	7.0446	2.9977	0.0450		0.5696	0.5696		0.5696	0.5696		8,993.1527	8,993.1527	0.1724	0.1649	9,047.8835
Supermarket	12718	0.1372	1.2469	1.0474	7.4800e-003		0.0948	0.0948		0.0948	0.0948		1,496.2380	1,496.2380	0.0287	0.0274	1,505.3438
Total		**2.5953**	**22.7982**	**13.9884**	**0.1416**		**1.7931**	**1.7931**		**1.7931**	**1.7931**		**28,311.7722**	**28,311.7722**	**0.5427**	**0.5190**	**28,484.0730**

Existing_WatermanSP2035Rates

San Bernardino-South Coast County, Winter

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Automobile Care Center	36.5432	0.3941	3.5827	3.0094	0.0215		0.2723	0.2723		0.2723	0.2723		4,299.1964	4,299.1964	0.0824	0.0788	4,325.3606
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Elementary School	1.14721	0.0124	0.1125	0.0945	6.7000e-004		8.5500e-003	8.5500e-003		8.5500e-003	8.5500e-003		134.9662	134.9662	2.5900e-003	2.4700e-003	135.7876
Fast Food Restaurant with Drive Thru	33.809	0.3646	3.3146	2.7843	0.0199		0.2519	0.2519		0.2519	0.2519		3,977.5298	3,977.5298	0.0762	0.0729	4,001.7364
General Light Industry	2.76552	0.0298	0.2711	0.2278	1.6300e-003		0.0206	0.0206		0.0206	0.0206		325.3549	325.3549	6.2400e-003	5.9600e-003	327.3350
General Office Building	0.37487	4.0400e-003	0.0368	0.0309	2.2000e-004		2.7900e-003	2.7900e-003		2.7900e-003	2.7900e-003		44.1024	44.1024	8.5000e-004	8.1000e-004	44.3708
Golf Course	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
High School	1.50209	0.0162	0.1473	0.1237	8.8000e-004		0.0112	0.0112		0.0112	0.0112		176.7160	176.7160	3.3900e-003	3.2400e-003	177.7914
Medical Office Building	12.5632	0.1355	1.2317	1.0346	7.3900e-003		0.0936	0.0936		0.0936	0.0936		1,478.0237	1,478.0237	0.0283	0.0271	1,487.0187
Mobile Home Park	32.0056	0.3452	2.9495	1.2551	0.0188		0.2385	0.2385		0.2385	0.2385		3,765.3613	3,765.3613	0.0722	0.0690	3,788.2767
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Apartments Low Rise	26.6996	0.2879	2.4606	1.0470	0.0157		0.1989	0.1989		0.1989	0.1989		3,141.1259	3,141.1259	0.0602	0.0576	3,160.2423
Place of Worship	0.112441	1.2100e-003	0.0110	9.2600e-003	7.0000e-005		8.4000e-004	8.4000e-004		8.4000e-004	8.4000e-004		13.2283	13.2283	2.5000e-004	2.4000e-004	13.3088
Regional Shopping Center	3.9676	0.0428	0.3890	0.3267	2.3300e-003		0.0296	0.0296		0.0296	0.0296		466.7769	466.7769	8.9500e-003	8.5600e-003	469.6176
Single Family Housing	76.4418	0.8244	7.0446	2.9977	0.0450		0.5696	0.5696		0.5696	0.5696		8,993.1527	8,993.1527	0.1724	0.1649	9,047.8835
Supermarket	12.718	0.1372	1.2469	1.0474	7.4800e-003		0.0948	0.0948		0.0948	0.0948		1,496.2380	1,496.2380	0.0287	0.0274	1,505.3438
Total		**2.5953**	**22.7982**	**13.9884**	**0.1416**		**1.7931**	**1.7931**		**1.7931**	**1.7931**		**28,311.7722**	**28,311.7722**	**0.5427**	**0.5190**	**28,484.0730**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	478.0205	3.8581	355.6520	8.4800e-003		28.5525	28.5525		28.5435	28.5435	2,633.6128	13,905.5649	16,539.1777	0.5374	0.4820	16,699.8872
Unmitigated	478.0205	3.8581	355.6520	8.4800e-003		28.5525	28.5525		28.5435	28.5435	2,633.6128	13,905.5649	16,539.1777	0.5374	0.4820	16,699.8872

Existing_WatermanSP2035Rates

San Bernardino-South Coast County, Winter

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	63.0897					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	231.4980					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	178.6297	2.0140	195.7300	0.0000		27.6633	27.6633		27.6542	27.6542	2,633.6128	13,616.4706	16,250.0834	0.2610	0.4820	16,404.9880
Landscaping	4.8031	1.8442	159.9220	8.4800e-003		0.8893	0.8893		0.8893	0.8893		289.0943	289.0943	0.2764		294.8992
Total	**478.0205**	**3.8582**	**355.6520**	**8.4800e-003**		**28.5525**	**28.5525**		**28.5435**	**28.5435**	**2,633.6128**	**13,905.5649**	**16,539.1777**	**0.5374**	**0.4820**	**16,699.8872**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	63.0897					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	231.4980					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	178.6297	2.0140	195.7300	0.0000		27.6633	27.6633		27.6542	27.6542	2,633.6128	13,616.4706	16,250.0834	0.2610	0.4820	16,404.9880
Landscaping	4.8031	1.8442	159.9220	8.4800e-003		0.8893	0.8893		0.8893	0.8893		289.0943	289.0943	0.2764		294.8992
Total	**478.0205**	**3.8582**	**355.6520**	**8.4800e-003**		**28.5525**	**28.5525**		**28.5435**	**28.5435**	**2,633.6128**	**13,905.5649**	**16,539.1777**	**0.5374**	**0.4820**	**16,699.8872**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Existing_WatermanSP2035Rates

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	32.58	1000sqft	15.00	32,578.00	0
Medical Office Building	1,091.80	1000sqft	39.00	1,091,802.00	0
Elementary School	509.00	Student	15.00	42,554.12	0
High School	420.00	Student	5.00	55,717.61	0
Place of Worship	1.21	1000sqft	2.00	1,211.00	0
General Light Industry	29.79	1000sqft	10.00	29,785.00	0
Other Asphalt Surfaces	71.00	Acre	71.00	3,092,760.00	0
City Park	46.00	Acre	46.00	2,003,760.00	0
Fast Food Restaurant with Drive Thru	44.17	1000sqft	10.00	44,175.00	0
Golf Course	34.00	Acre	34.00	1,481,040.00	0
Apartments Low Rise	669.00	Dwelling Unit	58.00	669,000.00	2118
Mobile Home Park	515.00	Dwelling Unit	40.00	618,000.00	1630
Single Family Housing	757.00	Dwelling Unit	134.00	1,362,600.00	2396
Automobile Care Center	393.57	1000sqft	73.00	393,575.00	0
Regional Shopping Center	559.14	1000sqft	135.00	559,141.00	0
Supermarket	214.12	1000sqft	23.00	214,118.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2035
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - See Assumptions

Construction Phase - Existing - no construction

Off-road Equipment - Existing no construction

Trips and VMT - Existing no construction

Architectural Coating - Existing no construction

Vehicle Trips - See Assumptions

Vechicle Emission Factors -

Vechicle Emission Factors -

Vechicle Emission Factors -

Woodstoves - See Assumptions

Area Coating -

Energy Use -

Water And Wastewater - See assumptions

Water Mitigation - Water Use based on WSA and so additional reductions are not applied.

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Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	0.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	0.00
tblArchitecturalCoating	EF_Residential_Exterior	100.00	0.00
tblArchitecturalCoating	EF_Residential_Interior	50.00	0.00
tblConstructionPhase	NumDays	880.00	1.00
tblFireplaces	NumberGas	568.65	0.00
tblFireplaces	NumberGas	437.75	0.00
tblFireplaces	NumberGas	643.45	643.00
tblFireplaces	NumberNoFireplace	66.90	669.00
tblFireplaces	NumberNoFireplace	51.50	515.00
tblFireplaces	NumberNoFireplace	75.70	76.00
tblFireplaces	NumberWood	33.45	0.00
tblFireplaces	NumberWood	25.75	0.00
tblFireplaces	NumberWood	37.85	38.00
tblLandUse	LandUseSquareFeet	32,580.00	32,578.00
tblLandUse	LandUseSquareFeet	1,091,800.00	1,091,802.00
tblLandUse	LandUseSquareFeet	1,210.00	1,211.00
tblLandUse	LandUseSquareFeet	29,790.00	29,785.00
tblLandUse	LandUseSquareFeet	44,170.00	44,175.00
tblLandUse	LandUseSquareFeet	393,570.00	393,575.00
tblLandUse	LandUseSquareFeet	559,140.00	559,141.00
tblLandUse	LandUseSquareFeet	214,120.00	214,118.00
tblLandUse	LotAcreage	0.75	15.00
tblLandUse	LotAcreage	25.06	39.00
tblLandUse	LotAcreage	0.98	15.00
tblLandUse	LotAcreage	1.28	5.00
tblLandUse	LotAcreage	0.03	2.00
tblLandUse	LotAcreage	0.68	10.00
tblLandUse	LotAcreage	1.01	10.00
tblLandUse	LotAcreage	41.81	58.00
tblLandUse	LotAcreage	64.88	40.00
tblLandUse	LotAcreage	245.78	134.00
tblLandUse	LotAcreage	9.04	73.00
tblLandUse	LotAcreage	12.84	135.00
tblLandUse	LotAcreage	4.92	23.00
tblLandUse	Population	1,913.00	2,118.00
tblLandUse	Population	1,473.00	1,630.00
tblLandUse	Population	2,165.00	2,396.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblProjectCharacteristics	OperationalYear	2014	2035
tblSolidWaste	SolidWasteGenerationRate	307.74	648.00
tblSolidWaste	SolidWasteGenerationRate	1,503.44	431.00
tblSolidWaste	SolidWasteGenerationRate	508.79	48.00
tblSolidWaste	SolidWasteGenerationRate	36.94	33.00
tblSolidWaste	SolidWasteGenerationRate	30.30	36.00

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tblSolidWaste	SolidWasteGenerationRate	11,791.44	1,196.00
tblSolidWaste	SolidWasteGenerationRate	236.90	940.00
tblSolidWaste	SolidWasteGenerationRate	6.90	1.00
tblSolidWaste	SolidWasteGenerationRate	587.10	612.00
tblSolidWaste	SolidWasteGenerationRate	982.36	1,382.00
tblSolidWaste	SolidWasteGenerationRate	1,207.64	234.00
tblTripsAndVMT	WorkerTripNumber	939.00	0.00
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CC_TL	8.40	8.96
tblVehicleTrips	CNW_TL	6.90	8.96
tblVehicleTrips	CNW_TL	6.90	8.96
tblVehicleTrips	CNW_TL	6.90	8.96
tblVehicleTrips	CNW_TL	6.90	8.96
tblVehicleTrips	CNW_TL	6.90	8.96
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tblVehicleTrips	CNW_TL	6.90	8.96
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tblVehicleTrips	CW_TL	16.60	8.96
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tblVehicleTrips	CW_TL	16.60	8.96
tblVehicleTrips	CW_TL	16.60	8.96
tblVehicleTrips	CW_TL	16.60	8.96
tblVehicleTrips	CW_TL	16.60	8.96
tblVehicleTrips	DV_TP	11.00	0.00

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tblVehicleTrips	DV_TP	51.00	0.00
tblVehicleTrips	DV_TP	28.00	0.00
tblVehicleTrips	DV_TP	25.00	0.00
tblVehicleTrips	DV_TP	21.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	DV_TP	19.00	0.00
tblVehicleTrips	DV_TP	39.00	0.00
tblVehicleTrips	DV_TP	19.00	0.00
tblVehicleTrips	DV_TP	30.00	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	25.00	0.00
tblVehicleTrips	DV_TP	35.00	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	30.00	0.00
tblVehicleTrips	HO_TL	8.70	8.96
tblVehicleTrips	HO_TL	8.70	8.96
tblVehicleTrips	HO_TL	8.70	8.96
tblVehicleTrips	HS_TL	5.90	8.96
tblVehicleTrips	HS_TL	5.90	8.96
tblVehicleTrips	HS_TL	5.90	8.96
tblVehicleTrips	HW_TL	14.70	8.96
tblVehicleTrips	HW_TL	14.70	8.96
tblVehicleTrips	HW_TL	14.70	8.96
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	28.00	0.00
tblVehicleTrips	PB_TP	6.00	0.00
tblVehicleTrips	PB_TP	12.00	0.00
tblVehicleTrips	PB_TP	50.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	4.00	0.00
tblVehicleTrips	PB_TP	9.00	0.00
tblVehicleTrips	PB_TP	6.00	0.00
tblVehicleTrips	PB_TP	10.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
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tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	36.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	21.00	100.00
tblVehicleTrips	PR_TP	66.00	100.00
tblVehicleTrips	PR_TP	63.00	100.00
tblVehicleTrips	PR_TP	29.00	100.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	PR_TP	77.00	100.00
tblVehicleTrips	PR_TP	52.00	100.00
tblVehicleTrips	PR_TP	75.00	100.00

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tblVehicleTrips	PR_TP	60.00	100.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	64.00	100.00
tblVehicleTrips	PR_TP	54.00	100.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	34.00	100.00
tblVehicleTrips	ST_TR	7.16	2.52
tblVehicleTrips	ST_TR	62.00	11.98
tblVehicleTrips	ST_TR	1.59	8.46
tblVehicleTrips	ST_TR	722.03	364.79
tblVehicleTrips	ST_TR	1.32	0.67
tblVehicleTrips	ST_TR	2.37	1.24
tblVehicleTrips	ST_TR	5.82	3.00
tblVehicleTrips	ST_TR	0.61	0.31
tblVehicleTrips	ST_TR	8.96	4.53
tblVehicleTrips	ST_TR	5.00	1.73
tblVehicleTrips	ST_TR	10.37	5.24
tblVehicleTrips	ST_TR	49.97	25.25
tblVehicleTrips	ST_TR	10.08	5.01
tblVehicleTrips	ST_TR	177.59	89.72
tblVehicleTrips	SU_TR	6.07	2.12
tblVehicleTrips	SU_TR	62.00	11.98
tblVehicleTrips	SU_TR	1.59	8.46
tblVehicleTrips	SU_TR	542.72	274.20
tblVehicleTrips	SU_TR	0.68	0.34
tblVehicleTrips	SU_TR	0.98	0.53
tblVehicleTrips	SU_TR	5.88	3.85
tblVehicleTrips	SU_TR	0.25	0.13
tblVehicleTrips	SU_TR	1.55	0.78
tblVehicleTrips	SU_TR	4.36	1.49
tblVehicleTrips	SU_TR	36.63	18.51
tblVehicleTrips	SU_TR	25.24	12.75
tblVehicleTrips	SU_TR	8.77	4.36
tblVehicleTrips	SU_TR	166.44	84.09
tblVehicleTrips	WD_TR	6.59	3.36
tblVehicleTrips	WD_TR	62.00	31.28
tblVehicleTrips	WD_TR	1.59	0.95
tblVehicleTrips	WD_TR	1.29	0.65
tblVehicleTrips	WD_TR	496.12	250.65
tblVehicleTrips	WD_TR	6.97	4.60
tblVehicleTrips	WD_TR	11.01	5.57
tblVehicleTrips	WD_TR	5.04	2.39
tblVehicleTrips	WD_TR	1.71	0.86
tblVehicleTrips	WD_TR	36.13	18.25
tblVehicleTrips	WD_TR	4.99	2.52
tblVehicleTrips	WD_TR	9.11	3.52
tblVehicleTrips	WD_TR	42.94	21.57

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tblVehicleTrips	WD_TR	9.57	4.81
tblVehicleTrips	WD_TR	102.24	51.65
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	IndoorWaterUseRate	43,588,043.14	53,292,125.49
tblWater	IndoorWaterUseRate	37,027,501.46	29,104,232.84
tblWater	IndoorWaterUseRate	0.00	24,953,160.83
tblWater	IndoorWaterUseRate	1,233,938.16	4,882,140.16
tblWater	IndoorWaterUseRate	13,407,084.08	4,368,123.74
tblWater	IndoorWaterUseRate	6,888,937.50	3,933,004.44
tblWater	IndoorWaterUseRate	5,790,565.51	8,136,900.27
tblWater	IndoorWaterUseRate	0.00	18,443,640.62
tblWater	IndoorWaterUseRate	1,850,083.20	5,967,060.20
tblWater	IndoorWaterUseRate	136,999,650.91	21,155,940.71
tblWater	IndoorWaterUseRate	33,554,323.20	21,495,232.18
tblWater	IndoorWaterUseRate	37,859.58	1,084,920.04
tblWater	IndoorWaterUseRate	41,416,909.66	78,123,385.19

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tblWater	IndoorWaterUseRate	49,321,597.40	67,403,535.47
tblWater	IndoorWaterUseRate	26,394,190.17	10,046,684.61
tblWater	OutdoorWaterUseRate	27,479,418.50	61,597,464.51
tblWater	OutdoorWaterUseRate	22,694,275.09	33,639,997.16
tblWater	OutdoorWaterUseRate	54,808,142.08	28,841,999.17
tblWater	OutdoorWaterUseRate	3,172,983.84	5,642,999.84
tblWater	OutdoorWaterUseRate	855,771.32	5,048,876.26
tblWater	OutdoorWaterUseRate	0.00	4,545,945.56
tblWater	OutdoorWaterUseRate	3,549,056.28	9,404,999.73
tblWater	OutdoorWaterUseRate	40,510,365.89	21,317,999.38
tblWater	OutdoorWaterUseRate	4,757,356.80	6,896,999.80
tblWater	OutdoorWaterUseRate	26,095,171.60	24,452,999.29
tblWater	OutdoorWaterUseRate	21,153,812.45	24,845,167.82
tblWater	OutdoorWaterUseRate	59,216.26	1,253,999.96
tblWater	OutdoorWaterUseRate	25,384,557.54	90,298,564.81
tblWater	OutdoorWaterUseRate	31,094,050.53	77,908,074.53
tblWater	OutdoorWaterUseRate	816,315.16	11,612,415.39
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	NumberCatalytic	33.45	0.00
tblWoodstoves	NumberCatalytic	25.75	0.00
tblWoodstoves	NumberCatalytic	37.85	0.00
tblWoodstoves	NumberNoncatalytic	33.45	0.00
tblWoodstoves	NumberNoncatalytic	25.75	0.00
tblWoodstoves	NumberNoncatalytic	37.85	0.00

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2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	56.5955	0.2557	22.4369	1.0600e-003		0.4570	0.4570		0.4568	0.4568	29.8647	187.1909	217.0556	0.0343	5.4700e-003	219.4704
Energy	0.4736	4.1607	2.5529	0.0258		0.3272	0.3272		0.3272	0.3272	0.0000	19,160.1561	19,160.1561	0.7551	0.2236	19,245.3221
Mobile	25.2844	71.9434	311.6364	1.3271	86.3951	1.8980	88.2931	23.1163	1.7507	24.8670	0.0000	87,178.7800	87,178.7800	2.1899	0.0000	87,224.7680
Waste						0.0000	0.0000		0.0000	0.0000	1,170.4703	0.0000	1,170.4703	69.1728	0.0000	2,623.0993
Water						0.0000	0.0000		0.0000	0.0000	124.6762	2,608.0303	2,732.7064	0.5490	0.2959	2,835.9748
Total	**82.3535**	**76.3598**	**336.6261**	**1.3540**	**86.3951**	**2.6822**	**89.0773**	**23.1163**	**2.5348**	**25.6511**	**1,325.0111**	**109,134.1573**	**110,459.1683**	**72.7011**	**0.5250**	**112,148.6346**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	56.5955	0.2557	22.4369	1.0600e-003		0.4570	0.4570		0.4568	0.4568	29.8647	187.1909	217.0556	0.0343	5.4700e-003	219.4704
Energy	0.4736	4.1607	2.5529	0.0258		0.3272	0.3272		0.3272	0.3272	0.0000	19,160.1561	19,160.1561	0.7551	0.2236	19,245.3221
Mobile	25.2844	71.9434	311.6364	1.3271	86.3951	1.8980	88.2931	23.1163	1.7507	24.8670	0.0000	87,178.7800	87,178.7800	2.1899	0.0000	87,224.7680
Waste						0.0000	0.0000		0.0000	0.0000	1,170.4703	0.0000	1,170.4703	69.1728	0.0000	2,623.0993
Water						0.0000	0.0000		0.0000	0.0000	124.6762	2,608.0303	2,732.7064	0.5467	0.2955	2,835.7759
Total	**82.3535**	**76.3598**	**336.6261**	**1.3540**	**86.3951**	**2.6822**	**89.0773**	**23.1163**	**2.5348**	**25.6511**	**1,325.0111**	**109,134.1573**	**110,459.1683**	**72.6988**	**0.5245**	**112,148.4357**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.09**	**0.00**

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4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	25.2844	71.9434	311.6364	1.3271	86.3951	1.8980	88.2931	23.1163	1.7507	24.8670	0.0000	87,178.7800	87,178.7800	2.1899	0.0000	87,224.7680
Unmitigated	25.2844	71.9434	311.6364	1.3271	86.3951	1.8980	88.2931	23.1163	1.7507	24.8670	0.0000	87,178.7800	87,178.7800	2.1899	0.0000	87,224.7680

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	2,247.84	1,685.88	1418.28	6,682,858	6,682,858
Automobile Care Center	12,310.87	4,714.97	4714.97	33,072,998	33,072,998
City Park	43.70	389.16	389.16	464,438	464,438
Elementary School	330.85	0.00	0.00	770,748	770,748
Fast Food Restaurant with Drive Thru	11,071.21	16,112.77	12111.41	38,941,706	38,941,706
General Light Industry	137.03	19.96	10.13	333,253	333,253
General Office Building	181.47	40.40	17.27	449,622	449,622
Golf Course	81.26	102.00	130.90	297,816	297,816
High School	361.20	130.20	54.60	927,554	927,554
Medical Office Building	19,925.35	4,945.85	851.60	49,119,247	49,119,247
Mobile Home Park	1,297.80	890.95	767.35	3,795,990	3,795,990
Other Asphalt Surfaces	0.00	0.00	0.00		
Place of Worship	4.26	6.34	22.40	23,312	23,312
Regional Shopping Center	12,060.65	14,118.29	7129.04	37,996,041	37,996,041
Single Family Housing	3,641.17	3,792.57	3300.52	11,787,282	11,787,282
Supermarket	11,059.30	19,210.85	18005.35	43,103,511	43,103,511
Total	74,753.96	66,160.19	48,922.98	227,766,376	227,766,376

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	8.96	8.96	8.96	40.20	19.20	40.60	100	0	0
Automobile Care Center	8.96	8.96	8.96	33.00	48.00	19.00	100	0	0
City Park	8.96	8.96	8.96	33.00	48.00	19.00	100	0	0
Elementary School	8.96	8.96	8.96	65.00	30.00	5.00	100	0	0
Fast Food Restaurant with Drive Thru	8.96	8.96	8.96	2.20	78.80	19.00	100	0	0
General Light Industry	8.96	8.96	8.96	59.00	28.00	13.00	100	0	0
General Office Building	8.96	8.96	8.96	33.00	48.00	19.00	100	0	0
Golf Course	8.96	8.96	8.96	33.00	48.00	19.00	100	0	0
High School	8.96	8.96	8.96	77.80	17.20	5.00	100	0	0
Medical Office Building	8.96	8.96	8.96	29.60	51.40	19.00	100	0	0
Mobile Home Park	8.96	8.96	8.96	40.20	19.20	40.60	100	0	0
Other Asphalt Surfaces	8.96	8.96	8.96	0.00	0.00	0.00	0	0	0
Place of Worship	8.96	8.96	8.96	0.00	95.00	5.00	100	0	0
Regional Shopping Center	8.96	8.96	8.96	16.30	64.70	19.00	100	0	0
Single Family Housing	8.96	8.96	8.96	40.20	19.20	40.60	100	0	0
Supermarket	8.96	8.96	8.96	6.50	74.50	19.00	100	0	0

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LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.445160	0.068315	0.180257	0.161061	0.057208	0.009197	0.016142	0.050774	0.001074	0.001468	0.004084	0.000577	0.004683

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	14,472.8247	14,472.8247	0.6653	0.1376	14,529.4643
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	14,472.8247	14,472.8247	0.6653	0.1376	14,529.4643
NaturalGas Mitigated	0.4736	4.1607	2.5529	0.0258		0.3272	0.3272		0.3272	0.3272	0.0000	4,687.3314	4,687.3314	0.0898	0.0859	4,715.8577
NaturalGas Unmitigated	0.4736	4.1607	2.5529	0.0258		0.3272	0.3272		0.3272	0.3272	0.0000	4,687.3314	4,687.3314	0.0898	0.0859	4,715.8577

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5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	9.74534e+006	0.0526	0.4491	0.1911	2.8700e-003		0.0363	0.0363		0.0363	0.0363	0.0000	520.0486	520.0486	9.9700e-003	9.5300e-003	523.2136
Automobile Care Center	1.33383e+007	0.0719	0.6538	0.5492	3.9200e-003		0.0497	0.0497		0.0497	0.0497	0.0000	711.7802	711.7802	0.0136	0.0131	716.1120
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Elementary School	418733	2.2600e-003	0.0205	0.0172	1.2000e-004		1.5600e-003	1.5600e-003		1.5600e-003	1.5600e-003	0.0000	22.3452	22.3452	4.3000e-004	4.1000e-004	22.4812
Fast Food Restaurant with Drive Thru	1.23403e+007	0.0665	0.6049	0.5081	3.6300e-003		0.0460	0.0460		0.0460	0.0460	0.0000	658.5247	658.5247	0.0126	0.0121	662.5323
General Light Industry	1.00941e+006	5.4400e-003	0.0495	0.0416	3.0000e-004		3.7600e-003	3.7600e-003		3.7600e-003	3.7600e-003	0.0000	53.8662	53.8662	1.0300e-003	9.9000e-004	54.1940
General Office Building	136828	7.4000e-004	6.7100e-003	5.6300e-003	4.0000e-005		5.1000e-004	5.1000e-004		5.1000e-004	5.1000e-004	0.0000	7.3016	7.3016	1.4000e-004	1.3000e-004	7.3461
Golf Course	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
High School	548261	2.9600e-003	0.0269	0.0226	1.6000e-004		2.0400e-003	2.0400e-003		2.0400e-003	2.0400e-003	0.0000	29.2573	29.2573	5.6000e-004	5.4000e-004	29.4354
Medical Office Building	4.58557e+006	0.0247	0.2248	0.1888	1.3500e-003		0.0171	0.0171		0.0171	0.0171	0.0000	244.7034	244.7034	4.6900e-003	4.4900e-003	246.1926
Mobile Home Park	1.1682e+007	0.0630	0.5383	0.2291	3.4400e-003		0.0435	0.0435		0.0435	0.0435	0.0000	623.3978	623.3978	0.0120	0.0114	627.1917
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Place of Worship	41040.8	2.2000e-004	2.0100e-003	1.6900e-003	1.0000e-005		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004	0.0000	2.1901	2.1901	4.0000e-005	4.0000e-005	2.2034
Regional Shopping Center	1.44818e+006	7.8100e-003	0.0710	0.0596	4.3000e-004		5.4000e-003	5.4000e-003		5.4000e-003	5.4000e-003	0.0000	77.2801	77.2801	1.4800e-003	1.4200e-003	77.7505
Single Family Housing	2.79013e+007	0.1505	1.2857	0.5471	8.2100e-003		0.1040	0.1040		0.1040	0.1040	0.0000	1,488.9173	1,488.9173	0.0285	0.0273	1,497.9786
Supermarket	4.64208e+006	0.0250	0.2276	0.1911	1.3700e-003		0.0173	0.0173		0.0173	0.0173	0.0000	247.7190	247.7190	4.7500e-003	4.5400e-003	249.2266
Total		**0.4736**	**4.1607**	**2.5529**	**0.0259**		**0.3272**	**0.3272**		**0.3272**	**0.3272**	**0.0000**	**4,687.3314**	**4,687.3314**	**0.0898**	**0.0859**	**4,715.8578**

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Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Automobile Care Center	1.33383e+007	0.0719	0.6538	0.5492	3.9200e-003		0.0497	0.0497		0.0497	0.0497	0.0000	711.7802	711.7802	0.0136	0.0131	716.1120
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Elementary School	418733	2.2600e-003	0.0205	0.0172	1.2000e-004		1.5600e-003	1.5600e-003		1.5600e-003	1.5600e-003	0.0000	22.3452	22.3452	4.3000e-004	4.1000e-004	22.4812
Fast Food Restaurant with Drive Thru	1.23403e+007	0.0665	0.6049	0.5081	3.6300e-003		0.0460	0.0460		0.0460	0.0460	0.0000	658.5247	658.5247	0.0126	0.0121	662.5323
General Light Industry	1.00941e+006	5.4400e-003	0.0495	0.0416	3.0000e-004		3.7600e-003	3.7600e-003		3.7600e-003	3.7600e-003	0.0000	53.8662	53.8662	1.0300e-003	9.9000e-004	54.1940
General Office Building	136828	7.4000e-004	6.7100e-003	5.6300e-003	4.0000e-005		5.1000e-004	5.1000e-004		5.1000e-004	5.1000e-004	0.0000	7.3016	7.3016	1.4000e-004	1.3000e-004	7.3461
Golf Course	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
High School	548261	2.9600e-003	0.0269	0.0226	1.6000e-004		2.0400e-003	2.0400e-003		2.0400e-003	2.0400e-003	0.0000	29.2573	29.2573	5.6000e-004	5.4000e-004	29.4354
Medical Office Building	4.58557e+006	0.0247	0.2248	0.1888	1.3500e-003		0.0171	0.0171		0.0171	0.0171	0.0000	244.7034	244.7034	4.6900e-003	4.4900e-003	246.1926
Mobile Home Park	1.1682e+007	0.0630	0.5383	0.2291	3.4400e-003		0.0435	0.0435		0.0435	0.0435	0.0000	623.3978	623.3978	0.0120	0.0114	627.1917
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Apartments Low Rise	9.74534e+006	0.0526	0.4491	0.1911	2.8700e-003		0.0363	0.0363		0.0363	0.0363	0.0000	520.0486	520.0486	9.9700e-003	9.5300e-003	523.2136
Place of Worship	41040.8	2.2000e-004	2.0100e-003	1.6900e-003	1.0000e-005		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004	0.0000	2.1901	2.1901	4.0000e-005	4.0000e-005	2.2034
Regional Shopping Center	1.44818e+006	7.8100e-003	0.0710	0.0596	4.3000e-004		5.4000e-003	5.4000e-003		5.4000e-003	5.4000e-003	0.0000	77.2801	77.2801	1.4800e-003	1.4200e-003	77.7505
Single Family Housing	2.79013e+007	0.1505	1.2857	0.5471	8.2100e-003		0.1040	0.1040		0.1040	0.1040	0.0000	1,488.9173	1,488.9173	0.0285	0.0273	1,497.9786
Supermarket	4.64208e+006	0.0250	0.2276	0.1911	1.3700e-003		0.0173	0.0173		0.0173	0.0173	0.0000	247.7190	247.7190	4.7500e-003	4.5400e-003	249.2266
Total		**0.4736**	**4.1607**	**2.5529**	**0.0259**		**0.3272**	**0.3272**		**0.3272**	**0.3272**	**0.0000**	**4,687.3314**	**4,687.3314**	**0.0898**	**0.0859**	**4,715.8578**

Existing_WatermanSP2035Rates

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5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	2.83254e+006	810.5790	0.0373	7.7100e-003	813.7512
Automobile Care Center	4.53792e+006	1,298.6024	0.0597	0.0124	1,303.6845
City Park	0	0.0000	0.0000	0.0000	0.0000
Elementary School	410647	117.5137	5.4000e-003	1.1200e-003	117.9735
Fast Food Restaurant with Drive Thru	2.39075e+006	684.1538	0.0315	6.5100e-003	686.8312
General Light Industry	343421	98.2757	4.5200e-003	9.3000e-004	98.6603
General Office Building	367154	105.0673	4.8300e-003	1.0000e-003	105.4785
Golf Course	0	0.0000	0.0000	0.0000	0.0000
High School	537675	153.8648	7.0700e-003	1.4600e-003	154.4669
Medical Office Building	1.23046e+007	3,521.1716	0.1619	0.0335	3,534.9517
Mobile Home Park	2.86945e+006	821.1405	0.0378	7.8100e-003	824.3540
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Place of Worship	13962.8	3.9957	1.8000e-004	4.0000e-005	4.0113
Regional Shopping Center	9.27615e+006	2,654.5268	0.1220	0.0253	2,664.9153
Single Family Housing	6.03156e+006	1,726.0339	0.0793	0.0164	1,732.7888
Supermarket	8.65893e+006	2,477.8996	0.1139	0.0236	2,487.5969
Total		**14,472.8247**	**0.6653**	**0.1377**	**14,529.4643**

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Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	2.83254e+006	810.5790	0.0373	7.7100e-003	813.7512
Automobile Care Center	4.53792e+006	1,298.6024	0.0597	0.0124	1,303.6845
City Park	0	0.0000	0.0000	0.0000	0.0000
Elementary School	410647	117.5137	5.4000e-003	1.1200e-003	117.9735
Fast Food Restaurant with Drive Thru	2.39075e+006	684.1538	0.0315	6.5100e-003	686.8312
General Light Industry	343421	98.2757	4.5200e-003	9.3000e-004	98.6603
General Office Building	367154	105.0673	4.8300e-003	1.0000e-003	105.4785
Golf Course	0	0.0000	0.0000	0.0000	0.0000
High School	537675	153.8648	7.0700e-003	1.4600e-003	154.4669
Medical Office Building	1.23046e+007	3,521.1716	0.1619	0.0335	3,534.9517
Mobile Home Park	2.86945e+006	821.1405	0.0378	7.8100e-003	824.3540
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Place of Worship	13962.8	3.9957	1.8000e-004	4.0000e-005	4.0113
Regional Shopping Center	9.27615e+006	2,654.5268	0.1220	0.0253	2,664.9153
Single Family Housing	6.03156e+006	1,726.0339	0.0793	0.0164	1,732.7888
Supermarket	8.65893e+006	2,477.8996	0.1139	0.0236	2,487.5969
Total		**14,472.8247**	**0.6653**	**0.1377**	**14,529.4643**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	56.5955	0.2557	22.4369	1.0600e-003		0.4570	0.4570		0.4568	0.4568	29.8647	187.1909	217.0556	0.0343	5.4700e-003	219.4704
Unmitigated	56.5955	0.2557	22.4369	1.0600e-003		0.4570	0.4570		0.4568	0.4568	29.8647	187.1909	217.0556	0.0343	5.4700e-003	219.4704

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6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	11.5139					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	42.2484					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	2.2329	0.0252	2.4466	0.0000		0.3458	0.3458		0.3457	0.3457	29.8647	154.4082	184.2729	2.9600e-003	5.4700e-003	186.0294
Landscaping	0.6004	0.2305	19.9903	1.0600e-003		0.1112	0.1112		0.1112	0.1112	0.0000	32.7827	32.7827	0.0314	0.0000	33.4410
Total	**56.5955**	**0.2557**	**22.4369**	**1.0600e-003**		**0.4570**	**0.4570**		**0.4568**	**0.4568**	**29.8647**	**187.1909**	**217.0556**	**0.0343**	**5.4700e-003**	**219.4704**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	11.5139					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	42.2484					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	2.2329	0.0252	2.4466	0.0000		0.3458	0.3458		0.3457	0.3457	29.8647	154.4082	184.2729	2.9600e-003	5.4700e-003	186.0294
Landscaping	0.6004	0.2305	19.9903	1.0600e-003		0.1112	0.1112		0.1112	0.1112	0.0000	32.7827	32.7827	0.0314	0.0000	33.4410
Total	**56.5955**	**0.2557**	**22.4369**	**1.0600e-003**		**0.4570**	**0.4570**		**0.4568**	**0.4568**	**29.8647**	**187.1909**	**217.0556**	**0.0343**	**5.4700e-003**	**219.4704**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	2,732.7064	0.5467	0.2955	2,835.7759
Unmitigated	2,732.7064	0.5490	0.2959	2,835.9748

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7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	53.2921 / 61.5975	413.2685	0.0830	0.0448	428.8859
Automobile Care Center	29.1042 / 33.64	225.6968	0.0453	0.0244	234.2259
City Park	24.9532 / 28.842	193.5062	0.0389	0.0210	200.8188
Elementary School	4.88214 / 5.643	37.8599	7.6100e-003	4.1000e-003	39.2906
Fast Food Restaurant with Drive Thru	4.36812 / 5.04888	33.8738	6.8100e-003	3.6700e-003	35.1539
General Light Industry	3.933 / 4.54595	30.4996	6.1300e-003	3.3000e-003	31.6521
General Office Building	8.1369 / 9.405	63.0998	0.0127	6.8300e-003	65.4844
Golf Course	18.4436 / 21.318	143.0263	0.0287	0.0155	148.4313
High School	5.96706 / 6.897	46.2732	9.3000e-003	5.0100e-003	48.0219
Medical Office Building	21.1559 / 24.453	164.0596	0.0330	0.0178	170.2594
Mobile Home Park	21.4952 / 24.8452	166.6907	0.0335	0.0181	172.9899
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Place of Worship	1.08492 / 1.254	8.4133	1.6900e-003	9.1000e-004	8.7313
Regional Shopping Center	78.1234 / 90.2986	605.8294	0.1217	0.0656	628.7236
Single Family Housing	67.4035 / 77.9081	522.6994	0.1050	0.0566	542.4521
Supermarket	10.0467 / 11.6124	77.9098	0.0157	8.4400e-003	80.8540
Total		**2,732.7064**	**0.5490**	**0.2959**	**2,835.9748**

Existing_WatermanSP2035Rates

San Bernardino-South Coast County, Annual

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	53.2921 / 61.5975	413.2685	0.0827	0.0447	428.8558
Automobile Care Center	29.1042 / 33.64	225.6968	0.0452	0.0244	234.2094
City Park	24.9532 / 28.842	193.5062	0.0387	0.0209	200.8047
Elementary School	4.88214 / 5.643	37.8599	7.5700e-003	4.0900e-003	39.2879
Fast Food Restaurant with Drive Thru	4.36812 / 5.04888	33.8738	6.7800e-003	3.6600e-003	35.1514
General Light Industry	3.933 / 4.54595	30.4996	6.1000e-003	3.3000e-003	31.6499
General Office Building	8.1369 / 9.405	63.0998	0.0126	6.8200e-003	65.4798
Golf Course	18.4436 / 21.318	143.0263	0.0286	0.0155	148.4208
High School	5.96706 / 6.897	46.2732	9.2600e-003	5.0000e-003	48.0185
Medical Office Building	21.1559 / 24.453	164.0596	0.0328	0.0177	170.2474
Mobile Home Park	21.4952 / 24.8452	166.6907	0.0334	0.0180	172.9778
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Place of Worship	1.08492 / 1.254	8.4133	1.6800e-003	9.1000e-004	8.7306
Regional Shopping Center	78.1234 / 90.2986	605.8294	0.1212	0.0655	628.6795
Single Family Housing	67.4035 / 77.9081	522.6994	0.1046	0.0565	542.4140
Supermarket	10.0467 / 11.6124	77.9098	0.0156	8.4200e-003	80.8483
Total		**2,732.7064**	**0.5467**	**0.2954**	**2,835.7759**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Unmitigated	1,170.4703	69.1728	0.0000	2,623.0993
Mitigated	1,170.4703	69.1728	0.0000	2,623.0993

Existing_WatermanSP2035Rates

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8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	648	131.5381	7.7737	0.0000	294.7855
Automobile Care Center	431	87.4891	5.1705	0.0000	196.0687
City Park	3.96	0.8038	0.0475	0.0000	1.8015
Elementary School	92.89	18.8558	1.1144	0.0000	42.2571
Fast Food Restaurant with Drive Thru	48	9.7436	0.5758	0.0000	21.8360
General Light Industry	33	6.6987	0.3959	0.0000	15.0122
General Office Building	36	7.3077	0.4319	0.0000	16.3770
Golf Course	31.62	6.4186	0.3793	0.0000	14.3844
High School	76.65	15.5593	0.9195	0.0000	34.8693
Medical Office Building	1196	242.7772	14.3477	0.0000	544.0793
Mobile Home Park	940	190.8115	11.2766	0.0000	427.6209
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Place of Worship	1	0.2030	0.0120	0.0000	0.4549
Regional Shopping Center	612	124.2305	7.3418	0.0000	278.4085
Single Family Housing	1382	280.5335	16.5791	0.0000	628.6937
Supermarket	234	47.4999	2.8072	0.0000	106.4503
Total		**1,170.4702**	**69.1728**	**0.0000**	**2,623.0993**

Existing_WatermanSP2035Rates

San Bernardino-South Coast County, Annual

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	648	131.5381	7.7737	0.0000	294.7855
Automobile Care Center	431	87.4891	5.1705	0.0000	196.0687
City Park	3.96	0.8038	0.0475	0.0000	1.8015
Elementary School	92.89	18.8558	1.1144	0.0000	42.2571
Fast Food Restaurant with Drive Thru	48	9.7436	0.5758	0.0000	21.8360
General Light Industry	33	6.6987	0.3959	0.0000	15.0122
General Office Building	36	7.3077	0.4319	0.0000	16.3770
Golf Course	31.62	6.4186	0.3793	0.0000	14.3844
High School	76.65	15.5593	0.9195	0.0000	34.8693
Medical Office Building	1196	242.7772	14.3477	0.0000	544.0793
Mobile Home Park	940	190.8115	11.2766	0.0000	427.6209
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Place of Worship	1	0.2030	0.0120	0.0000	0.4549
Regional Shopping Center	612	124.2305	7.3418	0.0000	278.4085
Single Family Housing	1382	280.5335	16.5791	0.0000	628.6937
Supermarket	234	47.4999	2.8072	0.0000	106.4503
Total		**1,170.4702**	**69.1728**	**0.0000**	**2,623.0993**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

CalEEMod Version: CalEEMod.2013.2.2

Date: 5/11/2016 2:26 PM

Existing_WatermanSP2035Rates

San Bernardino-South Coast County, Mitigation Report

Construction Mitigation Summary

Phase	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

OFFROAD Equipment Mitigation

Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPF	Oxidation Catalyst
Air Compressors	Diesel	No Change	0	0	No Change	0.00

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Unmitigated tons/yr						Unmitigated mt/yr					
Air Compressors	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Mitigated tons/yr						Mitigated mt/yr					
Air Compressors	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Air Compressors	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000

Fugitive Dust Mitigation

Yes/No	Mitigation Measure	Mitigation Input		Mitigation Input		Mitigation Input	
No	Soil Stabilizer for unpaved Roads	PM10 Reduction		PM2.5 Reduction			
No	Replace Ground Cover of Area Disturbed	PM10 Reduction		PM2.5 Reduction			
No	Water Exposed Area	PM10 Reduction		PM2.5 Reduction		Frequency (per day)	
No	Unpaved Road Mitigation	Moisture Content %		Vehicle Speed (mph)			
No	Clean Paved Road	% PM Reduction	0.00				

		Unmitigated		Mitigated		Percent Reduction	
Phase	Source	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Architectural Coating	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Architectural Coating	Roads	0.00	0.00	0.00	0.00	0.00	0.00

CalEEMod Version: CalEEMod.2013.2.2

Date: 5/11/2016 2:26 PM

Existing_WatermanSP2035Rates

San Bernardino-South Coast County, Mitigation Report

Operational Percent Reduction Summary

Category	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43	0.17	0.01
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Operational Mobile Mitigation

Project Setting:

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value 3
No	Land Use	Increase Density	0.00			
No	Land Use	Increase Diversity	0.30	0.69		
No	Land Use	Improve Walkability Design	0.00			
No	Land Use	Improve Destination Accessibility	0.00			
No	Land Use	Increase Transit Accessibility	0.25			
No	Land Use	Integrate Below Market Rate Housing	0.00			
	Land Use	Land Use SubTotal	0.00			
No	Neighborhood Enhancements	Improve Pedestrian Network				
No	Neighborhood Enhancements	Provide Traffic Calming Measures				
No	Neighborhood Enhancements	Implement NEV Network	0.00			
	Neighborhood Enhancements	Neighborhood Enhancements Subtotal	0.00			
No	Parking Policy Pricing	Limit Parking Supply	0.00			
No	Parking Policy Pricing	Unbundle Parking Costs	0.00			
No	Parking Policy Pricing	On-street Market Pricing	0.00			
	Parking Policy Pricing	Parking Policy Pricing Subtotal	0.00			
No	Transit Improvements	Provide BRT System	0.00			
No	Transit Improvements	Expand Transit Network	0.00			
No	Transit Improvements	Increase Transit Frequency	0.00			
	Transit Improvements	Transit Improvements Subtotal	0.00			
		Land Use and Site Enhancement Subtotal	0.00			
No	Commute	Implement Trip Reduction Program				

Existing_WatermanSP2035Rates

San Bernardino-South Coast County, Mitigation Report

No	Commute	Transit Subsidy				
No	Commute	Implement Employee Parking "Cash Out"				
No	Commute	Workplace Parking Charge				
No	Commute	Encourage Telecommuting and Alternative Work Schedules	0.00			
No	Commute	Market Commute Trip Reduction Option	0.00			
No	Commute	Employee Vanpool/Shuttle	0.00		2.00	
No	Commute	Provide Ride Sharing Program				
	Commute	Commute Subtotal	0.00			
No	School Trip	Implement School Bus Program	0.00			
		Total VMT Reduction	0.00			

Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
No	Only Natural Gas Hearth	
No	No Hearth	
No	Use Low VOC Cleaning Supplies	
No	Use Low VOC Paint (Residential Interior)	50.00
No	Use Low VOC Paint (Residential Exterior)	100.00
No	Use Low VOC Paint (Non-residential Interior)	250.00
No	Use Low VOC Paint (Non-residential Exterior)	250.00
No	% Electric Lawnmower	
No	% Electric Leafblower	
No	% Electric Chainsaw	

Energy Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Exceed Title 24		
No	Install High Efficiency Lighting		
No	On-site Renewable		

Appliance Type	Land Use Subtype	% Improvement
ClothWasher		30.00
DishWasher		15.00
Fan		50.00
Refrigerator		15.00

Existing_WatermanSP2035Rates

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Water Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Apply Water Conservation on Strategy	0.00	0.00
No	Use Reclaimed Water	0.00	0.00
No	Use Grey Water	0.00	
No	Install low-flow bathroom faucet	32.00	
No	Install low-flow Kitchen faucet	18.00	
No	Install low-flow Toilet	20.00	
No	Install low-flow Shower	20.00	
No	Turf Reduction	0.00	
No	Use Water Efficient Irrigation Systems	6.10	
No	Water Efficient Landscape	0.00	0.00

Solid Waste Mitigation

Mitigation Measures	Input Value
Institute Recycling and Composting Services	
Percent Reduction in Waste Disposed	

CalEEMod – Project (2035)

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San Bernardino-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	143.59	1000sqft	54.00	143,591.00	0
Elementary School	509.00	Student	15.00	42,554.12	0
High School	420.00	Student	5.00	55,717.61	0
Place of Worship	20.37	1000sqft	2.00	20,369.00	0
General Light Industry	157.03	1000sqft	10.00	157,034.00	0
Other Asphalt Surfaces	71.00	Acre	71.00	3,092,760.00	0
City Park	46.00	Acre	46.00	2,003,760.00	0
Golf Course	34.00	Acre	34.00	1,481,040.00	0
Apartments Low Rise	2,869.00	Dwelling Unit	58.00	2,869,000.00	8205
Mobile Home Park	1,029.00	Dwelling Unit	40.00	1,234,800.00	2943
Single Family Housing	443.00	Dwelling Unit	134.00	797,400.00	1267
Regional Shopping Center	3,249.45	1000sqft	242.00	3,249,454.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2035
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - See assumptions

Construction Phase - operational phase no construction

Off-road Equipment - operational phase no construction

Trips and VMT - operational phase no construction

Architectural Coating - operational phase no construction

Vehicle Trips - Based on Fehr & Peers gross trip ends and VMT using the MXD model

Woodstoves - See assumptions

Energy Use - See assumptions for blended rates - assumed mix of existing and new building stock.

Water And Wastewater - 100% treated wastewater. See assumptions for demand based on the WSA.

Solid Waste - see assumptions.

Area Mitigation - Coatings comply with Rule 1113 for flatcoats and semi gloss

Energy Mitigation - Building Energy efficiency accounted for in the blended rates

Water Mitigation - water efficiency accounted for in the WSA

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San Bernardino-South Coast County, Summer

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	0.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	0.00
tblArchitecturalCoating	EF_Residential_Exterior	100.00	0.00
tblArchitecturalCoating	EF_Residential_Interior	50.00	0.00
tblAreaMitigation	UseLowVOCPaintNonresidentialExterior Value	250	100
tblAreaMitigation	UseLowVOCPaintNonresidentialInterior Value	250	50
tblConstructionPhase	NumDays	880.00	1.00
tblEnergyUse	T24E	636.58	658.05
tblEnergyUse	T24E	3.40	3.64
tblEnergyUse	T24E	2.69	2.01
tblEnergyUse	T24E	3.75	2.80
tblEnergyUse	T24E	3.40	3.64
tblEnergyUse	T24E	973.13	1,211.87
tblEnergyUse	T24E	2.69	2.01
tblEnergyUse	T24E	5.60	4.01
tblEnergyUse	T24E	980.99	1,047.27
tblEnergyUse	T24NG	11,224.20	10,266.64
tblEnergyUse	T24NG	7.34	8.05
tblEnergyUse	T24NG	16.16	11.95
tblEnergyUse	T24NG	3.65	2.78
tblEnergyUse	T24NG	7.34	8.05
tblEnergyUse	T24NG	19,139.92	20,580.56
tblEnergyUse	T24NG	16.16	11.95
tblEnergyUse	T24NG	2.02	3.58
tblEnergyUse	T24NG	27,816.78	26,141.59
tblFireplaces	NumberGas	2,438.65	2,170.00
tblFireplaces	NumberGas	874.65	0.00
tblFireplaces	NumberGas	376.55	915.00
tblFireplaces	NumberNoFireplace	286.90	699.00
tblFireplaces	NumberNoFireplace	102.90	443.00
tblFireplaces	NumberNoFireplace	44.30	76.00
tblFireplaces	NumberWood	143.45	0.00
tblFireplaces	NumberWood	51.45	0.00
tblFireplaces	NumberWood	22.15	38.00
tblLandUse	LandUseSquareFeet	143,590.00	143,591.00
tblLandUse	LandUseSquareFeet	20,370.00	20,369.00
tblLandUse	LandUseSquareFeet	157,030.00	157,034.00
tblLandUse	LandUseSquareFeet	3,249,450.00	3,249,454.00
tblLandUse	LotAcreage	3.30	54.00
tblLandUse	LotAcreage	0.98	15.00
tblLandUse	LotAcreage	1.28	5.00
tblLandUse	LotAcreage	0.47	2.00
tblLandUse	LotAcreage	3.60	10.00
tblLandUse	LotAcreage	179.31	58.00
tblLandUse	LotAcreage	129.63	40.00

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tblLandUse	LotAcreage	143.83	134.00
tblLandUse	LotAcreage	74.60	242.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblProjectCharacteristics	OperationalYear	2014	2035
tblSolidWaste	SolidWasteGenerationRate	1,319.74	2,780.00
tblSolidWaste	SolidWasteGenerationRate	3.96	4.00
tblSolidWaste	SolidWasteGenerationRate	92.89	93.00
tblSolidWaste	SolidWasteGenerationRate	194.72	172.00
tblSolidWaste	SolidWasteGenerationRate	133.54	157.00
tblSolidWaste	SolidWasteGenerationRate	31.62	32.00
tblSolidWaste	SolidWasteGenerationRate	76.65	77.00
tblSolidWaste	SolidWasteGenerationRate	473.34	1,878.00
tblSolidWaste	SolidWasteGenerationRate	116.11	22.00
tblSolidWaste	SolidWasteGenerationRate	3,411.92	3,558.00
tblSolidWaste	SolidWasteGenerationRate	519.47	808.00
tblTripsAndVMT	WorkerTripNumber	1,386.00	0.00
tblVehicleTrips	CC_TL	8.40	8.83
tblVehicleTrips	CC_TL	8.40	8.83
tblVehicleTrips	CC_TL	8.40	8.83
tblVehicleTrips	CC_TL	8.40	8.83
tblVehicleTrips	CC_TL	8.40	8.83
tblVehicleTrips	CC_TL	8.40	8.83
tblVehicleTrips	CC_TL	8.40	8.83
tblVehicleTrips	CC_TL	8.40	8.83
tblVehicleTrips	CC_TL	8.40	8.83
tblVehicleTrips	CNW_TL	6.90	8.83
tblVehicleTrips	CNW_TL	6.90	8.83
tblVehicleTrips	CNW_TL	6.90	8.83
tblVehicleTrips	CNW_TL	6.90	8.83
tblVehicleTrips	CNW_TL	6.90	8.83
tblVehicleTrips	CNW_TL	6.90	8.83
tblVehicleTrips	CNW_TL	6.90	8.83
tblVehicleTrips	CNW_TL	6.90	8.83
tblVehicleTrips	CNW_TL	6.90	8.83
tblVehicleTrips	CW_TL	16.60	8.83
tblVehicleTrips	CW_TL	16.60	8.83
tblVehicleTrips	CW_TL	16.60	8.83
tblVehicleTrips	CW_TL	16.60	8.83
tblVehicleTrips	CW_TL	16.60	8.83
tblVehicleTrips	CW_TL	16.60	8.83
tblVehicleTrips	CW_TL	16.60	8.83
tblVehicleTrips	CW_TL	16.60	8.83
tblVehicleTrips	CW_TL	16.60	8.83
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	28.00	0.00
tblVehicleTrips	DV_TP	25.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00

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tblVehicleTrips	DV_TP	19.00	0.00
tblVehicleTrips	DV_TP	39.00	0.00
tblVehicleTrips	DV_TP	19.00	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	25.00	0.00
tblVehicleTrips	DV_TP	35.00	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	HO_TL	8.70	8.83
tblVehicleTrips	HO_TL	8.70	8.83
tblVehicleTrips	HO_TL	8.70	8.83
tblVehicleTrips	HS_TL	5.90	8.83
tblVehicleTrips	HS_TL	5.90	8.83
tblVehicleTrips	HS_TL	5.90	8.83
tblVehicleTrips	HW_TL	14.70	8.83
tblVehicleTrips	HW_TL	14.70	8.83
tblVehicleTrips	HW_TL	14.70	8.83
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	6.00	0.00
tblVehicleTrips	PB_TP	12.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	4.00	0.00
tblVehicleTrips	PB_TP	9.00	0.00
tblVehicleTrips	PB_TP	6.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	66.00	100.00
tblVehicleTrips	PR_TP	63.00	100.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	PR_TP	77.00	100.00
tblVehicleTrips	PR_TP	52.00	100.00
tblVehicleTrips	PR_TP	75.00	100.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	64.00	100.00
tblVehicleTrips	PR_TP	54.00	100.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	ST_TR	7.16	2.52
tblVehicleTrips	ST_TR	1.59	8.45
tblVehicleTrips	ST_TR	1.32	0.67
tblVehicleTrips	ST_TR	2.37	1.24
tblVehicleTrips	ST_TR	5.82	3.00
tblVehicleTrips	ST_TR	0.61	0.31
tblVehicleTrips	ST_TR	5.00	1.73
tblVehicleTrips	ST_TR	10.37	5.23
tblVehicleTrips	ST_TR	49.97	25.22

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tblVehicleTrips	ST_TR	10.08	5.00
tblVehicleTrips	SU_TR	6.07	2.12
tblVehicleTrips	SU_TR	1.59	8.45
tblVehicleTrips	SU_TR	0.68	0.34
tblVehicleTrips	SU_TR	0.98	0.53
tblVehicleTrips	SU_TR	5.88	3.85
tblVehicleTrips	SU_TR	0.25	0.13
tblVehicleTrips	SU_TR	4.36	1.48
tblVehicleTrips	SU_TR	36.63	18.49
tblVehicleTrips	SU_TR	25.24	12.74
tblVehicleTrips	SU_TR	8.77	4.35
tblVehicleTrips	WD_TR	6.59	3.36
tblVehicleTrips	WD_TR	1.59	0.95
tblVehicleTrips	WD_TR	1.29	0.65
tblVehicleTrips	WD_TR	6.97	4.60
tblVehicleTrips	WD_TR	11.01	5.57
tblVehicleTrips	WD_TR	5.04	2.39
tblVehicleTrips	WD_TR	1.71	0.86
tblVehicleTrips	WD_TR	4.99	2.52
tblVehicleTrips	WD_TR	9.11	3.52
tblVehicleTrips	WD_TR	42.94	21.55
tblVehicleTrips	WD_TR	9.57	4.80
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	IndoorWaterUseRate	186,926,899.51	87,944,480.00

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tblWater	IndoorWaterUseRate	0.00	28,511,617.00
tblWater	IndoorWaterUseRate	1,233,938.16	5,578,360.00
tblWater	IndoorWaterUseRate	36,313,187.50	50,341,599.00
tblWater	IndoorWaterUseRate	25,520,788.87	201,956,519.00
tblWater	IndoorWaterUseRate	0.00	21,073,804.00
tblWater	IndoorWaterUseRate	1,850,083.20	6,817,995.00
tblWater	IndoorWaterUseRate	67,043,492.36	15,569,422.00
tblWater	IndoorWaterUseRate	637,355.06	2,099,720.00
tblWater	IndoorWaterUseRate	240,694,954.94	173,855,957.00
tblWater	IndoorWaterUseRate	28,863,233.35	140,681,221.00
tblWater	OutdoorWaterUseRate	117,845,219.25	77,978,440.00
tblWater	OutdoorWaterUseRate	54,808,142.08	25,283,543.00
tblWater	OutdoorWaterUseRate	3,172,983.84	4,946,780.00
tblWater	OutdoorWaterUseRate	0.00	44,641,943.00
tblWater	OutdoorWaterUseRate	15,641,773.83	179,091,082.00
tblWater	OutdoorWaterUseRate	40,510,365.89	18,687,836.00
tblWater	OutdoorWaterUseRate	4,757,356.80	6,046,065.00
tblWater	OutdoorWaterUseRate	42,266,549.53	13,806,658.00
tblWater	OutdoorWaterUseRate	996,888.69	1,861,990.00
tblWater	OutdoorWaterUseRate	147,522,714.32	154,172,054.00
tblWater	OutdoorWaterUseRate	18,196,386.24	124,753,349.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	NumberCatalytic	143.45	0.00
tblWoodstoves	NumberCatalytic	51.45	0.00
tblWoodstoves	NumberCatalytic	22.15	0.00
tblWoodstoves	NumberNoncatalytic	143.45	0.00
tblWoodstoves	NumberNoncatalytic	51.45	0.00
tblWoodstoves	NumberNoncatalytic	22.15	0.00

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San Bernardino-South Coast County, Summer

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	569.5635	6.1358	553.3399	0.0190		32.9262	32.9262		32.8826	32.8826	2,633.6128	65,975.2951	68,608.9079	1.8686	1.4301	69,091.4753
Energy	2.7570	23.8684	12.2868	0.1504		1.9049	1.9049		1.9049	1.9049		30,076.6187	30,076.6187	0.5765	0.5514	30,259.6599
Mobile	210.9151	524.9297	2,478.3488	10.8636	679.3142	14.6575	693.9716	181.4794	13.5200	194.9993		781,865.6827	781,865.6827	18.6447		782,257.2212
Total	**783.2356**	**554.9339**	**3,043.9754**	**11.0329**	**679.3142**	**49.4885**	**728.8026**	**181.4794**	**48.3074**	**229.7868**	**2,633.6128**	**877,917.5964**	**880,551.2092**	**21.0898**	**1.9815**	**881,608.3564**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	520.7709	6.1358	553.3399	0.0190		32.9262	32.9262		32.8826	32.8826	2,633.6128	65,975.2951	68,608.9079	1.8686	1.4301	69,091.4753
Energy	2.7570	23.8684	12.2868	0.1504		1.9049	1.9049		1.9049	1.9049		30,076.6187	30,076.6187	0.5765	0.5514	30,259.6599
Mobile	210.9151	524.9297	2,478.3488	10.8636	679.3142	14.6575	693.9716	181.4794	13.5200	194.9993		781,865.6827	781,865.6827	18.6447		782,257.2212
Total	**734.4430**	**554.9339**	**3,043.9754**	**11.0329**	**679.3142**	**49.4885**	**728.8026**	**181.4794**	**48.3074**	**229.7868**	**2,633.6128**	**877,917.5964**	**880,551.2092**	**21.0898**	**1.9815**	**881,608.3564**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**6.23**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	210.9151	524.9297	2,478.3488	10.8636	679.3142	14.6575	693.9716	181.4794	13.5200	194.9993		781,865.6827	781,865.6827	18.6447		782,257.2212
Unmitigated	210.9151	524.9297	2,478.3488	10.8636	679.3142	14.6575	693.9716	181.4794	13.5200	194.9993		781,865.6827	781,865.6827	18.6447		782,257.2212

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San Bernardino-South Coast County, Summer

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	9,639.84	7,229.88	6082.28	28,243,556	28,243,556
City Park	43.70	388.70	388.70	457,277	457,277
Elementary School	330.85	0.00	0.00	759,565	759,565
General Light Industry	722.34	105.21	53.39	1,731,166	1,731,166
General Office Building	799.80	178.05	76.10	1,952,870	1,952,870
Golf Course	81.26	102.00	130.90	293,495	293,495
High School	361.20	130.20	54.60	914,096	914,096
Mobile Home Park	2,593.08	1,780.17	1522.92	7,469,840	7,469,840
Other Asphalt Surfaces	0.00	0.00	0.00		
Place of Worship	71.70	106.54	376.64	386,470	386,470
Regional Shopping Center	70,025.65	81,951.13	41397.99	217,401,864	217,401,864
Single Family Housing	2,126.40	2,215.00	1927.05	6,783,653	6,783,653
Total	86,795.81	94,186.88	52,010.58	266,393,853	266,393,853

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	8.83	8.83	8.83	40.20	19.20	40.60	100	0	0
City Park	8.83	8.83	8.83	33.00	48.00	19.00	100	0	0
Elementary School	8.83	8.83	8.83	65.00	30.00	5.00	100	0	0
General Light Industry	8.83	8.83	8.83	59.00	28.00	13.00	100	0	0
General Office Building	8.83	8.83	8.83	33.00	48.00	19.00	100	0	0
Golf Course	8.83	8.83	8.83	33.00	48.00	19.00	100	0	0
High School	8.83	8.83	8.83	77.80	17.20	5.00	100	0	0
Mobile Home Park	8.83	8.83	8.83	40.20	19.20	40.60	100	0	0
Other Asphalt Surfaces	8.83	8.83	8.83	0.00	0.00	0.00	0	0	0
Place of Worship	8.83	8.83	8.83	0.00	95.00	5.00	100	0	0
Regional Shopping Center	8.83	8.83	8.83	16.30	64.70	19.00	100	0	0
Single Family Housing	8.83	8.83	8.83	40.20	19.20	40.60	100	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.445160	0.068315	0.180257	0.161061	0.057208	0.009197	0.016142	0.050774	0.001074	0.001468	0.004084	0.000577	0.004683

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	2.7570	23.8684	12.2868	0.1504		1.9049	1.9049		1.9049	1.9049		30,076.6187	30,076.6187	0.5765	0.5514	30,259.6599
NaturalGas Unmitigated	2.7570	23.8684	12.2868	0.1504		1.9049	1.9049		1.9049	1.9049		30,076.6187	30,076.6187	0.5765	0.5514	30,259.6599

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San Bernardino-South Coast County, Summer

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Elementary School	1147.21	0.0124	0.1125	0.0945	6.7000e-004		8.5500e-003	8.5500e-003		8.5500e-003	8.5500e-003		134.9662	134.9662	2.5900e-003	2.4700e-003	135.7876
General Light Industry	12511.1	0.1349	1.2266	1.0303	7.3600e-003		0.0932	0.0932		0.0932	0.0932		1,471.8932	1,471.8932	0.0282	0.0270	1,480.8509
General Office Building	1093.65	0.0118	0.1072	0.0901	6.4000e-004		8.1500e-003	8.1500e-003		8.1500e-003	8.1500e-003		128.6649	128.6649	2.4700e-003	2.3600e-003	129.4480
Golf Course	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
High School	1502.09	0.0162	0.1473	0.1237	8.8000e-004		0.0112	0.0112		0.0112	0.0112		176.7160	176.7160	3.3900e-003	3.2400e-003	177.7914
Mobile Home Park	63949	0.6897	5.8933	2.5078	0.0376		0.4765	0.4765		0.4765	0.4765		7,523.4112	7,523.4112	0.1442	0.1379	7,569.1974
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Place of Worship	1622.82	0.0175	0.1591	0.1336	9.5000e-004		0.0121	0.0121		0.0121	0.0121		190.9204	190.9204	3.6600e-003	3.5000e-003	192.0823
Regional Shopping Center	34542.1	0.3725	3.3865	2.8447	0.0203		0.2574	0.2574		0.2574	0.2574		4,063.7813	4,063.7813	0.0779	0.0745	4,088.5128
Apartments Low Rise	100334	1.0820	9.2464	3.9347	0.0590		0.7476	0.7476		0.7476	0.7476		11,803.9491	11,803.9491	0.2262	0.2164	11,875.7860
Single Family Housing	38949.7	0.4201	3.5895	1.5274	0.0229		0.2902	0.2902		0.2902	0.2902		4,582.3163	4,582.3163	0.0878	0.0840	4,610.2035
Total		**2.7570**	**23.8684**	**12.2868**	**0.1504**		**1.9048**	**1.9048**		**1.9048**	**1.9048**		**30,076.6186**	**30,076.6186**	**0.5765**	**0.5514**	**30,259.6599**

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Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Elementary School	1.14721	0.0124	0.1125	0.0945	6.7000e-004		8.5500e-003	8.5500e-003		8.5500e-003	8.5500e-003		134.9662	134.9662	2.5900e-003	2.4700e-003	135.7876
General Light Industry	12.5111	0.1349	1.2266	1.0303	7.3600e-003		0.0932	0.0932		0.0932	0.0932		1,471.8932	1,471.8932	0.0282	0.0270	1,480.8509
General Office Building	1.09365	0.0118	0.1072	0.0901	6.4000e-004		8.1500e-003	8.1500e-003		8.1500e-003	8.1500e-003		128.6649	128.6649	2.4700e-003	2.3600e-003	129.4480
Golf Course	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
High School	1.50209	0.0162	0.1473	0.1237	8.8000e-004		0.0112	0.0112		0.0112	0.0112		176.7160	176.7160	3.3900e-003	3.2400e-003	177.7914
Mobile Home Park	63.949	0.6897	5.8933	2.5078	0.0376		0.4765	0.4765		0.4765	0.4765		7,523.4112	7,523.4112	0.1442	0.1379	7,569.1974
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Place of Worship	1.62282	0.0175	0.1591	0.1336	9.5000e-004		0.0121	0.0121		0.0121	0.0121		190.9204	190.9204	3.6600e-003	3.5000e-003	192.0823
Regional Shopping Center	34.5421	0.3725	3.3865	2.8447	0.0203		0.2574	0.2574		0.2574	0.2574		4,063.7813	4,063.7813	0.0779	0.0745	4,088.5128
Single Family Housing	38.9497	0.4201	3.5895	1.5274	0.0229		0.2902	0.2902		0.2902	0.2902		4,582.3163	4,582.3163	0.0878	0.0840	4,610.2035
Apartments Low Rise	100.334	1.0820	9.2464	3.9347	0.0590		0.7476	0.7476		0.7476	0.7476		11,803.9491	11,803.9491	0.2262	0.2164	11,875.7860
Total		**2.7570**	**23.8684**	**12.2868**	**0.1504**		**1.9048**	**1.9048**		**1.9048**	**1.9048**		**30,076.6186**	**30,076.6186**	**0.5765**	**0.5514**	**30,259.6599**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	520.7709	6.1358	553.3399	0.0190		32.9262	32.9262		32.8826	32.8826	2,633.6128	65,975.2951	68,608.9079	1.8686	1.4301	69,091.4753
Unmitigated	569.5635	6.1358	553.3399	0.0190		32.9262	32.9262		32.8826	32.8826	2,633.6128	65,975.2951	68,608.9079	1.8686	1.4301	69,091.4753

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6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	75.5596					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	299.9201					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	183.3701	2.0142	195.9886	0.0000		30.9384	30.9384		30.8949	30.8949	2,633.6128	65,329.4118	67,963.0246	1.2522	1.4301	68,432.6455
Landscaping	10.7137	4.1216	357.3513	0.0190		1.9877	1.9877		1.9877	1.9877		645.8833	645.8833	0.6165		658.8297
Total	**569.5635**	**6.1358**	**553.3399**	**0.0190**		**32.9262**	**32.9262**		**32.8826**	**32.8826**	**2,633.6128**	**65,975.2951**	**68,608.9079**	**1.8687**	**1.4301**	**69,091.4753**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	26.7670					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	299.9201					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	183.3701	2.0142	195.9886	0.0000		30.9384	30.9384		30.8949	30.8949	2,633.6128	65,329.4118	67,963.0246	1.2522	1.4301	68,432.6455
Landscaping	10.7137	4.1216	357.3513	0.0190		1.9877	1.9877		1.9877	1.9877		645.8833	645.8833	0.6165		658.8297
Total	**520.7709**	**6.1358**	**553.3399**	**0.0190**		**32.9262**	**32.9262**		**32.8826**	**32.8826**	**2,633.6128**	**65,975.2951**	**68,608.9079**	**1.8687**	**1.4301**	**69,091.4753**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

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San Bernardino-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	143.59	1000sqft	54.00	143,591.00	0
Elementary School	509.00	Student	15.00	42,554.12	0
High School	420.00	Student	5.00	55,717.61	0
Place of Worship	20.37	1000sqft	2.00	20,369.00	0
General Light Industry	157.03	1000sqft	10.00	157,034.00	0
Other Asphalt Surfaces	71.00	Acre	71.00	3,092,760.00	0
City Park	46.00	Acre	46.00	2,003,760.00	0
Golf Course	34.00	Acre	34.00	1,481,040.00	0
Apartments Low Rise	2,869.00	Dwelling Unit	58.00	2,869,000.00	8205
Mobile Home Park	1,029.00	Dwelling Unit	40.00	1,234,800.00	2943
Single Family Housing	443.00	Dwelling Unit	134.00	797,400.00	1267
Regional Shopping Center	3,249.45	1000sqft	242.00	3,249,454.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2035
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - See assumptions

Construction Phase - operational phase no construction

Off-road Equipment - operational phase no construction

Trips and VMT - operational phase no construction

Architectural Coating - operational phase no construction

Vehicle Trips - Based on Fehr & Peers gross trip ends and VMT using the MXD model

Woodstoves - See assumptions

Energy Use - See assumptions for blended rates - assumed mix of existing and new building stock.

Water And Wastewater - 100% treated wastewater. See assumptions for demand based on the WSA.

Solid Waste - see assumptions.

Area Mitigation - Coatings comply with Rule 1113 for flatcoats and semi gloss

Energy Mitigation - Building Energy efficiency accounted for in the blended rates

Water Mitigation - water efficiency accounted for in the WSA

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Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	0.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	0.00
tblArchitecturalCoating	EF_Residential_Exterior	100.00	0.00
tblArchitecturalCoating	EF_Residential_Interior	50.00	0.00
tblAreaMitigation	UseLowVOCPaintNonresidentialExterior Value	250	100
tblAreaMitigation	UseLowVOCPaintNonresidentialInterior Value	250	50
tblConstructionPhase	NumDays	880.00	1.00
tblEnergyUse	T24E	636.58	658.05
tblEnergyUse	T24E	3.40	3.64
tblEnergyUse	T24E	2.69	2.01
tblEnergyUse	T24E	3.75	2.80
tblEnergyUse	T24E	3.40	3.64
tblEnergyUse	T24E	973.13	1,211.87
tblEnergyUse	T24E	2.69	2.01
tblEnergyUse	T24E	5.60	4.01
tblEnergyUse	T24E	980.99	1,047.27
tblEnergyUse	T24NG	11,224.20	10,266.64
tblEnergyUse	T24NG	7.34	8.05
tblEnergyUse	T24NG	16.16	11.95
tblEnergyUse	T24NG	3.65	2.78
tblEnergyUse	T24NG	7.34	8.05
tblEnergyUse	T24NG	19,139.92	20,580.56
tblEnergyUse	T24NG	16.16	11.95
tblEnergyUse	T24NG	2.02	3.58
tblEnergyUse	T24NG	27,816.78	26,141.59
tblFireplaces	NumberGas	2,438.65	2,170.00
tblFireplaces	NumberGas	874.65	0.00
tblFireplaces	NumberGas	376.55	915.00
tblFireplaces	NumberNoFireplace	286.90	699.00
tblFireplaces	NumberNoFireplace	102.90	443.00
tblFireplaces	NumberNoFireplace	44.30	76.00
tblFireplaces	NumberWood	143.45	0.00
tblFireplaces	NumberWood	51.45	0.00
tblFireplaces	NumberWood	22.15	38.00
tblLandUse	LandUseSquareFeet	143,590.00	143,591.00
tblLandUse	LandUseSquareFeet	20,370.00	20,369.00
tblLandUse	LandUseSquareFeet	157,030.00	157,034.00
tblLandUse	LandUseSquareFeet	3,249,450.00	3,249,454.00
tblLandUse	LotAcreage	3.30	54.00
tblLandUse	LotAcreage	0.98	15.00
tblLandUse	LotAcreage	1.28	5.00
tblLandUse	LotAcreage	0.47	2.00
tblLandUse	LotAcreage	3.60	10.00
tblLandUse	LotAcreage	179.31	58.00
tblLandUse	LotAcreage	129.63	40.00
tblLandUse	LotAcreage	143.83	134.00

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tblLandUse	LotAcreage	74.60	242.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblProjectCharacteristics	OperationalYear	2014	2035
tblSolidWaste	SolidWasteGenerationRate	1,319.74	2,780.00
tblSolidWaste	SolidWasteGenerationRate	3.96	4.00
tblSolidWaste	SolidWasteGenerationRate	92.89	93.00
tblSolidWaste	SolidWasteGenerationRate	194.72	172.00
tblSolidWaste	SolidWasteGenerationRate	133.54	157.00
tblSolidWaste	SolidWasteGenerationRate	31.62	32.00
tblSolidWaste	SolidWasteGenerationRate	76.65	77.00
tblSolidWaste	SolidWasteGenerationRate	473.34	1,878.00
tblSolidWaste	SolidWasteGenerationRate	116.11	22.00
tblSolidWaste	SolidWasteGenerationRate	3,411.92	3,558.00
tblSolidWaste	SolidWasteGenerationRate	519.47	808.00
tblTripsAndVMT	WorkerTripNumber	1,386.00	0.00
tblVehicleTrips	CC_TL	8.40	8.83
tblVehicleTrips	CC_TL	8.40	8.83
tblVehicleTrips	CC_TL	8.40	8.83
tblVehicleTrips	CC_TL	8.40	8.83
tblVehicleTrips	CC_TL	8.40	8.83
tblVehicleTrips	CC_TL	8.40	8.83
tblVehicleTrips	CC_TL	8.40	8.83
tblVehicleTrips	CC_TL	8.40	8.83
tblVehicleTrips	CC_TL	8.40	8.83
tblVehicleTrips	CNW_TL	6.90	8.83
tblVehicleTrips	CNW_TL	6.90	8.83
tblVehicleTrips	CNW_TL	6.90	8.83
tblVehicleTrips	CNW_TL	6.90	8.83
tblVehicleTrips	CNW_TL	6.90	8.83
tblVehicleTrips	CNW_TL	6.90	8.83
tblVehicleTrips	CNW_TL	6.90	8.83
tblVehicleTrips	CNW_TL	6.90	8.83
tblVehicleTrips	CNW_TL	6.90	8.83
tblVehicleTrips	CW_TL	16.60	8.83
tblVehicleTrips	CW_TL	16.60	8.83
tblVehicleTrips	CW_TL	16.60	8.83
tblVehicleTrips	CW_TL	16.60	8.83
tblVehicleTrips	CW_TL	16.60	8.83
tblVehicleTrips	CW_TL	16.60	8.83
tblVehicleTrips	CW_TL	16.60	8.83
tblVehicleTrips	CW_TL	16.60	8.83
tblVehicleTrips	CW_TL	16.60	8.83
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	28.00	0.00
tblVehicleTrips	DV_TP	25.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	DV_TP	19.00	0.00

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tblVehicleTrips	DV_TP	39.00	0.00
tblVehicleTrips	DV_TP	19.00	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	25.00	0.00
tblVehicleTrips	DV_TP	35.00	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	HO_TL	8.70	8.83
tblVehicleTrips	HO_TL	8.70	8.83
tblVehicleTrips	HO_TL	8.70	8.83
tblVehicleTrips	HS_TL	5.90	8.83
tblVehicleTrips	HS_TL	5.90	8.83
tblVehicleTrips	HS_TL	5.90	8.83
tblVehicleTrips	HW_TL	14.70	8.83
tblVehicleTrips	HW_TL	14.70	8.83
tblVehicleTrips	HW_TL	14.70	8.83
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	6.00	0.00
tblVehicleTrips	PB_TP	12.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	4.00	0.00
tblVehicleTrips	PB_TP	9.00	0.00
tblVehicleTrips	PB_TP	6.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	66.00	100.00
tblVehicleTrips	PR_TP	63.00	100.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	PR_TP	77.00	100.00
tblVehicleTrips	PR_TP	52.00	100.00
tblVehicleTrips	PR_TP	75.00	100.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	64.00	100.00
tblVehicleTrips	PR_TP	54.00	100.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	ST_TR	7.16	2.52
tblVehicleTrips	ST_TR	1.59	8.45
tblVehicleTrips	ST_TR	1.32	0.67
tblVehicleTrips	ST_TR	2.37	1.24
tblVehicleTrips	ST_TR	5.82	3.00
tblVehicleTrips	ST_TR	0.61	0.31
tblVehicleTrips	ST_TR	5.00	1.73
tblVehicleTrips	ST_TR	10.37	5.23
tblVehicleTrips	ST_TR	49.97	25.22
tblVehicleTrips	ST_TR	10.08	5.00

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tblVehicleTrips	SU_TR	6.07	2.12
tblVehicleTrips	SU_TR	1.59	8.45
tblVehicleTrips	SU_TR	0.68	0.34
tblVehicleTrips	SU_TR	0.98	0.53
tblVehicleTrips	SU_TR	5.88	3.85
tblVehicleTrips	SU_TR	0.25	0.13
tblVehicleTrips	SU_TR	4.36	1.48
tblVehicleTrips	SU_TR	36.63	18.49
tblVehicleTrips	SU_TR	25.24	12.74
tblVehicleTrips	SU_TR	8.77	4.35
tblVehicleTrips	WD_TR	6.59	3.36
tblVehicleTrips	WD_TR	1.59	0.95
tblVehicleTrips	WD_TR	1.29	0.65
tblVehicleTrips	WD_TR	6.97	4.60
tblVehicleTrips	WD_TR	11.01	5.57
tblVehicleTrips	WD_TR	5.04	2.39
tblVehicleTrips	WD_TR	1.71	0.86
tblVehicleTrips	WD_TR	4.99	2.52
tblVehicleTrips	WD_TR	9.11	3.52
tblVehicleTrips	WD_TR	42.94	21.55
tblVehicleTrips	WD_TR	9.57	4.80
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	IndoorWaterUseRate	186,926,899.51	87,944,480.00
tblWater	IndoorWaterUseRate	0.00	28,511,617.00

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tblWater	IndoorWaterUseRate	1,233,938.16	5,578,360.00
tblWater	IndoorWaterUseRate	36,313,187.50	50,341,599.00
tblWater	IndoorWaterUseRate	25,520,788.87	201,956,519.00
tblWater	IndoorWaterUseRate	0.00	21,073,804.00
tblWater	IndoorWaterUseRate	1,850,083.20	6,817,995.00
tblWater	IndoorWaterUseRate	67,043,492.36	15,569,422.00
tblWater	IndoorWaterUseRate	637,355.06	2,099,720.00
tblWater	IndoorWaterUseRate	240,694,954.94	173,855,957.00
tblWater	IndoorWaterUseRate	28,863,233.35	140,681,221.00
tblWater	OutdoorWaterUseRate	117,845,219.25	77,978,440.00
tblWater	OutdoorWaterUseRate	54,808,142.08	25,283,543.00
tblWater	OutdoorWaterUseRate	3,172,983.84	4,946,780.00
tblWater	OutdoorWaterUseRate	0.00	44,641,943.00
tblWater	OutdoorWaterUseRate	15,641,773.83	179,091,082.00
tblWater	OutdoorWaterUseRate	40,510,365.89	18,687,836.00
tblWater	OutdoorWaterUseRate	4,757,356.80	6,046,065.00
tblWater	OutdoorWaterUseRate	42,266,549.53	13,806,658.00
tblWater	OutdoorWaterUseRate	996,888.69	1,861,990.00
tblWater	OutdoorWaterUseRate	147,522,714.32	154,172,054.00
tblWater	OutdoorWaterUseRate	18,196,386.24	124,753,349.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	NumberCatalytic	143.45	0.00
tblWoodstoves	NumberCatalytic	51.45	0.00
tblWoodstoves	NumberCatalytic	22.15	0.00
tblWoodstoves	NumberNoncatalytic	143.45	0.00
tblWoodstoves	NumberNoncatalytic	51.45	0.00
tblWoodstoves	NumberNoncatalytic	22.15	0.00

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San Bernardino-South Coast County, Winter

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	569.5635	6.1358	553.3399	0.0190		32.9262	32.9262		32.8826	32.8826	2,633.6128	65,975.2951	68,608.9079	1.8686	1.4301	69,091.4753
Energy	2.7570	23.8684	12.2868	0.1504		1.9049	1.9049		1.9049	1.9049		30,076.6187	30,076.6187	0.5765	0.5514	30,259.6599
Mobile	204.8828	544.6334	2,353.1844	10.1337	679.3142	14.7061	694.0203	181.4794	13.5647	195.0441		734,657.9849	734,657.9849	18.6933		735,050.5432
Total	**777.2033**	**574.6376**	**2,918.8110**	**10.3030**	**679.3142**	**49.5371**	**728.8513**	**181.4794**	**48.3522**	**229.8315**	**2,633.6128**	**830,709.8986**	**833,343.5114**	**21.1384**	**1.9815**	**834,401.6784**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	520.7709	6.1358	553.3399	0.0190		32.9262	32.9262		32.8826	32.8826	2,633.6128	65,975.2951	68,608.9079	1.8686	1.4301	69,091.4753
Energy	2.7570	23.8684	12.2868	0.1504		1.9049	1.9049		1.9049	1.9049		30,076.6187	30,076.6187	0.5765	0.5514	30,259.6599
Mobile	204.8828	544.6334	2,353.1844	10.1337	679.3142	14.7061	694.0203	181.4794	13.5647	195.0441		734,657.9849	734,657.9849	18.6933		735,050.5432
Total	**728.4107**	**574.6376**	**2,918.8110**	**10.3030**	**679.3142**	**49.5371**	**728.8513**	**181.4794**	**48.3522**	**229.8315**	**2,633.6128**	**830,709.8986**	**833,343.5114**	**21.1384**	**1.9815**	**834,401.6784**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**6.28**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	204.8828	544.6334	2,353.1844	10.1337	679.3142	14.7061	694.0203	181.4794	13.5647	195.0441		734,657.9849	734,657.9849	18.6933		735,050.5432
Unmitigated	204.8828	544.6334	2,353.1844	10.1337	679.3142	14.7061	694.0203	181.4794	13.5647	195.0441		734,657.9849	734,657.9849	18.6933		735,050.5432

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San Bernardino-South Coast County, Winter

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	9,639.84	7,229.88	6082.28	28,243,556	28,243,556
City Park	43.70	388.70	388.70	457,277	457,277
Elementary School	330.85	0.00	0.00	759,565	759,565
General Light Industry	722.34	105.21	53.39	1,731,166	1,731,166
General Office Building	799.80	178.05	76.10	1,952,870	1,952,870
Golf Course	81.26	102.00	130.90	293,495	293,495
High School	361.20	130.20	54.60	914,096	914,096
Mobile Home Park	2,593.08	1,780.17	1522.92	7,469,840	7,469,840
Other Asphalt Surfaces	0.00	0.00	0.00		
Place of Worship	71.70	106.54	376.64	386,470	386,470
Regional Shopping Center	70,025.65	81,951.13	41397.99	217,401,864	217,401,864
Single Family Housing	2,126.40	2,215.00	1927.05	6,783,653	6,783,653
Total	86,795.81	94,186.88	52,010.58	266,393,853	266,393,853

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	8.83	8.83	8.83	40.20	19.20	40.60	100	0	0
City Park	8.83	8.83	8.83	33.00	48.00	19.00	100	0	0
Elementary School	8.83	8.83	8.83	65.00	30.00	5.00	100	0	0
General Light Industry	8.83	8.83	8.83	59.00	28.00	13.00	100	0	0
General Office Building	8.83	8.83	8.83	33.00	48.00	19.00	100	0	0
Golf Course	8.83	8.83	8.83	33.00	48.00	19.00	100	0	0
High School	8.83	8.83	8.83	77.80	17.20	5.00	100	0	0
Mobile Home Park	8.83	8.83	8.83	40.20	19.20	40.60	100	0	0
Other Asphalt Surfaces	8.83	8.83	8.83	0.00	0.00	0.00	0	0	0
Place of Worship	8.83	8.83	8.83	0.00	95.00	5.00	100	0	0
Regional Shopping Center	8.83	8.83	8.83	16.30	64.70	19.00	100	0	0
Single Family Housing	8.83	8.83	8.83	40.20	19.20	40.60	100	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.445160	0.068315	0.180257	0.161061	0.057208	0.009197	0.016142	0.050774	0.001074	0.001468	0.004084	0.000577	0.004683

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	2.7570	23.8684	12.2868	0.1504		1.9049	1.9049		1.9049	1.9049		30,076.6187	30,076.6187	0.5765	0.5514	30,259.6599
NaturalGas Unmitigated	2.7570	23.8684	12.2868	0.1504		1.9049	1.9049		1.9049	1.9049		30,076.6187	30,076.6187	0.5765	0.5514	30,259.6599

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5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Elementary School	1147.21	0.0124	0.1125	0.0945	6.7000e-004		8.5500e-003	8.5500e-003		8.5500e-003	8.5500e-003		134.9662	134.9662	2.5900e-003	2.4700e-003	135.7876
General Light Industry	12511.1	0.1349	1.2266	1.0303	7.3600e-003		0.0932	0.0932		0.0932	0.0932		1,471.8932	1,471.8932	0.0282	0.0270	1,480.8509
General Office Building	1093.65	0.0118	0.1072	0.0901	6.4000e-004		8.1500e-003	8.1500e-003		8.1500e-003	8.1500e-003		128.6649	128.6649	2.4700e-003	2.3600e-003	129.4480
Golf Course	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
High School	1502.09	0.0162	0.1473	0.1237	8.8000e-004		0.0112	0.0112		0.0112	0.0112		176.7160	176.7160	3.3900e-003	3.2400e-003	177.7914
Mobile Home Park	63949	0.6897	5.8933	2.5078	0.0376		0.4765	0.4765		0.4765	0.4765		7,523.4112	7,523.4112	0.1442	0.1379	7,569.1974
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Place of Worship	1622.82	0.0175	0.1591	0.1336	9.5000e-004		0.0121	0.0121		0.0121	0.0121		190.9204	190.9204	3.6600e-003	3.5000e-003	192.0823
Regional Shopping Center	34542.1	0.3725	3.3865	2.8447	0.0203		0.2574	0.2574		0.2574	0.2574		4,063.7813	4,063.7813	0.0779	0.0745	4,088.5128
Apartments Low Rise	100334	1.0820	9.2464	3.9347	0.0590		0.7476	0.7476		0.7476	0.7476		11,803.9491	11,803.9491	0.2262	0.2164	11,875.7860
Single Family Housing	38949.7	0.4201	3.5895	1.5274	0.0229		0.2902	0.2902		0.2902	0.2902		4,582.3163	4,582.3163	0.0878	0.0840	4,610.2035
Total		**2.7570**	**23.8684**	**12.2868**	**0.1504**		**1.9048**	**1.9048**		**1.9048**	**1.9048**		**30,076.6186**	**30,076.6186**	**0.5765**	**0.5514**	**30,259.6599**

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San Bernardino-South Coast County, Winter

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Elementary School	1.14721	0.0124	0.1125	0.0945	6.7000e-004		8.5500e-003	8.5500e-003		8.5500e-003	8.5500e-003		134.9662	134.9662	2.5900e-003	2.4700e-003	135.7876
General Light Industry	12.5111	0.1349	1.2266	1.0303	7.3600e-003		0.0932	0.0932		0.0932	0.0932		1,471.8932	1,471.8932	0.0282	0.0270	1,480.8509
General Office Building	1.09365	0.0118	0.1072	0.0901	6.4000e-004		8.1500e-003	8.1500e-003		8.1500e-003	8.1500e-003		128.6649	128.6649	2.4700e-003	2.3600e-003	129.4480
Golf Course	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
High School	1.50209	0.0162	0.1473	0.1237	8.8000e-004		0.0112	0.0112		0.0112	0.0112		176.7160	176.7160	3.3900e-003	3.2400e-003	177.7914
Mobile Home Park	63.949	0.6897	5.8933	2.5078	0.0376		0.4765	0.4765		0.4765	0.4765		7,523.4112	7,523.4112	0.1442	0.1379	7,569.1974
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Place of Worship	1.62282	0.0175	0.1591	0.1336	9.5000e-004		0.0121	0.0121		0.0121	0.0121		190.9204	190.9204	3.6600e-003	3.5000e-003	192.0823
Regional Shopping Center	34.5421	0.3725	3.3865	2.8447	0.0203		0.2574	0.2574		0.2574	0.2574		4,063.7813	4,063.7813	0.0779	0.0745	4,088.5128
Single Family Housing	38.9497	0.4201	3.5895	1.5274	0.0229		0.2902	0.2902		0.2902	0.2902		4,582.3163	4,582.3163	0.0878	0.0840	4,610.2035
Apartments Low Rise	100.334	1.0820	9.2464	3.9347	0.0590		0.7476	0.7476		0.7476	0.7476		11,803.9491	11,803.9491	0.2262	0.2164	11,875.7860
Total		**2.7570**	**23.8684**	**12.2868**	**0.1504**		**1.9048**	**1.9048**		**1.9048**	**1.9048**		**30,076.6186**	**30,076.6186**	**0.5765**	**0.5514**	**30,259.6599**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	520.7709	6.1358	553.3399	0.0190		32.9262	32.9262		32.8826	32.8826	2,633.6128	65,975.2951	68,608.9079	1.8686	1.4301	69,091.4753
Unmitigated	569.5635	6.1358	553.3399	0.0190		32.9262	32.9262		32.8826	32.8826	2,633.6128	65,975.2951	68,608.9079	1.8686	1.4301	69,091.4753

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6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	75.5596					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	299.9201					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	183.3701	2.0142	195.9886	0.0000		30.9384	30.9384		30.8949	30.8949	2,633.6128	65,329.4118	67,963.0246	1.2522	1.4301	68,432.6455
Landscaping	10.7137	4.1216	357.3513	0.0190		1.9877	1.9877		1.9877	1.9877		645.8833	645.8833	0.6165		658.8297
Total	**569.5635**	**6.1358**	**553.3399**	**0.0190**		**32.9262**	**32.9262**		**32.8826**	**32.8826**	**2,633.6128**	**65,975.2951**	**68,608.9079**	**1.8687**	**1.4301**	**69,091.4753**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	26.7670					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	299.9201					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	183.3701	2.0142	195.9886	0.0000		30.9384	30.9384		30.8949	30.8949	2,633.6128	65,329.4118	67,963.0246	1.2522	1.4301	68,432.6455
Landscaping	10.7137	4.1216	357.3513	0.0190		1.9877	1.9877		1.9877	1.9877		645.8833	645.8833	0.6165		658.8297
Total	**520.7709**	**6.1358**	**553.3399**	**0.0190**		**32.9262**	**32.9262**		**32.8826**	**32.8826**	**2,633.6128**	**65,975.2951**	**68,608.9079**	**1.8687**	**1.4301**	**69,091.4753**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	143.59	1000sqft	54.00	143,591.00	0
Elementary School	509.00	Student	15.00	42,554.12	0
High School	420.00	Student	5.00	55,717.61	0
Place of Worship	20.37	1000sqft	2.00	20,369.00	0
General Light Industry	157.03	1000sqft	10.00	157,034.00	0
Other Asphalt Surfaces	71.00	Acre	71.00	3,092,760.00	0
City Park	46.00	Acre	46.00	2,003,760.00	0
Golf Course	34.00	Acre	34.00	1,481,040.00	0
Apartments Low Rise	2,869.00	Dwelling Unit	58.00	2,869,000.00	8205
Mobile Home Park	1,029.00	Dwelling Unit	40.00	1,234,800.00	2943
Single Family Housing	443.00	Dwelling Unit	134.00	797,400.00	1267
Regional Shopping Center	3,249.45	1000sqft	242.00	3,249,454.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2035
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - See assumptions

Construction Phase - operational phase no construction

Off-road Equipment - operational phase no construction

Trips and VMT - operational phase no construction

Architectural Coating - operational phase no construction

Vehicle Trips - Based on Fehr & Peers gross trip ends and VMT using the MXD model

Woodstoves - See assumptions

Energy Use - See assumptions for blended rates - assumed mix of existing and new building stock.

Water And Wastewater - 100% treated wastewater. See assumptions for demand based on the WSA.

Solid Waste - see assumptions.

Area Mitigation - Coatings comply with Rule 1113 for flatcoats and semi gloss

Energy Mitigation - Building Energy efficiency accounted for in the blended rates

Water Mitigation - water efficiency accounted for in the WSA

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Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	0.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	0.00
tblArchitecturalCoating	EF_Residential_Exterior	100.00	0.00
tblArchitecturalCoating	EF_Residential_Interior	50.00	0.00
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	250	100
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	50
tblConstructionPhase	NumDays	880.00	1.00
tblEnergyUse	T24E	636.58	658.05
tblEnergyUse	T24E	3.40	3.64
tblEnergyUse	T24E	2.69	2.01
tblEnergyUse	T24E	3.75	2.80
tblEnergyUse	T24E	3.40	3.64
tblEnergyUse	T24E	973.13	1,211.87
tblEnergyUse	T24E	2.69	2.01
tblEnergyUse	T24E	5.60	4.01
tblEnergyUse	T24E	980.99	1,047.27
tblEnergyUse	T24NG	11,224.20	10,266.64
tblEnergyUse	T24NG	7.34	8.05
tblEnergyUse	T24NG	16.16	11.95
tblEnergyUse	T24NG	3.65	2.78
tblEnergyUse	T24NG	7.34	8.05
tblEnergyUse	T24NG	19,139.92	20,580.56
tblEnergyUse	T24NG	16.16	11.95
tblEnergyUse	T24NG	2.02	3.58
tblEnergyUse	T24NG	27,816.78	26,141.59
tblFireplaces	NumberGas	2,438.65	2,170.00
tblFireplaces	NumberGas	874.65	0.00
tblFireplaces	NumberGas	376.55	915.00
tblFireplaces	NumberNoFireplace	286.90	699.00
tblFireplaces	NumberNoFireplace	102.90	443.00
tblFireplaces	NumberNoFireplace	44.30	76.00
tblFireplaces	NumberWood	143.45	0.00
tblFireplaces	NumberWood	51.45	0.00
tblFireplaces	NumberWood	22.15	38.00
tblLandUse	LandUseSquareFeet	143,590.00	143,591.00
tblLandUse	LandUseSquareFeet	20,370.00	20,369.00
tblLandUse	LandUseSquareFeet	157,030.00	157,034.00
tblLandUse	LandUseSquareFeet	3,249,450.00	3,249,454.00
tblLandUse	LotAcreage	3.30	54.00
tblLandUse	LotAcreage	0.98	15.00
tblLandUse	LotAcreage	1.28	5.00
tblLandUse	LotAcreage	0.47	2.00
tblLandUse	LotAcreage	3.60	10.00
tblLandUse	LotAcreage	179.31	58.00
tblLandUse	LotAcreage	129.63	40.00

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tblLandUse	LotAcreage	143.83	134.00
tblLandUse	LotAcreage	74.60	242.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblProjectCharacteristics	OperationalYear	2014	2035
tblSolidWaste	SolidWasteGenerationRate	1,319.74	2,780.00
tblSolidWaste	SolidWasteGenerationRate	3.96	4.00
tblSolidWaste	SolidWasteGenerationRate	92.89	93.00
tblSolidWaste	SolidWasteGenerationRate	194.72	172.00
tblSolidWaste	SolidWasteGenerationRate	133.54	157.00
tblSolidWaste	SolidWasteGenerationRate	31.62	32.00
tblSolidWaste	SolidWasteGenerationRate	76.65	77.00
tblSolidWaste	SolidWasteGenerationRate	473.34	1,878.00
tblSolidWaste	SolidWasteGenerationRate	116.11	22.00
tblSolidWaste	SolidWasteGenerationRate	3,411.92	3,558.00
tblSolidWaste	SolidWasteGenerationRate	519.47	808.00
tblTripsAndVMT	WorkerTripNumber	1,386.00	0.00
tblVehicleTrips	CC_TL	8.40	8.83
tblVehicleTrips	CC_TL	8.40	8.83
tblVehicleTrips	CC_TL	8.40	8.83
tblVehicleTrips	CC_TL	8.40	8.83
tblVehicleTrips	CC_TL	8.40	8.83
tblVehicleTrips	CC_TL	8.40	8.83
tblVehicleTrips	CC_TL	8.40	8.83
tblVehicleTrips	CC_TL	8.40	8.83
tblVehicleTrips	CC_TL	8.40	8.83
tblVehicleTrips	CNW_TL	6.90	8.83
tblVehicleTrips	CNW_TL	6.90	8.83
tblVehicleTrips	CNW_TL	6.90	8.83
tblVehicleTrips	CNW_TL	6.90	8.83
tblVehicleTrips	CNW_TL	6.90	8.83
tblVehicleTrips	CNW_TL	6.90	8.83
tblVehicleTrips	CNW_TL	6.90	8.83
tblVehicleTrips	CNW_TL	6.90	8.83
tblVehicleTrips	CNW_TL	6.90	8.83
tblVehicleTrips	CW_TL	16.60	8.83
tblVehicleTrips	CW_TL	16.60	8.83
tblVehicleTrips	CW_TL	16.60	8.83
tblVehicleTrips	CW_TL	16.60	8.83
tblVehicleTrips	CW_TL	16.60	8.83
tblVehicleTrips	CW_TL	16.60	8.83
tblVehicleTrips	CW_TL	16.60	8.83
tblVehicleTrips	CW_TL	16.60	8.83
tblVehicleTrips	CW_TL	16.60	8.83
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	28.00	0.00
tblVehicleTrips	DV_TP	25.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00

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tblVehicleTrips	DV_TP	19.00	0.00
tblVehicleTrips	DV_TP	39.00	0.00
tblVehicleTrips	DV_TP	19.00	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	25.00	0.00
tblVehicleTrips	DV_TP	35.00	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	HO_TL	8.70	8.83
tblVehicleTrips	HO_TL	8.70	8.83
tblVehicleTrips	HO_TL	8.70	8.83
tblVehicleTrips	HS_TL	5.90	8.83
tblVehicleTrips	HS_TL	5.90	8.83
tblVehicleTrips	HS_TL	5.90	8.83
tblVehicleTrips	HW_TL	14.70	8.83
tblVehicleTrips	HW_TL	14.70	8.83
tblVehicleTrips	HW_TL	14.70	8.83
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	6.00	0.00
tblVehicleTrips	PB_TP	12.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	4.00	0.00
tblVehicleTrips	PB_TP	9.00	0.00
tblVehicleTrips	PB_TP	6.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	66.00	100.00
tblVehicleTrips	PR_TP	63.00	100.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	PR_TP	77.00	100.00
tblVehicleTrips	PR_TP	52.00	100.00
tblVehicleTrips	PR_TP	75.00	100.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	64.00	100.00
tblVehicleTrips	PR_TP	54.00	100.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	ST_TR	7.16	2.52
tblVehicleTrips	ST_TR	1.59	8.45
tblVehicleTrips	ST_TR	1.32	0.67
tblVehicleTrips	ST_TR	2.37	1.24
tblVehicleTrips	ST_TR	5.82	3.00
tblVehicleTrips	ST_TR	0.61	0.31
tblVehicleTrips	ST_TR	5.00	1.73
tblVehicleTrips	ST_TR	10.37	5.23
tblVehicleTrips	ST_TR	49.97	25.22

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tblVehicleTrips	ST_TR	10.08	5.00
tblVehicleTrips	SU_TR	6.07	2.12
tblVehicleTrips	SU_TR	1.59	8.45
tblVehicleTrips	SU_TR	0.68	0.34
tblVehicleTrips	SU_TR	0.98	0.53
tblVehicleTrips	SU_TR	5.88	3.85
tblVehicleTrips	SU_TR	0.25	0.13
tblVehicleTrips	SU_TR	4.36	1.48
tblVehicleTrips	SU_TR	36.63	18.49
tblVehicleTrips	SU_TR	25.24	12.74
tblVehicleTrips	SU_TR	8.77	4.35
tblVehicleTrips	WD_TR	6.59	3.36
tblVehicleTrips	WD_TR	1.59	0.95
tblVehicleTrips	WD_TR	1.29	0.65
tblVehicleTrips	WD_TR	6.97	4.60
tblVehicleTrips	WD_TR	11.01	5.57
tblVehicleTrips	WD_TR	5.04	2.39
tblVehicleTrips	WD_TR	1.71	0.86
tblVehicleTrips	WD_TR	4.99	2.52
tblVehicleTrips	WD_TR	9.11	3.52
tblVehicleTrips	WD_TR	42.94	21.55
tblVehicleTrips	WD_TR	9.57	4.80
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	IndoorWaterUseRate	186,926,899.51	87,944,480.00

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tblWater	IndoorWaterUseRate	0.00	28,511,617.00
tblWater	IndoorWaterUseRate	1,233,938.16	5,578,360.00
tblWater	IndoorWaterUseRate	36,313,187.50	50,341,599.00
tblWater	IndoorWaterUseRate	25,520,788.87	201,956,519.00
tblWater	IndoorWaterUseRate	0.00	21,073,804.00
tblWater	IndoorWaterUseRate	1,850,083.20	6,817,995.00
tblWater	IndoorWaterUseRate	67,043,492.36	15,569,422.00
tblWater	IndoorWaterUseRate	637,355.06	2,099,720.00
tblWater	IndoorWaterUseRate	240,694,954.94	173,855,957.00
tblWater	IndoorWaterUseRate	28,863,233.35	140,681,221.00
tblWater	OutdoorWaterUseRate	117,845,219.25	77,978,440.00
tblWater	OutdoorWaterUseRate	54,808,142.08	25,283,543.00
tblWater	OutdoorWaterUseRate	3,172,983.84	4,946,780.00
tblWater	OutdoorWaterUseRate	0.00	44,641,943.00
tblWater	OutdoorWaterUseRate	15,641,773.83	179,091,082.00
tblWater	OutdoorWaterUseRate	40,510,365.89	18,687,836.00
tblWater	OutdoorWaterUseRate	4,757,356.80	6,046,065.00
tblWater	OutdoorWaterUseRate	42,266,549.53	13,806,658.00
tblWater	OutdoorWaterUseRate	996,888.69	1,861,990.00
tblWater	OutdoorWaterUseRate	147,522,714.32	154,172,054.00
tblWater	OutdoorWaterUseRate	18,196,386.24	124,753,349.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	NumberCatalytic	143.45	0.00
tblWoodstoves	NumberCatalytic	51.45	0.00
tblWoodstoves	NumberCatalytic	22.15	0.00
tblWoodstoves	NumberNoncatalytic	143.45	0.00
tblWoodstoves	NumberNoncatalytic	51.45	0.00
tblWoodstoves	NumberNoncatalytic	22.15	0.00

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2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	72.1564	0.5404	47.1188	2.3700e-003		0.6352	0.6352		0.6347	0.6347	29.8647	814.0650	843.9297	0.0841	0.0162	850.7232
Energy	0.5032	4.3560	2.2423	0.0274		0.3476	0.3476		0.3476	0.3476	0.0000	25,241.3142	25,241.3142	1.0268	0.2840	25,350.9137
Mobile	29.8610	84.4000	366.4116	1.5528	101.0470	2.2224	103.2694	27.0367	2.0499	29.0866	0.0000	102,004.7754	102,004.7754	2.5638	0.0000	102,058.6144
Waste						0.0000	0.0000		0.0000	0.0000	1,944.8564	0.0000	1,944.8564	114.9377	0.0000	4,358.5486
Water						0.0000	0.0000		0.0000	0.0000	259.8427	4,807.2114	5,067.0541	1.1153	0.6108	5,279.8213
Total	**102.5206**	**89.2964**	**415.7727**	**1.5826**	**101.0470**	**3.2052**	**104.2522**	**27.0367**	**3.0322**	**30.0689**	**2,234.5638**	**132,867.3660**	**135,101.9298**	**119.7277**	**0.9110**	**137,898.6210**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	63.2517	0.5404	47.1188	2.3700e-003		0.6352	0.6352		0.6347	0.6347	29.8647	814.0650	843.9297	0.0841	0.0162	850.7232
Energy	0.5032	4.3560	2.2423	0.0274		0.3476	0.3476		0.3476	0.3476	0.0000	25,241.3142	25,241.3142	1.0268	0.2840	25,350.9137
Mobile	29.8610	84.4000	366.4116	1.5528	101.0470	2.2224	103.2694	27.0367	2.0499	29.0866	0.0000	102,004.7754	102,004.7754	2.5638	0.0000	102,058.6144
Waste						0.0000	0.0000		0.0000	0.0000	1,944.8564	0.0000	1,944.8564	114.9377	0.0000	4,358.5486
Water						0.0000	0.0000		0.0000	0.0000	259.8427	4,807.2114	5,067.0541	1.1105	0.6098	5,279.4067
Total	**93.6159**	**89.2964**	**415.7727**	**1.5826**	**101.0470**	**3.2052**	**104.2522**	**27.0367**	**3.0322**	**30.0689**	**2,234.5638**	**132,867.3660**	**135,101.9298**	**119.7229**	**0.9100**	**137,898.2065**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**8.69**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.11**	**0.00**

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4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	29.8610	84.4000	366.4116	1.5528	101.0470	2.2224	103.2694	27.0367	2.0499	29.0866	0.0000	102,004.7754	102,004.7754	2.5638	0.0000	102,058.6144
Unmitigated	29.8610	84.4000	366.4116	1.5528	101.0470	2.2224	103.2694	27.0367	2.0499	29.0866	0.0000	102,004.7754	102,004.7754	2.5638	0.0000	102,058.6144

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	9,639.84	7,229.88	6082.28	28,243,556	28,243,556
City Park	43.70	388.70	388.70	457,277	457,277
Elementary School	330.85	0.00	0.00	759,565	759,565
General Light Industry	722.34	105.21	53.39	1,731,166	1,731,166
General Office Building	799.80	178.05	76.10	1,952,870	1,952,870
Golf Course	81.26	102.00	130.90	293,495	293,495
High School	361.20	130.20	54.60	914,096	914,096
Mobile Home Park	2,593.08	1,780.17	1522.92	7,469,840	7,469,840
Other Asphalt Surfaces	0.00	0.00	0.00		
Place of Worship	71.70	106.54	376.64	386,470	386,470
Regional Shopping Center	70,025.65	81,951.13	41397.99	217,401,864	217,401,864
Single Family Housing	2,126.40	2,215.00	1927.05	6,783,653	6,783,653
Total	86,795.81	94,186.88	52,010.58	266,393,853	266,393,853

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	8.83	8.83	8.83	40.20	19.20	40.60	100	0	0
City Park	8.83	8.83	8.83	33.00	48.00	19.00	100	0	0
Elementary School	8.83	8.83	8.83	65.00	30.00	5.00	100	0	0
General Light Industry	8.83	8.83	8.83	59.00	28.00	13.00	100	0	0
General Office Building	8.83	8.83	8.83	33.00	48.00	19.00	100	0	0
Golf Course	8.83	8.83	8.83	33.00	48.00	19.00	100	0	0
High School	8.83	8.83	8.83	77.80	17.20	5.00	100	0	0
Mobile Home Park	8.83	8.83	8.83	40.20	19.20	40.60	100	0	0
Other Asphalt Surfaces	8.83	8.83	8.83	0.00	0.00	0.00	0	0	0
Place of Worship	8.83	8.83	8.83	0.00	95.00	5.00	100	0	0
Regional Shopping Center	8.83	8.83	8.83	16.30	64.70	19.00	100	0	0
Single Family Housing	8.83	8.83	8.83	40.20	19.20	40.60	100	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.445160	0.068315	0.180257	0.161061	0.057208	0.009197	0.016142	0.050774	0.001074	0.001468	0.004084	0.000577	0.004683

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5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	20,261.7927	20,261.7927	0.9314	0.1927	20,341.0876
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	20,261.7927	20,261.7927	0.9314	0.1927	20,341.0876
NaturalGas Mitigated	0.5032	4.3560	2.2423	0.0274		0.3476	0.3476		0.3476	0.3476	0.0000	4,979.5215	4,979.5215	0.0954	0.0913	5,009.8261
NaturalGas Unmitigated	0.5032	4.3560	2.2423	0.0274		0.3476	0.3476		0.3476	0.3476	0.0000	4,979.5215	4,979.5215	0.0954	0.0913	5,009.8261

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	3.66218e+007	0.1975	1.6875	0.7181	0.0108		0.1364	0.1364		0.1364	0.1364	0.0000	1,954.2762	1,954.2762	0.0375	0.0358	1,966.1696
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Elementary School	418733	2.2600e-003	0.0205	0.0172	1.2000e-004		1.5600e-003	1.5600e-003		1.5600e-003	1.5600e-003	0.0000	22.3452	22.3452	4.3000e-004	4.1000e-004	22.4812
General Light Industry	4.56655e+006	0.0246	0.2239	0.1880	1.3400e-003		0.0170	0.0170		0.0170	0.0170	0.0000	243.6884	243.6884	4.6700e-003	4.4700e-003	245.1715
General Office Building	399183	2.1500e-003	0.0196	0.0164	1.2000e-004		1.4900e-003	1.4900e-003		1.4900e-003	1.4900e-003	0.0000	21.3019	21.3019	4.1000e-004	3.9000e-004	21.4316
Golf Course	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
High School	548261	2.9600e-003	0.0269	0.0226	1.6000e-004		2.0400e-003	2.0400e-003		2.0400e-003	2.0400e-003	0.0000	29.2573	29.2573	5.6000e-004	5.4000e-004	29.4354
Mobile Home Park	2.33414e+007	0.1259	1.0755	0.4577	6.8700e-003		0.0870	0.0870		0.0870	0.0870	0.0000	1,245.5851	1,245.5851	0.0239	0.0228	1,253.1655
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Place of Worship	592331	3.1900e-003	0.0290	0.0244	1.7000e-004		2.2100e-003	2.2100e-003		2.2100e-003	2.2100e-003	0.0000	31.6090	31.6090	6.1000e-004	5.8000e-004	31.8014
Regional Shopping Center	1.26079e+007	0.0680	0.6180	0.5192	3.7100e-003		0.0470	0.0470		0.0470	0.0470	0.0000	672.8046	672.8046	0.0129	0.0123	676.8992
Single Family Housing	1.42166e+007	0.0767	0.6551	0.2788	4.1800e-003		0.0530	0.0530		0.0530	0.0530	0.0000	758.6539	758.6539	0.0145	0.0139	763.2709
Total		**0.5032**	**4.3560**	**2.2423**	**0.0274**		**0.3476**	**0.3476**		**0.3476**	**0.3476**	**0.0000**	**4,979.5215**	**4,979.5215**	**0.0955**	**0.0913**	**5,009.8261**

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Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Elementary School	418733	2.2600e-003	0.0205	0.0172	1.2000e-004		1.5600e-003	1.5600e-003		1.5600e-003	1.5600e-003	0.0000	22.3452	22.3452	4.3000e-004	4.1000e-004	22.4812
General Light Industry	4.56655e+006	0.0246	0.2239	0.1880	1.3400e-003		0.0170	0.0170		0.0170	0.0170	0.0000	243.6884	243.6884	4.6700e-003	4.4700e-003	245.1715
General Office Building	399183	2.1500e-003	0.0196	0.0164	1.2000e-004		1.4900e-003	1.4900e-003		1.4900e-003	1.4900e-003	0.0000	21.3019	21.3019	4.1000e-004	3.9000e-004	21.4316
Golf Course	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
High School	548261	2.9600e-003	0.0269	0.0226	1.6000e-004		2.0400e-003	2.0400e-003		2.0400e-003	2.0400e-003	0.0000	29.2573	29.2573	5.6000e-004	5.4000e-004	29.4354
Mobile Home Park	2.33414e+007	0.1259	1.0755	0.4577	6.8700e-003		0.0870	0.0870		0.0870	0.0870	0.0000	1,245.5851	1,245.5851	0.0239	0.0228	1,253.1655
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Place of Worship	592331	3.1900e-003	0.0290	0.0244	1.7000e-004		2.2100e-003	2.2100e-003		2.2100e-003	2.2100e-003	0.0000	31.6090	31.6090	6.1000e-004	5.8000e-004	31.8014
Regional Shopping Center	1.26079e+007	0.0680	0.6180	0.5192	3.7100e-003		0.0470	0.0470		0.0470	0.0470	0.0000	672.8046	672.8046	0.0129	0.0123	676.8992
Single Family Housing	1.42166e+007	0.0767	0.6551	0.2788	4.1800e-003		0.0530	0.0530		0.0530	0.0530	0.0000	758.6539	758.6539	0.0145	0.0139	763.2709
Apartments Low Rise	3.66218e+007	0.1975	1.6875	0.7181	0.0108		0.1364	0.1364		0.1364	0.1364	0.0000	1,954.2762	1,954.2762	0.0375	0.0358	1,966.1696
Total		**0.5032**	**4.3560**	**2.2423**	**0.0274**		**0.3476**	**0.3476**		**0.3476**	**0.3476**	**0.0000**	**4,979.5215**	**4,979.5215**	**0.0955**	**0.0913**	**5,009.8261**

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5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	1.17609e+007	3,365.5696	0.1547	0.0320	3,378.7408
City Park	0	0.0000	0.0000	0.0000	0.0000
Elementary School	397030	113.6168	5.2200e-003	1.0800e-003	114.0615
General Light Industry	1.63158e+006	466.9051	0.0215	4.4400e-003	468.7324
General Office Building	1.39858e+006	400.2262	0.0184	3.8100e-003	401.7925
Golf Course	0	0.0000	0.0000	0.0000	0.0000
High School	519845	148.7625	6.8400e-003	1.4100e-003	149.3447
Mobile Home Park	5.73332e+006	1,640.6865	0.0754	0.0156	1,647.1073
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Place of Worship	211634	60.5626	2.7800e-003	5.8000e-004	60.7996
Regional Shopping Center	4.57198e+007	13,083.4981	0.6014	0.1244	13,134.7006
Single Family Housing	3.43144e+006	981.9653	0.0451	9.3400e-003	985.8082
Total		**20,261.7927**	**0.9314**	**0.1927**	**20,341.0876**

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Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	1.17609e+007	3,365.5696	0.1547	0.0320	3,378.7408
City Park	0	0.0000	0.0000	0.0000	0.0000
Elementary School	397030	113.6168	5.2200e-003	1.0800e-003	114.0615
General Light Industry	1.63158e+006	466.9051	0.0215	4.4400e-003	468.7324
General Office Building	1.39858e+006	400.2262	0.0184	3.8100e-003	401.7925
Golf Course	0	0.0000	0.0000	0.0000	0.0000
High School	519845	148.7625	6.8400e-003	1.4100e-003	149.3447
Mobile Home Park	5.73332e+006	1,640.6865	0.0754	0.0156	1,647.1073
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Place of Worship	211634	60.5626	2.7800e-003	5.8000e-004	60.7996
Regional Shopping Center	4.57198e+007	13,083.4981	0.6014	0.1244	13,134.7006
Single Family Housing	3.43144e+006	981.9653	0.0451	9.3400e-003	985.8082
Total		**20,261.7927**	**0.9314**	**0.1927**	**20,341.0876**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	63.2517	0.5404	47.1188	2.3700e-003		0.6352	0.6352		0.6347	0.6347	29.8647	814.0650	843.9297	0.0841	0.0162	850.7232
Unmitigated	72.1564	0.5404	47.1188	2.3700e-003		0.6352	0.6352		0.6347	0.6347	29.8647	814.0650	843.9297	0.0841	0.0162	850.7232

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6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	13.7896					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	54.7354					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	2.2921	0.0252	2.4499	0.0000		0.3867	0.3867		0.3862	0.3862	29.8647	740.8231	770.6877	0.0142	0.0162	776.0132
Landscaping	1.3392	0.5152	44.6689	2.3700e-003		0.2485	0.2485		0.2485	0.2485	0.0000	73.2419	73.2419	0.0699	0.0000	74.7100
Total	**72.1564**	**0.5404**	**47.1188**	**2.3700e-003**		**0.6352**	**0.6352**		**0.6347**	**0.6347**	**29.8647**	**814.0650**	**843.9297**	**0.0841**	**0.0162**	**850.7232**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	4.8850					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	54.7354					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	2.2921	0.0252	2.4499	0.0000		0.3867	0.3867		0.3862	0.3862	29.8647	740.8231	770.6877	0.0142	0.0162	776.0132
Landscaping	1.3392	0.5152	44.6689	2.3700e-003		0.2485	0.2485		0.2485	0.2485	0.0000	73.2419	73.2419	0.0699	0.0000	74.7100
Total	**63.2517**	**0.5404**	**47.1188**	**2.3700e-003**		**0.6352**	**0.6352**		**0.6347**	**0.6347**	**29.8647**	**814.0650**	**843.9297**	**0.0841**	**0.0162**	**850.7232**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	5,067.0541	1.1105	0.6098	5,279.4067
Unmitigated	5,067.0541	1.1153	0.6108	5,279.8213

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7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	87.9445 / 77.9784	606.7297	0.1336	0.0731	632.2075
City Park	28.5116 / 25.2835	196.7112	0.0433	0.0237	204.9711
Elementary School	5.57836 / 4.94678	38.4870	8.4700e-003	4.6400e-003	40.1030
General Light Industry	50.3416 / 44.6419	347.3235	0.0765	0.0419	361.9077
General Office Building	201.957 / 179.091	1,393.3655	0.3067	0.1680	1,451.8730
Golf Course	21.0738 / 18.6878	145.3952	0.0320	0.0175	151.5004
High School	6.81799 / 6.04606	47.0396	0.0104	5.6700e-003	49.0148
Mobile Home Park	15.5694 / 13.8067	107.4186	0.0236	0.0130	111.9292
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Place of Worship	2.09972 / 1.86199	14.4867	3.1900e-003	1.7500e-003	15.0950
Regional Shopping Center	173.856 / 154.172	1,199.4903	0.2640	0.1446	1,249.8570
Single Family Housing	140.681 / 124.753	970.6068	0.2136	0.1170	1,011.3626
Total		**5,067.0541**	**1.1153**	**0.6108**	**5,279.8213**

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Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	87.9445 / 77.9784	606.7297	0.1330	0.0730	632.1578
City Park	28.5116 / 25.2835	196.7112	0.0431	0.0237	204.9550
Elementary School	5.57836 / 4.94678	38.4870	8.4300e-003	4.6300e-003	40.0999
General Light Industry	50.3416 / 44.6419	347.3235	0.0761	0.0418	361.8792
General Office Building	201.957 / 179.091	1,393.3655	0.3054	0.1677	1,451.7591
Golf Course	21.0738 / 18.6878	145.3952	0.0319	0.0175	151.4885
High School	6.81799 / 6.04606	47.0396	0.0103	5.6600e-003	49.0110
Mobile Home Park	15.5694 / 13.8067	107.4186	0.0235	0.0129	111.9204
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Place of Worship	2.09972 / 1.86199	14.4867	3.1700e-003	1.7400e-003	15.0938
Regional Shopping Center	173.856 / 154.172	1,199.4903	0.2629	0.1444	1,249.7589
Single Family Housing	140.681 / 124.753	970.6068	0.2127	0.1168	1,011.2832
Total		**5,067.0541**	**1.1105**	**0.6098**	**5,279.4067**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Unmitigated	1,944.8564	114.9377	0.0000	4,358.5486
Mitigated	1,944.8564	114.9377	0.0000	4,358.5486

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8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	2780	564.3149	33.3501	0.0000	1,264.6660
City Park	4	0.8120	0.0480	0.0000	1.8197
Elementary School	93	18.8782	1.1157	0.0000	42.3072
General Light Industry	172	34.9145	2.0634	0.0000	78.2455
General Office Building	157	31.8696	1.8834	0.0000	71.4218
Golf Course	32	6.4957	0.3839	0.0000	14.5573
High School	77	15.6303	0.9237	0.0000	35.0285
Mobile Home Park	1878	381.2170	22.5293	0.0000	854.3319
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Place of Worship	22	4.4658	0.2639	0.0000	10.0082
Regional Shopping Center	3558	722.2419	42.6833	0.0000	1,618.5905
Single Family Housing	808	164.0167	9.6931	0.0000	367.5720
Total		**1,944.8564**	**114.9377**	**0.0000**	**4,358.5486**

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Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	2780	564.3149	33.3501	0.0000	1,264.6660
City Park	4	0.8120	0.0480	0.0000	1.8197
Elementary School	93	18.8782	1.1157	0.0000	42.3072
General Light Industry	172	34.9145	2.0634	0.0000	78.2455
General Office Building	157	31.8696	1.8834	0.0000	71.4218
Golf Course	32	6.4957	0.3839	0.0000	14.5573
High School	77	15.6303	0.9237	0.0000	35.0285
Mobile Home Park	1878	381.2170	22.5293	0.0000	854.3319
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Place of Worship	22	4.4658	0.2639	0.0000	10.0082
Regional Shopping Center	3558	722.2419	42.6833	0.0000	1,618.5905
Single Family Housing	808	164.0167	9.6931	0.0000	367.5720
Total		**1,944.8564**	**114.9377**	**0.0000**	**4,358.5486**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

CalEEMod Version: CalEEMod.2013.2.2

Date: 5/13/2016 5:11 PM

WatermanGardensSpecificPlan

San Bernardino-South Coast County, Mitigation Report

Construction Mitigation Summary

Phase	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

OFFROAD Equipment Mitigation

Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPF	Oxidation Catalyst
Air Compressors	Diesel	No Change	0	0	No Change	0.00

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Unmitigated tons/yr						Unmitigated mt/yr					
Air Compressors	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Mitigated tons/yr						Mitigated mt/yr					
Air Compressors	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Air Compressors	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000

Fugitive Dust Mitigation

Yes/No	Mitigation Measure	Mitigation Input		Mitigation Input		Mitigation Input	
No	Soil Stabilizer for unpaved Roads	PM10 Reduction		PM2.5 Reduction			
No	Replace Ground Cover of Area Disturbed	PM10 Reduction		PM2.5 Reduction			
No	Water Exposed Area	PM10 Reduction		PM2.5 Reduction		Frequency (per day)	
No	Unpaved Road Mitigation	Moisture Content %		Vehicle Speed (mph)			
No	Clean Paved Road	% PM Reduction	0.00				

		Unmitigated		Mitigated		Percent Reduction	
Phase	Source	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Architectural Coating	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Architectural Coating	Roads	0.00	0.00	0.00	0.00	0.00	0.00

CalEEMod Version: CalEEMod.2013.2.2

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Operational Percent Reduction Summary

Category	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	64.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44	0.17	0.01
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Operational Mobile Mitigation

Project Setting:

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value 3
No	Land Use	Increase Density	0.00			
No	Land Use	Increase Diversity	0.30	0.71		
No	Land Use	Improve Walkability Design	0.00			
No	Land Use	Improve Destination Accessibility	0.00			
No	Land Use	Increase Transit Accessibility	0.25			
No	Land Use	Integrate Below Market Rate Housing	0.00			
	Land Use	Land Use SubTotal	0.00			
No	Neighborhood Enhancements	Improve Pedestrian Network				
No	Neighborhood Enhancements	Provide Traffic Calming Measures				
No	Neighborhood Enhancements	Implement NEV Network	0.00			
	Neighborhood Enhancements	Neighborhood Enhancements Subtotal	0.00			
No	Parking Policy Pricing	Limit Parking Supply	0.00			
No	Parking Policy Pricing	Unbundle Parking Costs	0.00			
No	Parking Policy Pricing	On-street Market Pricing	0.00			
	Parking Policy Pricing	Parking Policy Pricing Subtotal	0.00			
No	Transit Improvements	Provide BRT System	0.00			
No	Transit Improvements	Expand Transit Network	0.00			
No	Transit Improvements	Increase Transit Frequency	0.00			
	Transit Improvements	Transit Improvements Subtotal	0.00			
		Land Use and Site Enhancement Subtotal	0.00			
No	Commute	Implement Trip Reduction Program				

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No	Commute	Transit Subsidy				
No	Commute	Implement Employee Parking "Cash Out"				
No	Commute	Workplace Parking Charge				
No	Commute	Encourage Telecommuting and Alternative Work Schedules	0.00			
No	Commute	Market Commute Trip Reduction Option	0.00			
No	Commute	Employee Vanpool/Shuttle	0.00		2.00	
No	Commute	Provide Ride Sharing Program				
	Commute	Commute Subtotal	0.00			
No	School Trip	Implement School Bus Program	0.00			
		Total VMT Reduction	0.00			

Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
No	Only Natural Gas Hearth	
No	No Hearth	
No	Use Low VOC Cleaning Supplies	
Yes	Use Low VOC Paint (Residential Interior)	50.00
Yes	Use Low VOC Paint (Residential Exterior)	100.00
Yes	Use Low VOC Paint (Non-residential Interior)	50.00
Yes	Use Low VOC Paint (Non-residential Exterior)	100.00
No	% Electric Lawnmower	0.00
No	% Electric Leafblower	0.00
No	% Electric Chainsaw	0.00

Energy Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Exceed Title 24		
No	Install High Efficiency Lighting		
No	On-site Renewable		

Appliance Type	Land Use Subtype	% Improvement
ClothWasher		30.00
DishWasher		15.00
Fan		50.00
Refrigerator		15.00

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Water Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Apply Water Conservation on Strategy	0.00	0.00
No	Use Reclaimed Water	0.00	0.00
No	Use Grey Water	0.00	
No	Install low-flow bathroom faucet	32.00	
No	Install low-flow Kitchen faucet	18.00	
No	Install low-flow Toilet	20.00	
No	Install low-flow Shower	20.00	
No	Turf Reduction	0.00	
No	Use Water Efficient Irrigation Systems	6.10	
No	Water Efficient Landscape	0.00	0.00

Solid Waste Mitigation

Mitigation Measures	Input Value
Institute Recycling and Composting Services	
Percent Reduction in Waste Disposed	

CalEEMod – Construction Estimate

WatermanConstructionEstimate

San Bernardino-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	35.50	Acre	35.50	1,546,380.00	0
Single Family Housing	802.00	Dwelling Unit	121.80	1,443,600.00	2294
Apartments Low Rise	2,668.00	Dwelling Unit	40.60	2,668,000.00	7630
General Office Building	143.59	1000sqft	54.00	143,591.00	0
Place of Worship	20.37	1000sqft	2.00	20,369.00	0
General Light Industry	177.88	1000sqft	7.00	177,884.00	0
Regional Shopping Center	4,097.16	1000sqft	169.40	4,097,160.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2035
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - See assumptions

Construction Phase - See assumptions

Off-road Equipment -

Demolition -

Trips and VMT - See assumptions

Architectural Coating - Rule 1113 for flat and semigloss coatings

Vehicle Trips -

Construction Off-road Equipment Mitigation - SCAQMD Rule 403

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	9
tblConstructionPhase	NumDays	7,750.00	4,950.00
tblConstructionPhase	PhaseEndDate	3/19/2021	2/8/2019
tblConstructionPhase	PhaseEndDate	12/10/2038	12/21/2035
tblConstructionPhase	PhaseEndDate	2/12/2021	12/20/2019
tblConstructionPhase	PhaseEndDate	1/29/2038	2/8/2019
tblConstructionPhase	PhaseEndDate	1/24/2020	2/23/2018
tblConstructionPhase	PhaseStartDate	2/9/2019	1/1/2017
tblConstructionPhase	PhaseStartDate	12/21/2019	1/1/2017
tblConstructionPhase	PhaseStartDate	2/24/2018	1/1/2017
tblConstructionPhase	PhaseStartDate	12/22/2035	1/1/2017
tblConstructionPhase	PhaseStartDate	12/1/2018	1/1/2017
tblLandUse	LotAcreage	260.39	121.80

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tblLandUse	LotAcreage	166.75	40.60
tblLandUse	LotAcreage	3.30	54.00
tblLandUse	LotAcreage	0.47	2.00
tblLandUse	LotAcreage	4.08	7.00
tblLandUse	LotAcreage	94.06	169.40
tblProjectCharacteristics	OperationalYear	2014	2035
tblTripsAndVMT	VendorTripNumber	1,352.00	200.00
tblTripsAndVMT	WorkerTripNumber	4,299.00	200.00
tblTripsAndVMT	WorkerTripNumber	15.00	40.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	148.6735	248.2068	248.0369	0.4200	53.2408	11.8398	65.0805	19.3396	10.9653	30.3049	0.0000	39,232.5292	39,232.5292	6.3176	0.0000	39,365.1982
2018	145.4599	216.7931	230.0321	0.4199	53.3471	10.0782	63.4253	19.3656	9.3358	28.7015	0.0000	38,369.8084	38,369.8084	6.2507	0.0000	38,501.0737
2019	135.3273	110.2446	141.9889	0.2989	22.4486	5.0481	27.4967	7.2752	4.6812	11.9564	0.0000	25,814.7663	25,814.7663	3.8214	0.0000	25,895.0163
2020	4.0278	31.7633	44.3381	0.0949	3.4917	1.3424	4.8341	0.9514	1.2578	2.2092	0.0000	8,339.5931	8,339.5931	0.7343	0.0000	8,355.0136
2021	3.7324	28.1866	43.1402	0.0952	3.4915	1.1628	4.6543	0.9514	1.0892	2.0406	0.0000	8,331.7869	8,331.7869	0.7251	0.0000	8,347.0135
2022	3.4853	25.4032	42.1559	0.0951	3.4914	1.0115	4.5029	0.9513	0.9475	1.8989	0.0000	8,299.7613	8,299.7613	0.7182	0.0000	8,314.8432
2023	3.2256	22.2511	40.8804	0.0949	3.4913	0.8999	4.3913	0.9513	0.8427	1.7940	0.0000	8,254.6237	8,254.6237	0.7081	0.0000	8,269.4932
2024	3.0988	21.2971	40.2434	0.0956	3.4913	0.8111	4.3024	0.9513	0.7590	1.7103	0.0000	8,288.5906	8,288.5906	0.7047	0.0000	8,303.3884
2025	2.9493	20.2510	39.5483	0.0956	3.4913	0.7265	4.2177	0.9513	0.6794	1.6306	0.0000	8,268.5027	8,268.5027	0.6991	0.0000	8,283.1844
2026	2.8950	20.0106	39.0153	0.0955	3.4912	0.7189	4.2101	0.9512	0.6724	1.6236	0.0000	8,249.2146	8,249.2146	0.6964	0.0000	8,263.8381
2027	2.8646	19.9343	38.6360	0.0955	3.4911	0.7194	4.2104	0.9512	0.6728	1.6240	0.0000	8,233.3588	8,233.3588	0.6947	0.0000	8,247.9480
2028	2.8366	19.8507	38.3404	0.0955	3.4910	0.7182	4.2092	0.9511	0.6718	1.6229	0.0000	8,219.5274	8,219.5274	0.6931	0.0000	8,234.0824
2029	2.8080	19.7989	37.9880	0.0955	3.4908	0.7184	4.2093	0.9511	0.6720	1.6231	0.0000	8,207.5976	8,207.5976	0.6917	0.0000	8,222.1230
2030	2.7268	15.2623	37.8288	0.0995	3.4907	0.3413	3.8320	0.9510	0.3259	1.2769	0.0000	8,536.3369	8,536.3369	0.2087	0.0000	8,540.7186
2031	2.7158	15.2519	37.6733	0.0998	3.4910	0.3393	3.8302	0.9511	0.3241	1.2752	0.0000	8,552.7376	8,552.7376	0.2086	0.0000	8,557.1186
2032	2.6983	15.2219	37.5266	0.0998	3.4912	0.3396	3.8308	0.9512	0.3244	1.2756	0.0000	8,546.7686	8,546.7686	0.2076	0.0000	8,551.1273
2033	2.6837	15.1928	37.4146	0.0998	3.4914	0.3399	3.8313	0.9513	0.3246	1.2760	0.0000	8,541.7466	8,541.7466	0.2066	0.0000	8,546.0857
2034	2.6697	15.1699	37.2971	0.0998	3.4916	0.3401	3.8317	0.9514	0.3248	1.2763	0.0000	8,537.4486	8,537.4486	0.2058	0.0000	8,541.7693
2035	2.5665	14.3858	37.1684	0.0998	3.4918	0.2828	3.7746	0.9515	0.2675	1.2190	0.0000	8,533.9941	8,533.9941	0.1968	0.0000	8,538.1260
Total	**477.4450**	**894.4758**	**1,249.2526**	**2.6902**	**184.8966**	**37.7780**	**222.6747**	**61.2006**	**35.1383**	**96.3389**	**0.0000**	**237,358.6928**	**237,358.6928**	**24.6890**	**0.0000**	**237,877.1613**

WatermanConstructionEstimate

San Bernardino-South Coast County, Winter

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	148.6735	248.2068	248.0369	0.4200	30.5045	11.8398	42.3443	10.3572	10.9653	21.3226	0.0000	39,232.5292	39,232.5292	6.3176	0.0000	39,365.1981
2018	145.4599	216.7931	230.0321	0.4199	30.6013	10.0782	40.6795	10.3809	9.3358	19.7168	0.0000	38,369.8084	38,369.8084	6.2507	0.0000	38,501.0736
2019	135.3273	110.2446	141.9889	0.2989	16.4215	5.0481	21.4696	4.9556	4.6812	9.6368	0.0000	25,814.7662	25,814.7662	3.8214	0.0000	25,895.0163
2020	4.0278	31.7633	44.3381	0.0949	3.2346	1.3424	4.5771	0.8883	1.2578	2.1461	0.0000	8,339.5931	8,339.5931	0.7343	0.0000	8,355.0136
2021	3.7324	28.1866	43.1402	0.0952	3.2345	1.1628	4.3973	0.8883	1.0892	1.9775	0.0000	8,331.7869	8,331.7869	0.7251	0.0000	8,347.0135
2022	3.4853	25.4032	42.1559	0.0951	3.2344	1.0115	4.2459	0.8883	0.9475	1.8358	0.0000	8,299.7613	8,299.7613	0.7182	0.0000	8,314.8432
2023	3.2256	22.2511	40.8804	0.0949	3.2343	0.8999	4.1342	0.8882	0.8427	1.7309	0.0000	8,254.6237	8,254.6237	0.7081	0.0000	8,269.4932
2024	3.0988	21.2971	40.2434	0.0956	3.2343	0.8111	4.0454	0.8882	0.7590	1.6472	0.0000	8,288.5906	8,288.5906	0.7047	0.0000	8,303.3884
2025	2.9493	20.2510	39.5483	0.0956	3.2342	0.7265	3.9607	0.8882	0.6794	1.5676	0.0000	8,268.5027	8,268.5027	0.6991	0.0000	8,283.1844
2026	2.8950	20.0106	39.0153	0.0955	3.2341	0.7189	3.9530	0.8881	0.6724	1.5605	0.0000	8,249.2146	8,249.2146	0.6964	0.0000	8,263.8381
2027	2.8646	19.9343	38.6360	0.0955	3.2340	0.7194	3.9534	0.8881	0.6728	1.5609	0.0000	8,233.3588	8,233.3588	0.6947	0.0000	8,247.9480
2028	2.8366	19.8507	38.3404	0.0955	3.2339	0.7182	3.9521	0.8880	0.6718	1.5598	0.0000	8,219.5274	8,219.5274	0.6931	0.0000	8,234.0824
2029	2.8080	19.7989	37.9880	0.0955	3.2338	0.7184	3.9522	0.8880	0.6720	1.5600	0.0000	8,207.5976	8,207.5976	0.6917	0.0000	8,222.1230
2030	2.7268	15.2623	37.8288	0.0995	3.2337	0.3413	3.5750	0.8879	0.3259	1.2138	0.0000	8,536.3368	8,536.3368	0.2087	0.0000	8,540.7186
2031	2.7158	15.2519	37.6733	0.0998	3.2340	0.3393	3.5732	0.8881	0.3241	1.2121	0.0000	8,552.7376	8,552.7376	0.2086	0.0000	8,557.1186
2032	2.6983	15.2219	37.5266	0.0998	3.2342	0.3396	3.5738	0.8882	0.3244	1.2125	0.0000	8,546.7686	8,546.7686	0.2076	0.0000	8,551.1273
2033	2.6837	15.1928	37.4146	0.0998	3.2344	0.3399	3.5743	0.8882	0.3246	1.2129	0.0000	8,541.7466	8,541.7466	0.2066	0.0000	8,546.0857
2034	2.6697	15.1699	37.2971	0.0998	3.2346	0.3401	3.5747	0.8883	0.3248	1.2132	0.0000	8,537.4485	8,537.4485	0.2058	0.0000	8,541.7693
2035	2.5665	14.3858	37.1684	0.0998	3.2348	0.2828	3.5176	0.8884	0.2675	1.1559	0.0000	8,533.9941	8,533.9941	0.1968	0.0000	8,538.1260
Total	**477.4450**	**894.4758**	**1,249.2526**	**2.6902**	**129.2751**	**37.7780**	**167.0531**	**39.9046**	**35.1383**	**75.0429**	**0.0000**	**237,358.6928**	**237,358.6928**	**24.6890**	**0.0000**	**237,877.1612**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**30.08**	**0.00**	**24.98**	**34.80**	**0.00**	**22.11**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

WatermanConstructionEstimate

San Bernardino-South Coast County, Winter

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2017	11/30/2018	5	500	
2	Site Preparation	Site Preparation	1/1/2017	2/23/2018	5	300	
3	Grading	Grading	1/1/2017	12/20/2019	5	775	
4	Building Construction	Building Construction	1/1/2017	12/21/2035	5	4950	
5	Paving	Paving	1/1/2017	2/8/2019	5	550	
6	Architectural Coating	Architectural Coating	1/1/2017	2/8/2019	5	550	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 1937.5

Acres of Paving: 0

Residential Indoor: 8,325,990; Residential Outdoor: 2,775,330; Non-Residential Indoor: 8,978,076; Non-Residential Outdoor: 2,992,692

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition	Excavators	3	8.00	162	0.38
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Excavators	2	8.00	162	0.38
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Paving	Pavers	2	8.00	125	0.42
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Paving Equipment	2	8.00	130	0.36
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Building Construction	Welders	1	8.00	46	0.45

WatermanConstructionEstimate

San Bernardino-South Coast County, Winter

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	25,111.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	200.00	200.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	40.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	860.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					10.8689	0.0000	10.8689	1.6457	0.0000	1.6457			0.0000			0.0000
Off-Road	4.0482	42.6971	33.8934	0.0399		2.1252	2.1252		1.9797	1.9797		4,036.4674	4,036.4674	1.1073		4,059.7211
Total	**4.0482**	**42.6971**	**33.8934**	**0.0399**	**10.8689**	**2.1252**	**12.9941**	**1.6457**	**1.9797**	**3.6254**		**4,036.4674**	**4,036.4674**	**1.1073**		**4,059.7211**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.8655	13.2071	10.6205	0.0367	1.4879	0.1977	1.6856	0.3900	0.1819	0.5719		3,642.1845	3,642.1845	0.0264		3,642.7398
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0537	0.0751	0.7914	1.9200e-003	0.1677	1.2000e-003	0.1689	0.0445	1.1000e-003	0.0456		153.2798	153.2798	7.9800e-003		153.4473
Total	**0.9192**	**13.2821**	**11.4118**	**0.0386**	**1.6555**	**0.1989**	**1.8544**	**0.4345**	**0.1830**	**0.6175**		**3,795.4643**	**3,795.4643**	**0.0344**		**3,796.1871**

WatermanConstructionEstimate

San Bernardino-South Coast County, Winter

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.6465	0.0000	4.6465	0.7035	0.0000	0.7035			0.0000			0.0000
Off-Road	4.0482	42.6971	33.8934	0.0399		2.1252	2.1252		1.9797	1.9797	0.0000	4,036.4674	4,036.4674	1.1073		4,059.7211
Total	**4.0482**	**42.6971**	**33.8934**	**0.0399**	**4.6465**	**2.1252**	**6.7717**	**0.7035**	**1.9797**	**2.6832**	**0.0000**	**4,036.4674**	**4,036.4674**	**1.1073**		**4,059.7211**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.8655	13.2071	10.6205	0.0367	1.3729	0.1977	1.5707	0.3618	0.1819	0.5437		3,642.1845	3,642.1845	0.0264		3,642.7398
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0537	0.0751	0.7914	1.9200e-003	0.1546	1.2000e-003	0.1557	0.0413	1.1000e-003	0.0424		153.2798	153.2798	7.9800e-003		153.4473
Total	**0.9192**	**13.2821**	**11.4118**	**0.0386**	**1.5275**	**0.1989**	**1.7264**	**0.4031**	**0.1830**	**0.5861**		**3,795.4643**	**3,795.4643**	**0.0344**		**3,796.1871**

3.2 Demolition - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					10.8689	0.0000	10.8689	1.6457	0.0000	1.6457			0.0000			0.0000
Off-Road	3.5606	36.8310	31.7250	0.0399		1.8090	1.8090		1.6856	1.6856		3,983.3282	3,983.3282	1.1015		4,006.4585
Total	**3.5606**	**36.8310**	**31.7250**	**0.0399**	**10.8689**	**1.8090**	**12.6779**	**1.6457**	**1.6856**	**3.3312**		**3,983.3282**	**3,983.3282**	**1.1015**		**4,006.4585**

WatermanConstructionEstimate

San Bernardino-South Coast County, Winter

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.8381	12.2505	10.3408	0.0367	1.5944	0.1976	1.7920	0.4162	0.1818	0.5980		3,581.3792	3,581.3792	0.0268		3,581.9420
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0478	0.0677	0.7131	1.9200e-003	0.1677	1.1700e-003	0.1688	0.0445	1.0800e-003	0.0456		147.4726	147.4726	7.3700e-003		147.6273
Total	**0.8859**	**12.3182**	**11.0538**	**0.0386**	**1.7620**	**0.1988**	**1.9608**	**0.4607**	**0.1829**	**0.6435**		**3,728.8519**	**3,728.8519**	**0.0342**		**3,729.5693**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.6465	0.0000	4.6465	0.7035	0.0000	0.7035			0.0000			0.0000
Off-Road	3.5606	36.8310	31.7250	0.0399		1.8090	1.8090		1.6856	1.6856	0.0000	3,983.3282	3,983.3282	1.1015		4,006.4585
Total	**3.5606**	**36.8310**	**31.7250**	**0.0399**	**4.6465**	**1.8090**	**6.4554**	**0.7035**	**1.6856**	**2.3891**	**0.0000**	**3,983.3282**	**3,983.3282**	**1.1015**		**4,006.4585**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.8381	12.2505	10.3408	0.0367	1.4699	0.1976	1.6675	0.3856	0.1818	0.5674		3,581.3792	3,581.3792	0.0268		3,581.9420
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0478	0.0677	0.7131	1.9200e-003	0.1546	1.1700e-003	0.1557	0.0413	1.0800e-003	0.0423		147.4726	147.4726	7.3700e-003		147.6273
Total	**0.8859**	**12.3182**	**11.0538**	**0.0386**	**1.6244**	**0.1988**	**1.8232**	**0.4269**	**0.1829**	**0.6098**		**3,728.8519**	**3,728.8519**	**0.0342**		**3,729.5693**

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San Bernardino-South Coast County, Winter

3.3 Site Preparation - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.8382	51.7535	39.3970	0.0391		2.7542	2.7542		2.5339	2.5339		4,003.0859	4,003.0859	1.2265		4,028.8432
Total	**4.8382**	**51.7535**	**39.3970**	**0.0391**	**18.0663**	**2.7542**	**20.8205**	**9.9307**	**2.5339**	**12.4646**		**4,003.0859**	**4,003.0859**	**1.2265**		**4,028.8432**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0644	0.0901	0.9496	2.3000e-003	0.2012	1.4400e-003	0.2026	0.0534	1.3300e-003	0.0547		183.9357	183.9357	9.5700e-003		184.1368
Total	**0.0644**	**0.0901**	**0.9496**	**2.3000e-003**	**0.2012**	**1.4400e-003**	**0.2026**	**0.0534**	**1.3300e-003**	**0.0547**		**183.9357**	**183.9357**	**9.5700e-003**		**184.1368**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.7233	0.0000	7.7233	4.2454	0.0000	4.2454			0.0000			0.0000
Off-Road	4.8382	51.7535	39.3970	0.0391		2.7542	2.7542		2.5339	2.5339	0.0000	4,003.0859	4,003.0859	1.2265		4,028.8432
Total	**4.8382**	**51.7535**	**39.3970**	**0.0391**	**7.7233**	**2.7542**	**10.4776**	**4.2454**	**2.5339**	**6.7793**	**0.0000**	**4,003.0859**	**4,003.0859**	**1.2265**		**4,028.8432**

WatermanConstructionEstimate

San Bernardino-South Coast County, Winter

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0644	0.0901	0.9496	2.3000e-003	0.1855	1.4400e-003	0.1869	0.0495	1.3300e-003	0.0508		183.9357	183.9357	9.5700e-003		184.1368
Total	**0.0644**	**0.0901**	**0.9496**	**2.3000e-003**	**0.1855**	**1.4400e-003**	**0.1869**	**0.0495**	**1.3300e-003**	**0.0508**		**183.9357**	**183.9357**	**9.5700e-003**		**184.1368**

3.3 Site Preparation - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.2921	45.6088	36.2346	0.0391		2.3654	2.3654		2.1762	2.1762		3,939.7731	3,939.7731	1.2265		3,965.5297
Total	**4.2921**	**45.6088**	**36.2346**	**0.0391**	**18.0663**	**2.3654**	**20.4317**	**9.9307**	**2.1762**	**12.1069**		**3,939.7731**	**3,939.7731**	**1.2265**		**3,965.5297**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0573	0.0812	0.8557	2.3000e-003	0.2012	1.4000e-003	0.2026	0.0534	1.3000e-003	0.0547		176.9671	176.9671	8.8400e-003		177.1528
Total	**0.0573**	**0.0812**	**0.8557**	**2.3000e-003**	**0.2012**	**1.4000e-003**	**0.2026**	**0.0534**	**1.3000e-003**	**0.0547**		**176.9671**	**176.9671**	**8.8400e-003**		**177.1528**

WatermanConstructionEstimate

San Bernardino-South Coast County, Winter

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.7233	0.0000	7.7233	4.2454	0.0000	4.2454			0.0000			0.0000
Off-Road	4.2921	45.6088	36.2346	0.0391		2.3654	2.3654		2.1762	2.1762	0.0000	3,939.7731	3,939.7731	1.2265		3,965.5297
Total	**4.2921**	**45.6088**	**36.2346**	**0.0391**	**7.7233**	**2.3654**	**10.0887**	**4.2454**	**2.1762**	**6.4215**	**0.0000**	**3,939.7731**	**3,939.7731**	**1.2265**		**3,965.5297**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0573	0.0812	0.8557	2.3000e-003	0.1855	1.4000e-003	0.1869	0.0495	1.3000e-003	0.0508		176.9671	176.9671	8.8400e-003		177.1528
Total	**0.0573**	**0.0812**	**0.8557**	**2.3000e-003**	**0.1855**	**1.4000e-003**	**0.1869**	**0.0495**	**1.3000e-003**	**0.0508**		**176.9671**	**176.9671**	**8.8400e-003**		**177.1528**

3.4 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	6.0991	69.5920	46.8050	0.0617		3.3172	3.3172		3.0518	3.0518		6,313.3690	6,313.3690	1.9344		6,353.9915
Total	**6.0991**	**69.5920**	**46.8050**	**0.0617**	**8.6733**	**3.3172**	**11.9905**	**3.5965**	**3.0518**	**6.6483**		**6,313.3690**	**6,313.3690**	**1.9344**		**6,353.9915**

WatermanConstructionEstimate

San Bernardino-South Coast County, Winter

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0716	0.1001	1.0551	2.5600e-003	0.2236	1.6000e-003	0.2252	0.0593	1.4700e-003	0.0608		204.3730	204.3730	0.0106		204.5964
Total	**0.0716**	**0.1001**	**1.0551**	**2.5600e-003**	**0.2236**	**1.6000e-003**	**0.2252**	**0.0593**	**1.4700e-003**	**0.0608**		**204.3730**	**204.3730**	**0.0106**		**204.5964**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.7079	0.0000	3.7079	1.5375	0.0000	1.5375			0.0000			0.0000
Off-Road	6.0991	69.5920	46.8050	0.0617		3.3172	3.3172		3.0518	3.0518	0.0000	6,313.3690	6,313.3690	1.9344		6,353.9915
Total	**6.0991**	**69.5920**	**46.8050**	**0.0617**	**3.7079**	**3.3172**	**7.0250**	**1.5375**	**3.0518**	**4.5893**	**0.0000**	**6,313.3690**	**6,313.3690**	**1.9344**		**6,353.9915**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0716	0.1001	1.0551	2.5600e-003	0.2061	1.6000e-003	0.2077	0.0550	1.4700e-003	0.0565		204.3730	204.3730	0.0106		204.5964
Total	**0.0716**	**0.1001**	**1.0551**	**2.5600e-003**	**0.2061**	**1.6000e-003**	**0.2077**	**0.0550**	**1.4700e-003**	**0.0565**		**204.3730**	**204.3730**	**0.0106**		**204.5964**

WatermanConstructionEstimate

San Bernardino-South Coast County, Winter

3.4 Grading - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	5.2895	59.5338	42.3068	0.0617		2.7880	2.7880		2.5650	2.5650		6,212.8042	6,212.8042	1.9341		6,253.4209
Total	**5.2895**	**59.5338**	**42.3068**	**0.0617**	**8.6733**	**2.7880**	**11.4614**	**3.5965**	**2.5650**	**6.1615**		**6,212.8042**	**6,212.8042**	**1.9341**		**6,253.4209**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0637	0.0903	0.9508	2.5600e-003	0.2236	1.5600e-003	0.2251	0.0593	1.4400e-003	0.0607		196.6301	196.6301	9.8200e-003		196.8364
Total	**0.0637**	**0.0903**	**0.9508**	**2.5600e-003**	**0.2236**	**1.5600e-003**	**0.2251**	**0.0593**	**1.4400e-003**	**0.0607**		**196.6301**	**196.6301**	**9.8200e-003**		**196.8364**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.7079	0.0000	3.7079	1.5375	0.0000	1.5375			0.0000			0.0000
Off-Road	5.2895	59.5338	42.3068	0.0617		2.7880	2.7880		2.5650	2.5650	0.0000	6,212.8041	6,212.8041	1.9341		6,253.4209
Total	**5.2895**	**59.5338**	**42.3068**	**0.0617**	**3.7079**	**2.7880**	**6.4959**	**1.5375**	**2.5650**	**4.1025**	**0.0000**	**6,212.8041**	**6,212.8041**	**1.9341**		**6,253.4209**

WatermanConstructionEstimate

San Bernardino-South Coast County, Winter

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0637	0.0903	0.9508	2.5600e-003	0.2061	1.5600e-003	0.2076	0.0550	1.4400e-003	0.0564		196.6301	196.6301	9.8200e-003		196.8364
Total	**0.0637**	**0.0903**	**0.9508**	**2.5600e-003**	**0.2061**	**1.5600e-003**	**0.2076**	**0.0550**	**1.4400e-003**	**0.0564**		**196.6301**	**196.6301**	**9.8200e-003**		**196.8364**

3.4 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.8912	54.1978	40.2888	0.0617		2.5049	2.5049		2.3045	2.3045		6,111.3121	6,111.3121	1.9336		6,151.9167
Total	**4.8912**	**54.1978**	**40.2888**	**0.0617**	**8.6733**	**2.5049**	**11.1783**	**3.5965**	**2.3045**	**5.9010**		**6,111.3121**	**6,111.3121**	**1.9336**		**6,151.9167**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0579	0.0822	0.8609	2.5400e-003	0.2236	1.5200e-003	0.2251	0.0593	1.4100e-003	0.0607		188.3572	188.3572	9.0600e-003		188.5474
Total	**0.0579**	**0.0822**	**0.8609**	**2.5400e-003**	**0.2236**	**1.5200e-003**	**0.2251**	**0.0593**	**1.4100e-003**	**0.0607**		**188.3572**	**188.3572**	**9.0600e-003**		**188.5474**

WatermanConstructionEstimate

San Bernardino-South Coast County, Winter

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.7079	0.0000	3.7079	1.5375	0.0000	1.5375			0.0000			0.0000
Off-Road	4.8912	54.1978	40.2888	0.0617		2.5049	2.5049		2.3045	2.3045	0.0000	6,111.3121	6,111.3121	1.9336		6,151.9167
Total	**4.8912**	**54.1978**	**40.2888**	**0.0617**	**3.7079**	**2.5049**	**6.2128**	**1.5375**	**2.3045**	**3.8420**	**0.0000**	**6,111.3121**	**6,111.3121**	**1.9336**		**6,151.9167**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0579	0.0822	0.8609	2.5400e-003	0.2061	1.5200e-003	0.2076	0.0550	1.4100e-003	0.0564		188.3572	188.3572	9.0600e-003		188.5474
Total	**0.0579**	**0.0822**	**0.8609**	**2.5400e-003**	**0.2061**	**1.5200e-003**	**0.2076**	**0.0550**	**1.4100e-003**	**0.0564**		**188.3572**	**188.3572**	**9.0600e-003**		**188.5474**

3.5 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730		2,639.8053	2,639.8053	0.6497		2,653.4490
Total	**3.1024**	**26.4057**	**18.1291**	**0.0268**		**1.7812**	**1.7812**		**1.6730**	**1.6730**		**2,639.8053**	**2,639.8053**	**0.6497**		**2,653.4490**

WatermanConstructionEstimate

San Bernardino-South Coast County, Winter

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.6644	16.3010	21.7680	0.0431	1.2566	0.2604	1.5170	0.3588	0.2395	0.5983		4,253.0060	4,253.0060	0.0313		4,253.6629
Worker	0.7155	1.0007	10.5514	0.0256	2.2355	0.0160	2.2515	0.5929	0.0147	0.6076		2,043.7302	2,043.7302	0.1064		2,045.9640
Total	**2.3800**	**17.3017**	**32.3194**	**0.0687**	**3.4922**	**0.2763**	**3.7685**	**0.9517**	**0.2542**	**1.2059**		**6,296.7361**	**6,296.7361**	**0.1377**		**6,299.6269**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730	0.0000	2,639.8053	2,639.8053	0.6497		2,653.4490
Total	**3.1024**	**26.4057**	**18.1291**	**0.0268**		**1.7812**	**1.7812**		**1.6730**	**1.6730**	**0.0000**	**2,639.8053**	**2,639.8053**	**0.6497**		**2,653.4490**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.6644	16.3010	21.7680	0.0431	1.1745	0.2604	1.4349	0.3386	0.2395	0.5781		4,253.0060	4,253.0060	0.0313		4,253.6629
Worker	0.7155	1.0007	10.5514	0.0256	2.0606	0.0160	2.0766	0.5499	0.0147	0.5647		2,043.7302	2,043.7302	0.1064		2,045.9640
Total	**2.3800**	**17.3017**	**32.3194**	**0.0687**	**3.2351**	**0.2763**	**3.5115**	**0.8886**	**0.2542**	**1.1428**		**6,296.7361**	**6,296.7361**	**0.1377**		**6,299.6269**

WatermanConstructionEstimate

San Bernardino-South Coast County, Winter

3.5 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048		2,609.9390	2,609.9390	0.6387		2,623.3517
Total	**2.6687**	**23.2608**	**17.5327**	**0.0268**		**1.4943**	**1.4943**		**1.4048**	**1.4048**		**2,609.9390**	**2,609.9390**	**0.6387**		**2,623.3517**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.5383	14.9367	20.7331	0.0430	1.2564	0.2449	1.5013	0.3587	0.2253	0.5839		4,180.1391	4,180.1391	0.0311		4,180.7922
Worker	0.6369	0.9025	9.5075	0.0256	2.2355	0.0156	2.2511	0.5929	0.0144	0.6073		1,966.3014	1,966.3014	0.0982		1,968.3643
Total	**2.1752**	**15.8392**	**30.2406**	**0.0686**	**3.4920**	**0.2605**	**3.7524**	**0.9516**	**0.2397**	**1.1912**		**6,146.4405**	**6,146.4405**	**0.1293**		**6,149.1565**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048	0.0000	2,609.9389	2,609.9389	0.6387		2,623.3517
Total	**2.6687**	**23.2608**	**17.5327**	**0.0268**		**1.4943**	**1.4943**		**1.4048**	**1.4048**	**0.0000**	**2,609.9389**	**2,609.9389**	**0.6387**		**2,623.3517**

WatermanConstructionEstimate

San Bernardino-South Coast County, Winter

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.5383	14.9367	20.7331	0.0430	1.1743	0.2449	1.4192	0.3385	0.2253	0.5638		4,180.1391	4,180.1391	0.0311		4,180.7922
Worker	0.6369	0.9025	9.5075	0.0256	2.0606	0.0156	2.0762	0.5499	0.0144	0.5644		1,966.3014	1,966.3014	0.0982		1,968.3643
Total	**2.1752**	**15.8392**	**30.2406**	**0.0686**	**3.2349**	**0.2605**	**3.4954**	**0.8885**	**0.2397**	**1.1282**		**6,146.4405**	**6,146.4405**	**0.1293**		**6,149.1565**

3.5 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083		2,580.7618	2,580.7618	0.6279		2,593.9479
Total	**2.3516**	**20.9650**	**17.1204**	**0.0268**		**1.2850**	**1.2850**		**1.2083**	**1.2083**		**2,580.7618**	**2,580.7618**	**0.6279**		**2,593.9479**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.4586	13.7079	20.1635	0.0427	1.2563	0.2347	1.4910	0.3586	0.2159	0.5746		4,084.2704	4,084.2704	0.0301		4,084.9026
Worker	0.5791	0.8220	8.6089	0.0254	2.2355	0.0152	2.2508	0.5929	0.0141	0.6070		1,883.5716	1,883.5716	0.0906		1,885.4736
Total	**2.0377**	**14.5299**	**28.7724**	**0.0681**	**3.4918**	**0.2500**	**3.7418**	**0.9515**	**0.2301**	**1.1815**		**5,967.8420**	**5,967.8420**	**0.1207**		**5,970.3761**

WatermanConstructionEstimate

San Bernardino-South Coast County, Winter

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083	0.0000	2,580.7618	2,580.7618	0.6279		2,593.9479
Total	**2.3516**	**20.9650**	**17.1204**	**0.0268**		**1.2850**	**1.2850**		**1.2083**	**1.2083**	**0.0000**	**2,580.7618**	**2,580.7618**	**0.6279**		**2,593.9479**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.4586	13.7079	20.1635	0.0427	1.1742	0.2347	1.4089	0.3385	0.2159	0.5544		4,084.2704	4,084.2704	0.0301		4,084.9026
Worker	0.5791	0.8220	8.6089	0.0254	2.0606	0.0152	2.0758	0.5499	0.0141	0.5641		1,883.5716	1,883.5716	0.0906		1,885.4736
Total	**2.0377**	**14.5299**	**28.7724**	**0.0681**	**3.2348**	**0.2500**	**3.4848**	**0.8884**	**0.2301**	**1.1185**		**5,967.8420**	**5,967.8420**	**0.1207**		**5,970.3761**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1113	19.0839	16.8084	0.0268		1.1128	1.1128		1.0465	1.0465		2,542.4799	2,542.4799	0.6194		2,555.4880
Total	**2.1113**	**19.0839**	**16.8084**	**0.0268**		**1.1128**	**1.1128**		**1.0465**	**1.0465**		**2,542.4799**	**2,542.4799**	**0.6194**		**2,555.4880**

WatermanConstructionEstimate

San Bernardino-South Coast County, Winter

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.3781	11.9211	19.5549	0.0426	1.2561	0.2144	1.4705	0.3586	0.1973	0.5558		3,990.6665	3,990.6665	0.0295		3,991.2858
Worker	0.5384	0.7583	7.9748	0.0254	2.2355	0.0152	2.2507	0.5929	0.0141	0.6070		1,806.4467	1,806.4467	0.0854		1,808.2398
Total	**1.9166**	**12.6794**	**27.5297**	**0.0681**	**3.4917**	**0.2296**	**3.7213**	**0.9514**	**0.2113**	**1.1628**		**5,797.1132**	**5,797.1132**	**0.1149**		**5,799.5256**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1113	19.0839	16.8084	0.0268		1.1128	1.1128		1.0465	1.0465	0.0000	2,542.4799	2,542.4799	0.6194		2,555.4880
Total	**2.1113**	**19.0839**	**16.8084**	**0.0268**		**1.1128**	**1.1128**		**1.0465**	**1.0465**	**0.0000**	**2,542.4799**	**2,542.4799**	**0.6194**		**2,555.4880**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.3781	11.9211	19.5549	0.0426	1.1740	0.2144	1.3884	0.3384	0.1973	0.5357		3,990.6665	3,990.6665	0.0295		3,991.2858
Worker	0.5384	0.7583	7.9748	0.0254	2.0606	0.0152	2.0758	0.5499	0.0141	0.5640		1,806.4467	1,806.4467	0.0854		1,808.2398
Total	**1.9166**	**12.6794**	**27.5297**	**0.0681**	**3.2346**	**0.2296**	**3.4642**	**0.8883**	**0.2113**	**1.0997**		**5,797.1132**	**5,797.1132**	**0.1149**		**5,799.5256**

WatermanConstructionEstimate

San Bernardino-South Coast County, Winter

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8931	17.3403	16.5376	0.0268		0.9549	0.9549		0.8979	0.8979		2,542.7817	2,542.7817	0.6126		2,555.6462
Total	**1.8931**	**17.3403**	**16.5376**	**0.0268**		**0.9549**	**0.9549**		**0.8979**	**0.8979**		**2,542.7817**	**2,542.7817**	**0.6126**		**2,555.6462**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.3297	10.1360	19.0634	0.0428	1.2560	0.1925	1.4485	0.3585	0.1771	0.5356		4,002.6643	4,002.6643	0.0301		4,003.2961
Worker	0.5096	0.7103	7.5392	0.0256	2.2355	0.0154	2.2509	0.5929	0.0143	0.6072		1,786.3409	1,786.3409	0.0824		1,788.0713
Total	**1.8393**	**10.8463**	**26.6025**	**0.0683**	**3.4915**	**0.2079**	**3.6994**	**0.9514**	**0.1914**	**1.1428**		**5,789.0052**	**5,789.0052**	**0.1125**		**5,791.3673**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8931	17.3403	16.5376	0.0268		0.9549	0.9549		0.8979	0.8979	0.0000	2,542.7817	2,542.7817	0.6126		2,555.6462
Total	**1.8931**	**17.3403**	**16.5376**	**0.0268**		**0.9549**	**0.9549**		**0.8979**	**0.8979**	**0.0000**	**2,542.7817**	**2,542.7817**	**0.6126**		**2,555.6462**

WatermanConstructionEstimate

San Bernardino-South Coast County, Winter

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.3297	10.1360	19.0634	0.0428	1.1739	0.1925	1.3664	0.3383	0.1771	0.5155		4,002.6643	4,002.6643	0.0301		4,003.2961
Worker	0.5096	0.7103	7.5392	0.0256	2.0606	0.0154	2.0760	0.5499	0.0143	0.5642		1,786.3409	1,786.3409	0.0824		1,788.0713
Total	**1.8393**	**10.8463**	**26.6025**	**0.0683**	**3.2345**	**0.2079**	**3.4424**	**0.8883**	**0.1914**	**1.0797**		**5,789.0052**	**5,789.0052**	**0.1125**		**5,791.3673**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6992	15.5364	16.3276	0.0268		0.8057	0.8057		0.7581	0.7581		2,543.7497	2,543.7497	0.6085		2,556.5286
Total	**1.6992**	**15.5364**	**16.3276**	**0.0268**		**0.8057**	**0.8057**		**0.7581**	**0.7581**		**2,543.7497**	**2,543.7497**	**0.6085**		**2,556.5286**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.3039	9.1998	18.7273	0.0427	1.2559	0.1903	1.4462	0.3585	0.1751	0.5336		3,998.1764	3,998.1764	0.0308		3,998.8221
Worker	0.4822	0.6670	7.1010	0.0256	2.2355	0.0154	2.2510	0.5929	0.0143	0.6072		1,757.8352	1,757.8352	0.0789		1,759.4925
Total	**1.7861**	**9.8668**	**25.8283**	**0.0683**	**3.4914**	**0.2057**	**3.6972**	**0.9513**	**0.1894**	**1.1407**		**5,756.0116**	**5,756.0116**	**0.1097**		**5,758.3146**

WatermanConstructionEstimate

San Bernardino-South Coast County, Winter

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6992	15.5364	16.3276	0.0268		0.8057	0.8057		0.7581	0.7581	0.0000	2,543.7497	2,543.7497	0.6085		2,556.5286
Total	**1.6992**	**15.5364**	**16.3276**	**0.0268**		**0.8057**	**0.8057**		**0.7581**	**0.7581**	**0.0000**	**2,543.7497**	**2,543.7497**	**0.6085**		**2,556.5286**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.3039	9.1998	18.7273	0.0427	1.1738	0.1903	1.3641	0.3383	0.1751	0.5134		3,998.1764	3,998.1764	0.0308		3,998.8221
Worker	0.4822	0.6670	7.1010	0.0256	2.0606	0.0154	2.0761	0.5499	0.0143	0.5643		1,757.8352	1,757.8352	0.0789		1,759.4925
Total	**1.7861**	**9.8668**	**25.8283**	**0.0683**	**3.2344**	**0.2057**	**3.4402**	**0.8883**	**0.1894**	**1.0776**		**5,756.0116**	**5,756.0116**	**0.1097**		**5,758.3146**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5661	14.3126	16.2093	0.0268		0.6967	0.6967		0.6557	0.6557		2,544.6262	2,544.6262	0.6044		2,557.3191
Total	**1.5661**	**14.3126**	**16.2093**	**0.0268**		**0.6967**	**0.6967**		**0.6557**	**0.6557**		**2,544.6262**	**2,544.6262**	**0.6044**		**2,557.3191**

WatermanConstructionEstimate

San Bernardino-South Coast County, Winter

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.2026	7.3095	17.9638	0.0425	1.2558	0.1878	1.4435	0.3584	0.1727	0.5312		3,977.8072	3,977.8072	0.0278		3,978.3901
Worker	0.4570	0.6290	6.7074	0.0256	2.2355	0.0155	2.2510	0.5929	0.0144	0.6072		1,732.1903	1,732.1903	0.0759		1,733.7840
Total	**1.6595**	**7.9385**	**24.6711**	**0.0681**	**3.4913**	**0.2032**	**3.6945**	**0.9513**	**0.1871**	**1.1384**		**5,709.9975**	**5,709.9975**	**0.1036**		**5,712.1741**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5661	14.3126	16.2093	0.0268		0.6967	0.6967		0.6557	0.6557	0.0000	2,544.6262	2,544.6262	0.6044		2,557.3191
Total	**1.5661**	**14.3126**	**16.2093**	**0.0268**		**0.6967**	**0.6967**		**0.6557**	**0.6557**	**0.0000**	**2,544.6262**	**2,544.6262**	**0.6044**		**2,557.3191**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.2026	7.3095	17.9638	0.0425	1.1737	0.1878	1.3614	0.3383	0.1727	0.5110		3,977.8072	3,977.8072	0.0278		3,978.3901
Worker	0.4570	0.6290	6.7074	0.0256	2.0606	0.0155	2.0761	0.5499	0.0144	0.5643		1,732.1903	1,732.1903	0.0759		1,733.7840
Total	**1.6595**	**7.9385**	**24.6711**	**0.0681**	**3.2343**	**0.2032**	**3.4375**	**0.8882**	**0.1871**	**1.0753**		**5,709.9975**	**5,709.9975**	**0.1036**		**5,712.1741**

WatermanConstructionEstimate

San Bernardino-South Coast County, Winter

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4653	13.3774	16.1332	0.0268		0.6106	0.6106		0.5744	0.5744		2,545.1154	2,545.1154	0.6009		2,557.7349
Total	**1.4653**	**13.3774**	**16.1332**	**0.0268**		**0.6106**	**0.6106**		**0.5744**	**0.5744**		**2,545.1154**	**2,545.1154**	**0.6009**		**2,557.7349**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.1963	7.3210	17.6650	0.0429	1.2558	0.1846	1.4404	0.3584	0.1699	0.5283		4,014.0124	4,014.0124	0.0287		4,014.6151
Worker	0.4372	0.5987	6.4452	0.0259	2.2355	0.0159	2.2514	0.5929	0.0148	0.6076		1,729.4628	1,729.4628	0.0750		1,731.0384
Total	**1.6335**	**7.9197**	**24.1102**	**0.0687**	**3.4913**	**0.2005**	**3.6918**	**0.9513**	**0.1846**	**1.1359**		**5,743.4752**	**5,743.4752**	**0.1037**		**5,745.6535**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4653	13.3774	16.1332	0.0268		0.6106	0.6106		0.5744	0.5744	0.0000	2,545.1154	2,545.1154	0.6009		2,557.7349
Total	**1.4653**	**13.3774**	**16.1332**	**0.0268**		**0.6106**	**0.6106**		**0.5744**	**0.5744**	**0.0000**	**2,545.1154**	**2,545.1154**	**0.6009**		**2,557.7349**

WatermanConstructionEstimate

San Bernardino-South Coast County, Winter

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.1963	7.3210	17.6650	0.0429	1.1737	0.1846	1.3583	0.3383	0.1699	0.5081		4,014.0124	4,014.0124	0.0287		4,014.6151
Worker	0.4372	0.5987	6.4452	0.0259	2.0606	0.0159	2.0765	0.5499	0.0148	0.5647		1,729.4628	1,729.4628	0.0750		1,731.0384
Total	**1.6335**	**7.9197**	**24.1102**	**0.0687**	**3.2343**	**0.2005**	**3.4348**	**0.8882**	**0.1846**	**1.0728**		**5,743.4752**	**5,743.4752**	**0.1037**		**5,745.6535**

3.5 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3615	12.4097	16.0518	0.0269		0.5250	0.5250		0.4939	0.4939		2,545.8905	2,545.8905	0.5975		2,558.4386
Total	**1.3615**	**12.4097**	**16.0518**	**0.0269**		**0.5250**	**0.5250**		**0.4939**	**0.4939**		**2,545.8905**	**2,545.8905**	**0.5975**		**2,558.4386**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.1701	7.2707	17.3334	0.0429	1.2557	0.1855	1.4412	0.3584	0.1706	0.5290		4,013.3206	4,013.3206	0.0288		4,013.9254
Worker	0.4177	0.5706	6.1631	0.0259	2.2355	0.0160	2.2515	0.5929	0.0148	0.6077		1,709.2916	1,709.2916	0.0728		1,710.8204
Total	**1.5878**	**7.8413**	**23.4965**	**0.0687**	**3.4913**	**0.2015**	**3.6927**	**0.9513**	**0.1855**	**1.1367**		**5,722.6122**	**5,722.6122**	**0.1016**		**5,724.7458**

WatermanConstructionEstimate

San Bernardino-South Coast County, Winter

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3615	12.4097	16.0518	0.0269		0.5250	0.5250		0.4939	0.4939	0.0000	2,545.8905	2,545.8905	0.5975		2,558.4386
Total	**1.3615**	**12.4097**	**16.0518**	**0.0269**		**0.5250**	**0.5250**		**0.4939**	**0.4939**	**0.0000**	**2,545.8905**	**2,545.8905**	**0.5975**		**2,558.4386**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.1701	7.2707	17.3334	0.0429	1.1736	0.1855	1.3591	0.3382	0.1706	0.5089		4,013.3206	4,013.3206	0.0288		4,013.9254
Worker	0.4177	0.5706	6.1631	0.0259	2.0606	0.0160	2.0766	0.5499	0.0148	0.5648		1,709.2916	1,709.2916	0.0728		1,710.8204
Total	**1.5878**	**7.8413**	**23.4965**	**0.0687**	**3.2342**	**0.2015**	**3.4357**	**0.8882**	**0.1855**	**1.0736**		**5,722.6122**	**5,722.6122**	**0.1016**		**5,724.7458**

3.5 Building Construction - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3615	12.4097	16.0518	0.0269		0.5250	0.5250		0.4939	0.4939		2,545.8905	2,545.8905	0.5975		2,558.4386
Total	**1.3615**	**12.4097**	**16.0518**	**0.0269**		**0.5250**	**0.5250**		**0.4939**	**0.4939**		**2,545.8905**	**2,545.8905**	**0.5975**		**2,558.4386**

WatermanConstructionEstimate

San Bernardino-South Coast County, Winter

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.1329	7.0540	17.0390	0.0428	1.2556	0.1778	1.4334	0.3583	0.1636	0.5219		4,011.3278	4,011.3278	0.0279		4,011.9145
Worker	0.4006	0.5469	5.9245	0.0259	2.2355	0.0161	2.2516	0.5929	0.0149	0.6078		1,691.9963	1,691.9963	0.0709		1,693.4851
Total	**1.5335**	**7.6009**	**22.9635**	**0.0687**	**3.4912**	**0.1939**	**3.6850**	**0.9512**	**0.1785**	**1.1297**		**5,703.3240**	**5,703.3240**	**0.0988**		**5,705.3995**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3615	12.4097	16.0518	0.0269		0.5250	0.5250		0.4939	0.4939	0.0000	2,545.8905	2,545.8905	0.5975		2,558.4386
Total	**1.3615**	**12.4097**	**16.0518**	**0.0269**		**0.5250**	**0.5250**		**0.4939**	**0.4939**	**0.0000**	**2,545.8905**	**2,545.8905**	**0.5975**		**2,558.4386**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.1329	7.0540	17.0390	0.0428	1.1735	0.1778	1.3513	0.3382	0.1636	0.5018		4,011.3278	4,011.3278	0.0279		4,011.9145
Worker	0.4006	0.5469	5.9245	0.0259	2.0606	0.0161	2.0767	0.5499	0.0149	0.5649		1,691.9963	1,691.9963	0.0709		1,693.4851
Total	**1.5335**	**7.6009**	**22.9635**	**0.0687**	**3.2341**	**0.1939**	**3.4280**	**0.8881**	**0.1785**	**1.0666**		**5,703.3240**	**5,703.3240**	**0.0988**		**5,705.3995**

WatermanConstructionEstimate

San Bernardino-South Coast County, Winter

3.5 Building Construction - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3615	12.4097	16.0518	0.0269		0.5250	0.5250		0.4939	0.4939		2,545.8905	2,545.8905	0.5975		2,558.4386
Total	**1.3615**	**12.4097**	**16.0518**	**0.0269**		**0.5250**	**0.5250**		**0.4939**	**0.4939**		**2,545.8905**	**2,545.8905**	**0.5975**		**2,558.4386**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.1184	6.9987	16.8682	0.0428	1.2555	0.1782	1.4337	0.3583	0.1639	0.5222		4,010.3806	4,010.3806	0.0280		4,010.9683
Worker	0.3848	0.5259	5.7161	0.0259	2.2355	0.0162	2.2517	0.5929	0.0150	0.6079		1,677.0877	1,677.0877	0.0692		1,678.5411
Total	**1.5032**	**7.5246**	**22.5843**	**0.0687**	**3.4911**	**0.1944**	**3.6854**	**0.9512**	**0.1789**	**1.1301**		**5,687.4683**	**5,687.4683**	**0.0972**		**5,689.5094**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3615	12.4097	16.0518	0.0269		0.5250	0.5250		0.4939	0.4939	0.0000	2,545.8905	2,545.8905	0.5975		2,558.4386
Total	**1.3615**	**12.4097**	**16.0518**	**0.0269**		**0.5250**	**0.5250**		**0.4939**	**0.4939**	**0.0000**	**2,545.8905**	**2,545.8905**	**0.5975**		**2,558.4386**

WatermanConstructionEstimate

San Bernardino-South Coast County, Winter

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.1184	6.9987	16.8682	0.0428	1.1734	0.1782	1.3516	0.3382	0.1639	0.5021		4,010.3806	4,010.3806	0.0280		4,010.9683
Worker	0.3848	0.5259	5.7161	0.0259	2.0606	0.0162	2.0768	0.5499	0.0150	0.5650		1,677.0877	1,677.0877	0.0692		1,678.5411
Total	**1.5032**	**7.5246**	**22.5843**	**0.0687**	**3.2340**	**0.1944**	**3.4284**	**0.8881**	**0.1789**	**1.0670**		**5,687.4683**	**5,687.4683**	**0.0972**		**5,689.5094**

3.5 Building Construction - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3615	12.4097	16.0518	0.0269		0.5250	0.5250		0.4939	0.4939		2,545.8905	2,545.8905	0.5975		2,558.4386
Total	**1.3615**	**12.4097**	**16.0518**	**0.0269**		**0.5250**	**0.5250**		**0.4939**	**0.4939**		**2,545.8905**	**2,545.8905**	**0.5975**		**2,558.4386**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.1048	6.9339	16.7540	0.0428	1.2554	0.1769	1.4323	0.3583	0.1628	0.5210		4,009.2778	4,009.2778	0.0279		4,009.8627
Worker	0.3704	0.5072	5.5346	0.0259	2.2355	0.0163	2.2518	0.5929	0.0151	0.6080		1,664.3591	1,664.3591	0.0677		1,665.7812
Total	**1.4752**	**7.4410**	**22.2887**	**0.0687**	**3.4910**	**0.1932**	**3.6842**	**0.9511**	**0.1779**	**1.1290**		**5,673.6369**	**5,673.6369**	**0.0956**		**5,675.6439**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3615	12.4097	16.0518	0.0269		0.5250	0.5250		0.4939	0.4939	0.0000	2,545.8905	2,545.8905	0.5975		2,558.4386
Total	**1.3615**	**12.4097**	**16.0518**	**0.0269**		**0.5250**	**0.5250**		**0.4939**	**0.4939**	**0.0000**	**2,545.8905**	**2,545.8905**	**0.5975**		**2,558.4386**

WatermanConstructionEstimate

San Bernardino-South Coast County, Winter

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.1048	6.9339	16.7540	0.0428	1.1733	0.1769	1.3502	0.3381	0.1628	0.5009		4,009.2778	4,009.2778	0.0279		4,009.8627
Worker	0.3704	0.5072	5.5346	0.0259	2.0606	0.0163	2.0769	0.5499	0.0151	0.5650		1,664.3591	1,664.3591	0.0677		1,665.7812
Total	**1.4752**	**7.4410**	**22.2887**	**0.0687**	**3.2339**	**0.1932**	**3.4271**	**0.8880**	**0.1779**	**1.0659**		**5,673.6369**	**5,673.6369**	**0.0956**		**5,675.6439**

3.5 Building Construction - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3615	12.4097	16.0518	0.0269		0.5250	0.5250		0.4939	0.4939		2,545.8905	2,545.8905	0.5975		2,558.4386
Total	**1.3615**	**12.4097**	**16.0518**	**0.0269**		**0.5250**	**0.5250**		**0.4939**	**0.4939**		**2,545.8905**	**2,545.8905**	**0.5975**		**2,558.4386**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.0904	6.9001	16.5765	0.0428	1.2553	0.1771	1.4324	0.3582	0.1629	0.5211		4,008.2389	4,008.2389	0.0279		4,008.8243
Worker	0.3562	0.4891	5.3598	0.0259	2.2355	0.0163	2.2519	0.5929	0.0152	0.6080		1,653.4682	1,653.4682	0.0663		1,654.8601
Total	**1.4466**	**7.3892**	**21.9363**	**0.0686**	**3.4908**	**0.1934**	**3.6843**	**0.9511**	**0.1781**	**1.1292**		**5,661.7070**	**5,661.7070**	**0.0942**		**5,663.6844**

WatermanConstructionEstimate

San Bernardino-South Coast County, Winter

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3615	12.4097	16.0518	0.0269		0.5250	0.5250		0.4939	0.4939	0.0000	2,545.8905	2,545.8905	0.5975		2,558.4386
Total	**1.3615**	**12.4097**	**16.0518**	**0.0269**		**0.5250**	**0.5250**		**0.4939**	**0.4939**	**0.0000**	**2,545.8905**	**2,545.8905**	**0.5975**		**2,558.4386**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.0904	6.9001	16.5765	0.0428	1.1732	0.1771	1.3503	0.3381	0.1629	0.5010		4,008.2389	4,008.2389	0.0279		4,008.8243
Worker	0.3562	0.4891	5.3598	0.0259	2.0606	0.0163	2.0770	0.5499	0.0152	0.5651		1,653.4682	1,653.4682	0.0663		1,654.8601
Total	**1.4466**	**7.3892**	**21.9363**	**0.0686**	**3.2338**	**0.1934**	**3.4272**	**0.8880**	**0.1781**	**1.0661**		**5,661.7070**	**5,661.7070**	**0.0942**		**5,663.6844**

3.5 Building Construction - 2030

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3041	7.9179	16.1313	0.0308		0.1476	0.1476		0.1476	0.1476		2,884.8300	2,884.8300	0.1158		2,887.2617
Total	**1.3041**	**7.9179**	**16.1313**	**0.0308**		**0.1476**	**0.1476**		**0.1476**	**0.1476**		**2,884.8300**	**2,884.8300**	**0.1158**		**2,887.2617**

WatermanConstructionEstimate

San Bernardino-South Coast County, Winter

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.0799	6.8721	16.4910	0.0428	1.2552	0.1773	1.4325	0.3582	0.1631	0.5213		4,007.2691	4,007.2691	0.0279		4,007.8550
Worker	0.3428	0.4724	5.2065	0.0259	2.2355	0.0164	2.2519	0.5929	0.0152	0.6081		1,644.2378	1,644.2378	0.0650		1,645.6019
Total	**1.4227**	**7.3445**	**21.6975**	**0.0686**	**3.4907**	**0.1937**	**3.6844**	**0.9510**	**0.1783**	**1.1293**		**5,651.5069**	**5,651.5069**	**0.0929**		**5,653.4569**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3041	7.9179	16.1313	0.0308		0.1476	0.1476		0.1476	0.1476	0.0000	2,884.8300	2,884.8300	0.1158		2,887.2617
Total	**1.3041**	**7.9179**	**16.1313**	**0.0308**		**0.1476**	**0.1476**		**0.1476**	**0.1476**	**0.0000**	**2,884.8300**	**2,884.8300**	**0.1158**		**2,887.2617**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.0799	6.8721	16.4910	0.0428	1.1731	0.1773	1.3504	0.3380	0.1631	0.5011		4,007.2691	4,007.2691	0.0279		4,007.8550
Worker	0.3428	0.4724	5.2065	0.0259	2.0606	0.0164	2.0770	0.5499	0.0152	0.5651		1,644.2378	1,644.2378	0.0650		1,645.6019
Total	**1.4227**	**7.3445**	**21.6975**	**0.0686**	**3.2337**	**0.1937**	**3.4274**	**0.8880**	**0.1783**	**1.0662**		**5,651.5069**	**5,651.5069**	**0.0929**		**5,653.4569**

WatermanConstructionEstimate

San Bernardino-South Coast County, Winter

3.5 Building Construction - 2031

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3041	7.9179	16.1313	0.0308		0.1476	0.1476		0.1476	0.1476		2,884.8300	2,884.8300	0.1158		2,887.2617
Total	**1.3041**	**7.9179**	**16.1313**	**0.0308**		**0.1476**	**0.1476**		**0.1476**	**0.1476**		**2,884.8300**	**2,884.8300**	**0.1158**		**2,887.2617**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.0808	6.8768	16.4405	0.0429	1.2554	0.1751	1.4305	0.3583	0.1611	0.5193		4,023.6331	4,023.6331	0.0283		4,024.2281
Worker	0.3309	0.4573	5.1014	0.0260	2.2355	0.0166	2.2521	0.5929	0.0154	0.6082		1,644.2746	1,644.2746	0.0645		1,645.6289
Total	**1.4117**	**7.3340**	**21.5419**	**0.0689**	**3.4910**	**0.1917**	**3.6826**	**0.9511**	**0.1764**	**1.1276**		**5,667.9076**	**5,667.9076**	**0.0928**		**5,669.8569**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3041	7.9179	16.1313	0.0308		0.1476	0.1476		0.1476	0.1476	0.0000	2,884.8300	2,884.8300	0.1158		2,887.2617
Total	**1.3041**	**7.9179**	**16.1313**	**0.0308**		**0.1476**	**0.1476**		**0.1476**	**0.1476**	**0.0000**	**2,884.8300**	**2,884.8300**	**0.1158**		**2,887.2617**

WatermanConstructionEstimate

San Bernardino-South Coast County, Winter

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.0808	6.8768	16.4405	0.0429	1.1733	0.1751	1.3484	0.3381	0.1611	0.4992		4,023.6331	4,023.6331	0.0283		4,024.2281
Worker	0.3309	0.4573	5.1014	0.0260	2.0606	0.0166	2.0772	0.5499	0.0154	0.5653		1,644.2746	1,644.2746	0.0645		1,645.6289
Total	**1.4117**	**7.3340**	**21.5419**	**0.0689**	**3.2340**	**0.1917**	**3.4256**	**0.8881**	**0.1764**	**1.0645**		**5,667.9076**	**5,667.9076**	**0.0928**		**5,669.8569**

3.5 Building Construction - 2032

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3041	7.9179	16.1313	0.0308		0.1476	0.1476		0.1476	0.1476		2,884.8300	2,884.8300	0.1158		2,887.2617
Total	**1.3041**	**7.9179**	**16.1313**	**0.0308**		**0.1476**	**0.1476**		**0.1476**	**0.1476**		**2,884.8300**	**2,884.8300**	**0.1158**		**2,887.2617**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.0750	6.8606	16.4175	0.0430	1.2557	0.1754	1.4311	0.3584	0.1614	0.5198		4,024.2044	4,024.2044	0.0284		4,024.8002
Worker	0.3192	0.4434	4.9778	0.0260	2.2355	0.0166	2.2521	0.5929	0.0154	0.6082		1,637.7342	1,637.7342	0.0634		1,639.0654
Total	**1.3942**	**7.3040**	**21.3952**	**0.0689**	**3.4912**	**0.1920**	**3.6832**	**0.9512**	**0.1768**	**1.1280**		**5,661.9386**	**5,661.9386**	**0.0918**		**5,663.8656**

WatermanConstructionEstimate

San Bernardino-South Coast County, Winter

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3041	7.9179	16.1313	0.0308		0.1476	0.1476		0.1476	0.1476	0.0000	2,884.8300	2,884.8300	0.1158		2,887.2617
Total	**1.3041**	**7.9179**	**16.1313**	**0.0308**		**0.1476**	**0.1476**		**0.1476**	**0.1476**	**0.0000**	**2,884.8300**	**2,884.8300**	**0.1158**		**2,887.2617**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.0750	6.8606	16.4175	0.0430	1.1736	0.1754	1.3490	0.3382	0.1614	0.4996		4,024.2044	4,024.2044	0.0284		4,024.8002
Worker	0.3192	0.4434	4.9778	0.0260	2.0606	0.0166	2.0772	0.5499	0.0154	0.5653		1,637.7342	1,637.7342	0.0634		1,639.0654
Total	**1.3942**	**7.3040**	**21.3952**	**0.0689**	**3.2342**	**0.1920**	**3.4262**	**0.8882**	**0.1768**	**1.0649**		**5,661.9386**	**5,661.9386**	**0.0918**		**5,663.8656**

3.5 Building Construction - 2033

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3041	7.9179	16.1313	0.0308		0.1476	0.1476		0.1476	0.1476		2,884.8300	2,884.8300	0.1158		2,887.2617
Total	**1.3041**	**7.9179**	**16.1313**	**0.0308**		**0.1476**	**0.1476**		**0.1476**	**0.1476**		**2,884.8300**	**2,884.8300**	**0.1158**		**2,887.2617**

WatermanConstructionEstimate

San Bernardino-South Coast County, Winter

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.0709	6.8436	16.4103	0.0430	1.2559	0.1757	1.4316	0.3585	0.1617	0.5201		4,024.6418	4,024.6418	0.0284		4,025.2384
Worker	0.3087	0.4314	4.8729	0.0260	2.2355	0.0166	2.2521	0.5929	0.0154	0.6082		1,632.2748	1,632.2748	0.0624		1,633.5856
Total	**1.3796**	**7.2749**	**21.2832**	**0.0689**	**3.4914**	**0.1923**	**3.6837**	**0.9513**	**0.1770**	**1.1283**		**5,656.9166**	**5,656.9166**	**0.0908**		**5,658.8240**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3041	7.9179	16.1313	0.0308		0.1476	0.1476		0.1476	0.1476	0.0000	2,884.8300	2,884.8300	0.1158		2,887.2617
Total	**1.3041**	**7.9179**	**16.1313**	**0.0308**		**0.1476**	**0.1476**		**0.1476**	**0.1476**	**0.0000**	**2,884.8300**	**2,884.8300**	**0.1158**		**2,887.2617**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.0709	6.8436	16.4103	0.0430	1.1738	0.1757	1.3495	0.3383	0.1617	0.5000		4,024.6418	4,024.6418	0.0284		4,025.2384
Worker	0.3087	0.4314	4.8729	0.0260	2.0606	0.0166	2.0772	0.5499	0.0154	0.5653		1,632.2748	1,632.2748	0.0624		1,633.5856
Total	**1.3796**	**7.2749**	**21.2832**	**0.0689**	**3.2344**	**0.1923**	**3.4267**	**0.8883**	**0.1770**	**1.0653**		**5,656.9166**	**5,656.9166**	**0.0908**		**5,658.8240**

WatermanConstructionEstimate

San Bernardino-South Coast County, Winter

3.5 Building Construction - 2034

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3041	7.9179	16.1313	0.0308		0.1476	0.1476		0.1476	0.1476		2,884.8300	2,884.8300	0.1158		2,887.2617
Total	**1.3041**	**7.9179**	**16.1313**	**0.0308**		**0.1476**	**0.1476**		**0.1476**	**0.1476**		**2,884.8300**	**2,884.8300**	**0.1158**		**2,887.2617**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.0677	6.8304	16.3918	0.0430	1.2561	0.1760	1.4321	0.3585	0.1619	0.5204		4,024.9620	4,024.9620	0.0284		4,025.5593
Worker	0.2979	0.4216	4.7740	0.0260	2.2355	0.0165	2.2521	0.5929	0.0153	0.6082		1,627.6566	1,627.6566	0.0615		1,628.9484
Total	**1.3656**	**7.2520**	**21.1658**	**0.0690**	**3.4916**	**0.1925**	**3.6841**	**0.9514**	**0.1772**	**1.1286**		**5,652.6186**	**5,652.6186**	**0.0900**		**5,654.5076**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3041	7.9179	16.1313	0.0308		0.1476	0.1476		0.1476	0.1476	0.0000	2,884.8300	2,884.8300	0.1158		2,887.2617
Total	**1.3041**	**7.9179**	**16.1313**	**0.0308**		**0.1476**	**0.1476**		**0.1476**	**0.1476**	**0.0000**	**2,884.8300**	**2,884.8300**	**0.1158**		**2,887.2617**

WatermanConstructionEstimate

San Bernardino-South Coast County, Winter

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.0677	6.8304	16.3918	0.0430	1.1740	0.1760	1.3500	0.3384	0.1619	0.5003		4,024.9620	4,024.9620	0.0284		4,025.5593
Worker	0.2979	0.4216	4.7740	0.0260	2.0606	0.0165	2.0771	0.5499	0.0153	0.5653		1,627.6566	1,627.6566	0.0615		1,628.9484
Total	**1.3656**	**7.2520**	**21.1658**	**0.0690**	**3.2346**	**0.1925**	**3.4271**	**0.8883**	**0.1772**	**1.0656**		**5,652.6186**	**5,652.6186**	**0.0900**		**5,654.5076**

3.5 Building Construction - 2035

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2123	7.1510	16.0922	0.0308		0.0901	0.0901		0.0901	0.0901		2,884.8300	2,884.8300	0.1075		2,887.0878
Total	**1.2123**	**7.1510**	**16.0922**	**0.0308**		**0.0901**	**0.0901**		**0.0901**	**0.0901**		**2,884.8300**	**2,884.8300**	**0.1075**		**2,887.0878**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.0653	6.8205	16.3831	0.0430	1.2562	0.1763	1.4325	0.3586	0.1622	0.5208		4,025.2972	4,025.2972	0.0285		4,025.8951
Worker	0.2889	0.4144	4.6931	0.0260	2.2355	0.0165	2.2520	0.5929	0.0153	0.6082		1,623.8670	1,623.8670	0.0608		1,625.1431
Total	**1.3542**	**7.2349**	**21.0762**	**0.0690**	**3.4918**	**0.1928**	**3.6845**	**0.9515**	**0.1775**	**1.1289**		**5,649.1642**	**5,649.1642**	**0.0892**		**5,651.0382**

WatermanConstructionEstimate

San Bernardino-South Coast County, Winter

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2123	7.1510	16.0922	0.0308		0.0901	0.0901		0.0901	0.0901	0.0000	2,884.8300	2,884.8300	0.1075		2,887.0878
Total	**1.2123**	**7.1510**	**16.0922**	**0.0308**		**0.0901**	**0.0901**		**0.0901**	**0.0901**	**0.0000**	**2,884.8300**	**2,884.8300**	**0.1075**		**2,887.0878**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.0653	6.8205	16.3831	0.0430	1.1741	0.1763	1.3504	0.3385	0.1622	0.5006		4,025.2972	4,025.2972	0.0285		4,025.8951
Worker	0.2889	0.4144	4.6931	0.0260	2.0606	0.0165	2.0771	0.5499	0.0153	0.5653		1,623.8670	1,623.8670	0.0608		1,625.1431
Total	**1.3542**	**7.2349**	**21.0762**	**0.0690**	**3.2348**	**0.1928**	**3.4275**	**0.8884**	**0.1775**	**1.0659**		**5,649.1642**	**5,649.1642**	**0.0892**		**5,651.0382**

3.6 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9074	20.2964	14.7270	0.0223		1.1384	1.1384		1.0473	1.0473		2,281.0588	2,281.0588	0.6989		2,295.7360
Paving	0.1691					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.0765**	**20.2964**	**14.7270**	**0.0223**		**1.1384**	**1.1384**		**1.0473**	**1.0473**		**2,281.0588**	**2,281.0588**	**0.6989**		**2,295.7360**

WatermanConstructionEstimate

San Bernardino-South Coast County, Winter

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1431	0.2001	2.1103	5.1100e-003	0.4471	3.1900e-003	0.4503	0.1186	2.9500e-003	0.1215		408.7460	408.7460	0.0213		409.1928
Total	**0.1431**	**0.2001**	**2.1103**	**5.1100e-003**	**0.4471**	**3.1900e-003**	**0.4503**	**0.1186**	**2.9500e-003**	**0.1215**		**408.7460**	**408.7460**	**0.0213**		**409.1928**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9074	20.2964	14.7270	0.0223		1.1384	1.1384		1.0473	1.0473	0.0000	2,281.0588	2,281.0588	0.6989		2,295.7360
Paving	0.1691					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.0765**	**20.2964**	**14.7270**	**0.0223**		**1.1384**	**1.1384**		**1.0473**	**1.0473**	**0.0000**	**2,281.0588**	**2,281.0588**	**0.6989**		**2,295.7360**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1431	0.2001	2.1103	5.1100e-003	0.4121	3.1900e-003	0.4153	0.1100	2.9500e-003	0.1129		408.7460	408.7460	0.0213		409.1928
Total	**0.1431**	**0.2001**	**2.1103**	**5.1100e-003**	**0.4121**	**3.1900e-003**	**0.4153**	**0.1100**	**2.9500e-003**	**0.1129**		**408.7460**	**408.7460**	**0.0213**		**409.1928**

WatermanConstructionEstimate

San Bernardino-South Coast County, Winter

3.6 Paving - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6114	17.1628	14.4944	0.0223		0.9386	0.9386		0.8635	0.8635		2,245.2695	2,245.2695	0.6990		2,259.9481
Paving	0.1691					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.7805**	**17.1628**	**14.4944**	**0.0223**		**0.9386**	**0.9386**		**0.8635**	**0.8635**		**2,245.2695**	**2,245.2695**	**0.6990**		**2,259.9481**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1274	0.1805	1.9015	5.1100e-003	0.4471	3.1200e-003	0.4502	0.1186	2.8900e-003	0.1215		393.2603	393.2603	0.0197		393.6729
Total	**0.1274**	**0.1805**	**1.9015**	**5.1100e-003**	**0.4471**	**3.1200e-003**	**0.4502**	**0.1186**	**2.8900e-003**	**0.1215**		**393.2603**	**393.2603**	**0.0197**		**393.6729**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6114	17.1628	14.4944	0.0223		0.9386	0.9386		0.8635	0.8635	0.0000	2,245.2695	2,245.2695	0.6990		2,259.9481
Paving	0.1691					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.7805**	**17.1628**	**14.4944**	**0.0223**		**0.9386**	**0.9386**		**0.8635**	**0.8635**	**0.0000**	**2,245.2695**	**2,245.2695**	**0.6990**		**2,259.9481**

WatermanConstructionEstimate

San Bernardino-South Coast County, Winter

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1274	0.1805	1.9015	5.1100e-003	0.4121	3.1200e-003	0.4152	0.1100	2.8900e-003	0.1129		393.2603	393.2603	0.0197		393.6729
Total	**0.1274**	**0.1805**	**1.9015**	**5.1100e-003**	**0.4121**	**3.1200e-003**	**0.4152**	**0.1100**	**2.8900e-003**	**0.1129**		**393.2603**	**393.2603**	**0.0197**		**393.6729**

3.6 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4259	14.9353	14.3652	0.0223		0.8094	0.8094		0.7447	0.7447		2,208.9731	2,208.9731	0.6989		2,223.6499
Paving	0.1691					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.5950**	**14.9353**	**14.3652**	**0.0223**		**0.8094**	**0.8094**		**0.7447**	**0.7447**		**2,208.9731**	**2,208.9731**	**0.6989**		**2,223.6499**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1158	0.1644	1.7218	5.0800e-003	0.4471	3.0400e-003	0.4502	0.1186	2.8200e-003	0.1214		376.7143	376.7143	0.0181		377.0947
Total	**0.1158**	**0.1644**	**1.7218**	**5.0800e-003**	**0.4471**	**3.0400e-003**	**0.4502**	**0.1186**	**2.8200e-003**	**0.1214**		**376.7143**	**376.7143**	**0.0181**		**377.0947**

WatermanConstructionEstimate

San Bernardino-South Coast County, Winter

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4259	14.9353	14.3652	0.0223		0.8094	0.8094		0.7447	0.7447	0.0000	2,208.9731	2,208.9731	0.6989		2,223.6499
Paving	0.1691					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.5950**	**14.9353**	**14.3652**	**0.0223**		**0.8094**	**0.8094**		**0.7447**	**0.7447**	**0.0000**	**2,208.9731**	**2,208.9731**	**0.6989**		**2,223.6499**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1158	0.1644	1.7218	5.0800e-003	0.4121	3.0400e-003	0.4152	0.1100	2.8200e-003	0.1128		376.7143	376.7143	0.0181		377.0947
Total	**0.1158**	**0.1644**	**1.7218**	**5.0800e-003**	**0.4121**	**3.0400e-003**	**0.4152**	**0.1100**	**2.8200e-003**	**0.1128**		**376.7143**	**376.7143**	**0.0181**		**377.0947**

3.7 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	121.5217					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.0721
Total	**121.8541**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**		**281.4481**	**281.4481**	**0.0297**		**282.0721**

WatermanConstructionEstimate

San Bernardino-South Coast County, Winter

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	3.0768	4.3031	45.3709	0.1099	9.6128	0.0687	9.6815	2.5494	0.0634	2.6127		8,788.0396	8,788.0396	0.4574		8,797.6453
Total	**3.0768**	**4.3031**	**45.3709**	**0.1099**	**9.6128**	**0.0687**	**9.6815**	**2.5494**	**0.0634**	**2.6127**		**8,788.0396**	**8,788.0396**	**0.4574**		**8,797.6453**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	121.5217					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.0721
Total	**121.8541**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**	**0.0000**	**281.4481**	**281.4481**	**0.0297**		**282.0721**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	3.0768	4.3031	45.3709	0.1099	8.8606	0.0687	8.9293	2.3647	0.0634	2.4281		8,788.0396	8,788.0396	0.4574		8,797.6453
Total	**3.0768**	**4.3031**	**45.3709**	**0.1099**	**8.8606**	**0.0687**	**8.9293**	**2.3647**	**0.0634**	**2.4281**		**8,788.0396**	**8,788.0396**	**0.4574**		**8,797.6453**

WatermanConstructionEstimate

San Bernardino-South Coast County, Winter

3.7 Architectural Coating - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	121.5217					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.0102
Total	**121.8204**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**		**281.4485**	**281.4485**	**0.0267**		**282.0102**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	2.7387	3.8808	40.8821	0.1099	9.6128	0.0670	9.6798	2.5494	0.0620	2.6114		8,455.0961	8,455.0961	0.4224		8,463.9666
Total	**2.7387**	**3.8808**	**40.8821**	**0.1099**	**9.6128**	**0.0670**	**9.6798**	**2.5494**	**0.0620**	**2.6114**		**8,455.0961**	**8,455.0961**	**0.4224**		**8,463.9666**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	121.5217					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.0102
Total	**121.8204**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**	**0.0000**	**281.4485**	**281.4485**	**0.0267**		**282.0102**

WatermanConstructionEstimate

San Bernardino-South Coast County, Winter

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	2.7387	3.8808	40.8821	0.1099	8.8606	0.0670	8.9277	2.3647	0.0620	2.4268		8,455.0961	8,455.0961	0.4224		8,463.9666
Total	**2.7387**	**3.8808**	**40.8821**	**0.1099**	**8.8606**	**0.0670**	**8.9277**	**2.3647**	**0.0620**	**2.4268**		**8,455.0961**	**8,455.0961**	**0.4224**		**8,463.9666**

3.7 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	121.5217					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		281.9473
Total	**121.7882**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**		**281.4481**	**281.4481**	**0.0238**		**281.9473**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	2.4900	3.5346	37.0182	0.1093	9.6128	0.0655	9.6782	2.5494	0.0607	2.6100		8,099.3578	8,099.3578	0.3895		8,107.5363
Total	**2.4900**	**3.5346**	**37.0182**	**0.1093**	**9.6128**	**0.0655**	**9.6782**	**2.5494**	**0.0607**	**2.6100**		**8,099.3578**	**8,099.3578**	**0.3895**		**8,107.5363**

WatermanConstructionEstimate

San Bernardino-South Coast County, Winter

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	121.5217					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		281.9473
Total	**121.7882**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**	**0.0000**	**281.4481**	**281.4481**	**0.0238**		**281.9473**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	2.4900	3.5346	37.0182	0.1093	8.8606	0.0655	8.9261	2.3647	0.0607	2.4254		8,099.3578	8,099.3578	0.3895		8,107.5363
Total	**2.4900**	**3.5346**	**37.0182**	**0.1093**	**8.8606**	**0.0655**	**8.9261**	**2.3647**	**0.0607**	**2.4254**		**8,099.3578**	**8,099.3578**	**0.3895**		**8,107.5363**

WatermanConstructionEstimate

San Bernardino-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	35.50	Acre	35.50	1,546,380.00	0
Single Family Housing	802.00	Dwelling Unit	121.80	1,443,600.00	2294
Apartments Low Rise	2,668.00	Dwelling Unit	40.60	2,668,000.00	7630
General Office Building	143.59	1000sqft	54.00	143,591.00	0
Place of Worship	20.37	1000sqft	2.00	20,369.00	0
General Light Industry	177.88	1000sqft	7.00	177,884.00	0
Regional Shopping Center	4,097.16	1000sqft	169.40	4,097,160.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2035
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - See assumptions

Construction Phase - See assumptions

Off-road Equipment -

Demolition -

Trips and VMT - See assumptions

Architectural Coating - Rule 1113 for flat and semigloss coatings

Vehicle Trips -

Construction Off-road Equipment Mitigation - SCAQMD Rule 403

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	9
tblConstructionPhase	NumDays	7,750.00	4,950.00
tblConstructionPhase	PhaseEndDate	3/19/2021	2/8/2019
tblConstructionPhase	PhaseEndDate	12/10/2038	12/21/2035
tblConstructionPhase	PhaseEndDate	2/12/2021	12/20/2019
tblConstructionPhase	PhaseEndDate	1/29/2038	2/8/2019
tblConstructionPhase	PhaseEndDate	1/24/2020	2/23/2018
tblConstructionPhase	PhaseStartDate	2/9/2019	1/1/2017
tblConstructionPhase	PhaseStartDate	12/21/2019	1/1/2017
tblConstructionPhase	PhaseStartDate	2/24/2018	1/1/2017
tblConstructionPhase	PhaseStartDate	12/22/2035	1/1/2017
tblConstructionPhase	PhaseStartDate	12/1/2018	1/1/2017
tblLandUse	LotAcreage	260.39	121.80

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tblLandUse	LotAcreage	166.75	40.60
tblLandUse	LotAcreage	3.30	54.00
tblLandUse	LotAcreage	0.47	2.00
tblLandUse	LotAcreage	4.08	7.00
tblLandUse	LotAcreage	94.06	169.40
tblProjectCharacteristics	OperationalYear	2014	2035
tblTripsAndVMT	VendorTripNumber	1,352.00	200.00
tblTripsAndVMT	WorkerTripNumber	4,299.00	200.00
tblTripsAndVMT	WorkerTripNumber	15.00	40.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	19.2997	32.3644	32.6364	0.0549	9.4779	1.5390	11.0168	3.6295	1.4253	5.0548	0.0000	4,651.4131	4,651.4131	0.7450	0.0000	4,667.0574
2018	18.4297	22.8142	25.8189	0.0497	9.3504	1.0324	10.3828	3.6079	0.9579	4.5658	0.0000	4,079.8452	4,079.8452	0.6053	0.0000	4,092.5558
2019	3.0204	11.8642	12.1340	0.0227	3.9794	0.5331	4.5125	1.5612	0.4940	2.0552	0.0000	1,890.0191	1,890.0191	0.3272	0.0000	1,896.8911
2020	0.5223	4.1956	5.8984	0.0125	0.4492	0.1757	0.6249	0.1226	0.1647	0.2873	0.0000	996.7784	996.7784	0.0872	0.0000	998.6095
2021	0.4818	3.7080	5.7113	0.0125	0.4475	0.1516	0.5991	0.1222	0.1420	0.2642	0.0000	992.0268	992.0268	0.0858	0.0000	993.8279
2022	0.4478	3.3293	5.5538	0.0125	0.4458	0.1314	0.5771	0.1217	0.1231	0.2448	0.0000	984.3980	984.3980	0.0846	0.0000	986.1751
2023	0.4141	2.9157	5.3820	0.0124	0.4457	0.1169	0.5626	0.1217	0.1095	0.2311	0.0000	979.0311	979.0311	0.0834	0.0000	980.7831
2024	0.4007	2.8130	5.3358	0.0126	0.4492	0.1062	0.5553	0.1226	0.0993	0.2219	0.0000	990.6154	990.6154	0.0837	0.0000	992.3724
2025	0.3797	2.6655	5.2201	0.0126	0.4474	0.0947	0.5421	0.1221	0.0886	0.2107	0.0000	984.4219	984.4219	0.0827	0.0000	986.1584
2026	0.3727	2.6336	5.1476	0.0126	0.4474	0.0937	0.5411	0.1221	0.0877	0.2098	0.0000	982.1090	982.1090	0.0824	0.0000	983.8386
2027	0.3688	2.6234	5.0954	0.0126	0.4474	0.0938	0.5412	0.1221	0.0877	0.2098	0.0000	980.2067	980.2067	0.0822	0.0000	981.9323
2028	0.3638	2.6022	5.0359	0.0125	0.4457	0.0933	0.5390	0.1217	0.0872	0.2089	0.0000	974.7991	974.7991	0.0817	0.0000	976.5140
2029	0.3615	2.6053	5.0067	0.0126	0.4474	0.0937	0.5410	0.1221	0.0876	0.2097	0.0000	977.1187	977.1187	0.0818	0.0000	978.8367
2030	0.3510	2.0131	4.9847	0.0131	0.4474	0.0444	0.4918	0.1221	0.0424	0.1645	0.0000	1,016.0230	1,016.0230	0.0246	0.0000	1,016.5402
2031	0.3497	2.0117	4.9635	0.0131	0.4474	0.0442	0.4916	0.1221	0.0422	0.1643	0.0000	1,017.9805	1,017.9805	0.0246	0.0000	1,018.4975
2032	0.3488	2.0154	4.9625	0.0132	0.4492	0.0444	0.4935	0.1226	0.0424	0.1650	0.0000	1,021.1613	1,021.1613	0.0246	0.0000	1,021.6777
2033	0.3443	1.9961	4.9095	0.0131	0.4458	0.0441	0.4898	0.1217	0.0421	0.1638	0.0000	1,012.7656	1,012.7656	0.0243	0.0000	1,013.2757
2034	0.3426	1.9930	4.8935	0.0131	0.4458	0.0441	0.4899	0.1217	0.0421	0.1638	0.0000	1,012.2516	1,012.2516	0.0242	0.0000	1,012.7596
2035	0.3229	1.8547	4.7825	0.0128	0.4372	0.0360	0.4732	0.1194	0.0340	0.1534	0.0000	992.3797	992.3797	0.0227	0.0000	992.8561
Total	**46.9221**	**109.0185**	**153.4724**	**0.3308**	**29.9530**	**4.5124**	**34.4654**	**10.7490**	**4.1998**	**14.9488**	**0.0000**	**26,535.3441**	**26,535.3441**	**2.6579**	**0.0000**	**26,591.1591**

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Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	19.2997	32.3644	32.6363	0.0549	5.0401	1.5390	6.5791	1.8187	1.4253	3.2440	0.0000	4,651.4104	4,651.4104	0.7450	0.0000	4,667.0546
2018	18.4297	22.8142	25.8189	0.0497	4.9762	1.0324	6.0086	1.8069	0.9579	2.7648	0.0000	4,079.8430	4,079.8430	0.6053	0.0000	4,092.5536
2019	3.0204	11.8642	12.1340	0.0227	2.0091	0.5331	2.5422	0.7520	0.4940	1.2460	0.0000	1,890.0179	1,890.0179	0.3272	0.0000	1,896.8898
2020	0.5223	4.1956	5.8984	0.0125	0.4163	0.1757	0.5920	0.1145	0.1647	0.2792	0.0000	996.7780	996.7780	0.0872	0.0000	998.6091
2021	0.4818	3.7080	5.7113	0.0125	0.4147	0.1516	0.5663	0.1141	0.1420	0.2561	0.0000	992.0265	992.0265	0.0858	0.0000	993.8276
2022	0.4478	3.3293	5.5538	0.0125	0.4131	0.1314	0.5445	0.1137	0.1231	0.2367	0.0000	984.3976	984.3976	0.0846	0.0000	986.1747
2023	0.4141	2.9157	5.3820	0.0124	0.4131	0.1169	0.5299	0.1137	0.1095	0.2231	0.0000	979.0307	979.0307	0.0834	0.0000	980.7828
2024	0.4007	2.8130	5.3358	0.0126	0.4162	0.1061	0.5224	0.1145	0.0993	0.2139	0.0000	990.6151	990.6151	0.0837	0.0000	992.3721
2025	0.3797	2.6655	5.2201	0.0126	0.4146	0.0947	0.5093	0.1141	0.0886	0.2026	0.0000	984.4216	984.4216	0.0827	0.0000	986.1581
2026	0.3727	2.6336	5.1476	0.0126	0.4146	0.0937	0.5083	0.1141	0.0877	0.2017	0.0000	982.1086	982.1086	0.0824	0.0000	983.8383
2027	0.3688	2.6234	5.0954	0.0126	0.4146	0.0938	0.5084	0.1141	0.0877	0.2018	0.0000	980.2064	980.2064	0.0822	0.0000	981.9320
2028	0.3638	2.6022	5.0359	0.0125	0.4130	0.0933	0.5063	0.1136	0.0872	0.2009	0.0000	974.7987	974.7987	0.0817	0.0000	976.5136
2029	0.3615	2.6053	5.0067	0.0126	0.4146	0.0937	0.5082	0.1141	0.0876	0.2017	0.0000	977.1183	977.1183	0.0818	0.0000	978.8363
2030	0.3510	2.0131	4.9847	0.0131	0.4146	0.0444	0.4590	0.1141	0.0424	0.1565	0.0000	1,016.0226	1,016.0226	0.0246	0.0000	1,016.5398
2031	0.3497	2.0117	4.9635	0.0131	0.4146	0.0442	0.4588	0.1141	0.0422	0.1563	0.0000	1,017.9801	1,017.9801	0.0246	0.0000	1,018.4971
2032	0.3488	2.0154	4.9625	0.0132	0.4162	0.0444	0.4606	0.1145	0.0424	0.1569	0.0000	1,021.1609	1,021.1609	0.0246	0.0000	1,021.6773
2033	0.3443	1.9961	4.9095	0.0131	0.4131	0.0441	0.4572	0.1137	0.0421	0.1558	0.0000	1,012.7652	1,012.7652	0.0243	0.0000	1,013.2753
2034	0.3426	1.9930	4.8935	0.0131	0.4131	0.0441	0.4572	0.1137	0.0421	0.1558	0.0000	1,012.2512	1,012.2512	0.0242	0.0000	1,012.7592
2035	0.3229	1.8547	4.7825	0.0128	0.4052	0.0360	0.4411	0.1115	0.0340	0.1455	0.0000	992.3793	992.3793	0.0227	0.0000	992.8557
Total	**46.9221**	**109.0185**	**153.4723**	**0.3308**	**18.6469**	**4.5124**	**23.1593**	**6.1994**	**4.1998**	**10.3992**	**0.0000**	**26,535.3319**	**26,535.3319**	**2.6579**	**0.0000**	**26,591.1468**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**37.75**	**0.00**	**32.80**	**42.33**	**0.00**	**30.43**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2017	11/30/2018	5	500	
2	Site Preparation	Site Preparation	1/1/2017	2/23/2018	5	300	
3	Grading	Grading	1/1/2017	12/20/2019	5	775	
4	Building Construction	Building Construction	1/1/2017	12/21/2035	5	4950	
5	Paving	Paving	1/1/2017	2/8/2019	5	550	
6	Architectural Coating	Architectural Coating	1/1/2017	2/8/2019	5	550	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 1937.5

Acres of Paving: 0

Residential Indoor: 8,325,990; Residential Outdoor: 2,775,330; Non-Residential Indoor: 8,978,076; Non-Residential Outdoor: 2,992,692

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition	Excavators	3	8.00	162	0.38
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Excavators	2	8.00	162	0.38
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Paving	Pavers	2	8.00	125	0.42
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Paving Equipment	2	8.00	130	0.36
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Building Construction	Welders	1	8.00	46	0.45

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Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	25,111.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	200.00	200.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	40.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	860.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.4130	0.0000	1.4130	0.2139	0.0000	0.2139	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.5263	5.5506	4.4061	5.1900e-003		0.2763	0.2763		0.2574	0.2574	0.0000	476.0368	476.0368	0.1306	0.0000	478.7792
Total	**0.5263**	**5.5506**	**4.4061**	**5.1900e-003**	**1.4130**	**0.2763**	**1.6892**	**0.2139**	**0.2574**	**0.4713**	**0.0000**	**476.0368**	**476.0368**	**0.1306**	**0.0000**	**478.7792**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.1124	1.7438	1.4104	4.7800e-003	0.1898	0.0257	0.2155	0.0498	0.0236	0.0734	0.0000	430.1350	430.1350	3.0900e-003	0.0000	430.2000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.6300e-003	0.0102	0.1067	2.5000e-004	0.0214	1.6000e-004	0.0215	5.6800e-003	1.4000e-004	5.8200e-003	0.0000	18.3566	18.3566	9.4000e-004	0.0000	18.3764
Total	**0.1190**	**1.7539**	**1.5171**	**5.0300e-003**	**0.2112**	**0.0258**	**0.2370**	**0.0555**	**0.0238**	**0.0792**	**0.0000**	**448.4916**	**448.4916**	**4.0300e-003**	**0.0000**	**448.5763**

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Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.6040	0.0000	0.6040	0.0915	0.0000	0.0915	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.5263	5.5506	4.4061	5.1900e-003		0.2763	0.2763		0.2574	0.2574	0.0000	476.0362	476.0362	0.1306	0.0000	478.7786
Total	**0.5263**	**5.5506**	**4.4061**	**5.1900e-003**	**0.6040**	**0.2763**	**0.8803**	**0.0915**	**0.2574**	**0.3488**	**0.0000**	**476.0362**	**476.0362**	**0.1306**	**0.0000**	**478.7786**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.1124	1.7438	1.4104	4.7800e-003	0.1752	0.0257	0.2008	0.0462	0.0236	0.0698	0.0000	430.1350	430.1350	3.0900e-003	0.0000	430.2000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.6300e-003	0.0102	0.1067	2.5000e-004	0.0197	1.6000e-004	0.0199	5.2700e-003	1.4000e-004	5.4100e-003	0.0000	18.3566	18.3566	9.4000e-004	0.0000	18.3764
Total	**0.1190**	**1.7539**	**1.5171**	**5.0300e-003**	**0.1949**	**0.0258**	**0.2207**	**0.0515**	**0.0238**	**0.0753**	**0.0000**	**448.4916**	**448.4916**	**4.0300e-003**	**0.0000**	**448.5763**

3.2 Demolition - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.3043	0.0000	1.3043	0.1975	0.0000	0.1975	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.4273	4.4197	3.8070	4.7900e-003		0.2171	0.2171		0.2023	0.2023	0.0000	433.6337	433.6337	0.1199	0.0000	436.1518
Total	**0.4273**	**4.4197**	**3.8070**	**4.7900e-003**	**1.3043**	**0.2171**	**1.5213**	**0.1975**	**0.2023**	**0.3998**	**0.0000**	**433.6337**	**433.6337**	**0.1199**	**0.0000**	**436.1518**

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Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.1004	1.4931	1.2664	4.4100e-003	0.1877	0.0237	0.2114	0.0491	0.0218	0.0708	0.0000	390.4194	390.4194	2.8900e-003	0.0000	390.4802
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.4400e-003	8.4500e-003	0.0887	2.3000e-004	0.0197	1.4000e-004	0.0199	5.2400e-003	1.3000e-004	5.3700e-003	0.0000	16.3029	16.3029	8.0000e-004	0.0000	16.3197
Total	**0.1058**	**1.5015**	**1.3551**	**4.6400e-003**	**0.2074**	**0.0238**	**0.2313**	**0.0543**	**0.0219**	**0.0762**	**0.0000**	**406.7223**	**406.7223**	**3.6900e-003**	**0.0000**	**406.7999**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.5576	0.0000	0.5576	0.0844	0.0000	0.0844	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.4273	4.4197	3.8070	4.7900e-003		0.2171	0.2171		0.2023	0.2023	0.0000	433.6332	433.6332	0.1199	0.0000	436.1513
Total	**0.4273**	**4.4197**	**3.8070**	**4.7900e-003**	**0.5576**	**0.2171**	**0.7746**	**0.0844**	**0.2023**	**0.2867**	**0.0000**	**433.6332**	**433.6332**	**0.1199**	**0.0000**	**436.1513**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.1004	1.4931	1.2664	4.4100e-003	0.1731	0.0237	0.1968	0.0455	0.0218	0.0673	0.0000	390.4194	390.4194	2.8900e-003	0.0000	390.4802
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.4400e-003	8.4500e-003	0.0887	2.3000e-004	0.0182	1.4000e-004	0.0183	4.8600e-003	1.3000e-004	4.9900e-003	0.0000	16.3029	16.3029	8.0000e-004	0.0000	16.3197
Total	**0.1058**	**1.5015**	**1.3551**	**4.6400e-003**	**0.1913**	**0.0238**	**0.2151**	**0.0503**	**0.0219**	**0.0722**	**0.0000**	**406.7223**	**406.7223**	**3.6900e-003**	**0.0000**	**406.7999**

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3.3 Site Preparation - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.7099	0.0000	2.7099	1.4896	0.0000	1.4896	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.6290	6.7280	5.1216	5.0800e-003		0.3581	0.3581		0.3294	0.3294	0.0000	472.1000	472.1000	0.1447	0.0000	475.1377
Total	**0.6290**	**6.7280**	**5.1216**	**5.0800e-003**	**2.7099**	**0.3581**	**3.0680**	**1.4896**	**0.3294**	**1.8190**	**0.0000**	**472.1000**	**472.1000**	**0.1447**	**0.0000**	**475.1377**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.9600e-003	0.0122	0.1281	3.0000e-004	0.0257	1.9000e-004	0.0258	6.8100e-003	1.7000e-004	6.9900e-003	0.0000	22.0279	22.0279	1.1300e-003	0.0000	22.0516
Total	**7.9600e-003**	**0.0122**	**0.1281**	**3.0000e-004**	**0.0257**	**1.9000e-004**	**0.0258**	**6.8100e-003**	**1.7000e-004**	**6.9900e-003**	**0.0000**	**22.0279**	**22.0279**	**1.1300e-003**	**0.0000**	**22.0516**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.1585	0.0000	1.1585	0.6368	0.0000	0.6368	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.6290	6.7279	5.1216	5.0800e-003		0.3581	0.3581		0.3294	0.3294	0.0000	472.0994	472.0994	0.1447	0.0000	475.1371
Total	**0.6290**	**6.7279**	**5.1216**	**5.0800e-003**	**1.1585**	**0.3581**	**1.5166**	**0.6368**	**0.3294**	**0.9662**	**0.0000**	**472.0994**	**472.0994**	**0.1447**	**0.0000**	**475.1371**

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Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.9600e-003	0.0122	0.1281	3.0000e-004	0.0237	1.9000e-004	0.0238	6.3200e-003	1.7000e-004	6.5000e-003	0.0000	22.0279	22.0279	1.1300e-003	0.0000	22.0516
Total	**7.9600e-003**	**0.0122**	**0.1281**	**3.0000e-004**	**0.0237**	**1.9000e-004**	**0.0238**	**6.3200e-003**	**1.7000e-004**	**6.5000e-003**	**0.0000**	**22.0279**	**22.0279**	**1.1300e-003**	**0.0000**	**22.0516**

3.3 Site Preparation - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.7099	0.0000	2.7099	1.4896	0.0000	1.4896	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0858	0.9122	0.7247	7.8000e-004		0.0473	0.0473		0.0435	0.0435	0.0000	71.4820	71.4820	0.0223	0.0000	71.9494
Total	**0.0858**	**0.9122**	**0.7247**	**7.8000e-004**	**2.7099**	**0.0473**	**2.7573**	**1.4896**	**0.0435**	**1.5331**	**0.0000**	**71.4820**	**71.4820**	**0.0223**	**0.0000**	**71.9494**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0900e-003	1.6900e-003	0.0178	5.0000e-005	3.9500e-003	3.0000e-005	3.9800e-003	1.0500e-003	3.0000e-005	1.0700e-003	0.0000	3.2606	3.2606	1.6000e-004	0.0000	3.2640
Total	**1.0900e-003**	**1.6900e-003**	**0.0178**	**5.0000e-005**	**3.9500e-003**	**3.0000e-005**	**3.9800e-003**	**1.0500e-003**	**3.0000e-005**	**1.0700e-003**	**0.0000**	**3.2606**	**3.2606**	**1.6000e-004**	**0.0000**	**3.2640**

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Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.1585	0.0000	1.1585	0.6368	0.0000	0.6368	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0858	0.9122	0.7247	7.8000e-004		0.0473	0.0473		0.0435	0.0435	0.0000	71.4820	71.4820	0.0223	0.0000	71.9493
Total	**0.0858**	**0.9122**	**0.7247**	**7.8000e-004**	**1.1585**	**0.0473**	**1.2058**	**0.6368**	**0.0435**	**0.6803**	**0.0000**	**71.4820**	**71.4820**	**0.0223**	**0.0000**	**71.9493**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0900e-003	1.6900e-003	0.0178	5.0000e-005	3.6400e-003	3.0000e-005	3.6700e-003	9.7000e-004	3.0000e-005	1.0000e-003	0.0000	3.2606	3.2606	1.6000e-004	0.0000	3.2640
Total	**1.0900e-003**	**1.6900e-003**	**0.0178**	**5.0000e-005**	**3.6400e-003**	**3.0000e-005**	**3.6700e-003**	**9.7000e-004**	**3.0000e-005**	**1.0000e-003**	**0.0000**	**3.2606**	**3.2606**	**1.6000e-004**	**0.0000**	**3.2640**

3.4 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.3609	0.0000	3.3609	1.3936	0.0000	1.3936	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.7929	9.0470	6.0847	8.0200e-003		0.4312	0.4312		0.3967	0.3967	0.0000	744.5610	744.5610	0.2281	0.0000	749.3517
Total	**0.7929**	**9.0470**	**6.0847**	**8.0200e-003**	**3.3609**	**0.4312**	**3.7922**	**1.3936**	**0.3967**	**1.7904**	**0.0000**	**744.5610**	**744.5610**	**0.2281**	**0.0000**	**749.3517**

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Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.8400e-003	0.0135	0.1423	3.4000e-004	0.0285	2.1000e-004	0.0287	7.5700e-003	1.9000e-004	7.7600e-003	0.0000	24.4755	24.4755	1.2500e-003	0.0000	24.5018
Total	**8.8400e-003**	**0.0135**	**0.1423**	**3.4000e-004**	**0.0285**	**2.1000e-004**	**0.0287**	**7.5700e-003**	**1.9000e-004**	**7.7600e-003**	**0.0000**	**24.4755**	**24.4755**	**1.2500e-003**	**0.0000**	**24.5018**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.4368	0.0000	1.4368	0.5958	0.0000	0.5958	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.7929	9.0470	6.0847	8.0200e-003		0.4312	0.4312		0.3967	0.3967	0.0000	744.5601	744.5601	0.2281	0.0000	749.3509
Total	**0.7929**	**9.0470**	**6.0847**	**8.0200e-003**	**1.4368**	**0.4312**	**1.8680**	**0.5958**	**0.3967**	**0.9925**	**0.0000**	**744.5601**	**744.5601**	**0.2281**	**0.0000**	**749.3509**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.8400e-003	0.0135	0.1423	3.4000e-004	0.0263	2.1000e-004	0.0265	7.0300e-003	1.9000e-004	7.2200e-003	0.0000	24.4755	24.4755	1.2500e-003	0.0000	24.5018
Total	**8.8400e-003**	**0.0135**	**0.1423**	**3.4000e-004**	**0.0263**	**2.1000e-004**	**0.0265**	**7.0300e-003**	**1.9000e-004**	**7.2200e-003**	**0.0000**	**24.4755**	**24.4755**	**1.2500e-003**	**0.0000**	**24.5018**

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Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.3609	0.0000	3.3609	1.3936	0.0000	1.3936	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.6903	7.7692	5.5210	8.0500e-003		0.3638	0.3638		0.3347	0.3347	0.0000	735.5190	735.5190	0.2290	0.0000	740.3275
Total	**0.6903**	**7.7692**	**5.5210**	**8.0500e-003**	**3.3609**	**0.3638**	**3.7248**	**1.3936**	**0.3347**	**1.7284**	**0.0000**	**735.5190**	**735.5190**	**0.2290**	**0.0000**	**740.3275**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.8900e-003	0.0123	0.1287	3.4000e-004	0.0286	2.0000e-004	0.0288	7.6000e-003	1.9000e-004	7.7900e-003	0.0000	23.6392	23.6392	1.1600e-003	0.0000	23.6636
Total	**7.8900e-003**	**0.0123**	**0.1287**	**3.4000e-004**	**0.0286**	**2.0000e-004**	**0.0288**	**7.6000e-003**	**1.9000e-004**	**7.7900e-003**	**0.0000**	**23.6392**	**23.6392**	**1.1600e-003**	**0.0000**	**23.6636**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.4368	0.0000	1.4368	0.5958	0.0000	0.5958	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.6903	7.7692	5.5210	8.0500e-003		0.3638	0.3638		0.3347	0.3347	0.0000	735.5182	735.5182	0.2290	0.0000	740.3267
Total	**0.6903**	**7.7692**	**5.5210**	**8.0500e-003**	**1.4368**	**0.3638**	**1.8006**	**0.5958**	**0.3347**	**0.9305**	**0.0000**	**735.5182**	**735.5182**	**0.2290**	**0.0000**	**740.3267**

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Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.8900e-003	0.0123	0.1287	3.4000e-004	0.0264	2.0000e-004	0.0266	7.0500e-003	1.9000e-004	7.2400e-003	0.0000	23.6392	23.6392	1.1600e-003	0.0000	23.6636
Total	**7.8900e-003**	**0.0123**	**0.1287**	**3.4000e-004**	**0.0264**	**2.0000e-004**	**0.0266**	**7.0500e-003**	**1.9000e-004**	**7.2400e-003**	**0.0000**	**23.6392**	**23.6392**	**1.1600e-003**	**0.0000**	**23.6636**

3.4 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.3609	0.0000	3.3609	1.3936	0.0000	1.3936	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.6212	6.8831	5.1167	7.8400e-003		0.3181	0.3181		0.2927	0.2927	0.0000	704.0993	704.0993	0.2228	0.0000	708.7775
Total	**0.6212**	**6.8831**	**5.1167**	**7.8400e-003**	**3.3609**	**0.3181**	**3.6790**	**1.3936**	**0.2927**	**1.6863**	**0.0000**	**704.0993**	**704.0993**	**0.2228**	**0.0000**	**708.7775**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.9700e-003	0.0109	0.1134	3.3000e-004	0.0279	1.9000e-004	0.0280	7.4000e-003	1.8000e-004	7.5800e-003	0.0000	22.0369	22.0369	1.0400e-003	0.0000	22.0588
Total	**6.9700e-003**	**0.0109**	**0.1134**	**3.3000e-004**	**0.0279**	**1.9000e-004**	**0.0280**	**7.4000e-003**	**1.8000e-004**	**7.5800e-003**	**0.0000**	**22.0369**	**22.0369**	**1.0400e-003**	**0.0000**	**22.0588**

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Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.4368	0.0000	1.4368	0.5958	0.0000	0.5958	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.6212	6.8831	5.1167	7.8400e-003		0.3181	0.3181		0.2927	0.2927	0.0000	704.0985	704.0985	0.2228	0.0000	708.7766
Total	**0.6212**	**6.8831**	**5.1167**	**7.8400e-003**	**1.4368**	**0.3181**	**1.7549**	**0.5958**	**0.2927**	**0.8885**	**0.0000**	**704.0985**	**704.0985**	**0.2228**	**0.0000**	**708.7766**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.9700e-003	0.0109	0.1134	3.3000e-004	0.0257	1.9000e-004	0.0259	6.8600e-003	1.8000e-004	7.0400e-003	0.0000	22.0369	22.0369	1.0400e-003	0.0000	22.0588
Total	**6.9700e-003**	**0.0109**	**0.1134**	**3.3000e-004**	**0.0257**	**1.9000e-004**	**0.0259**	**6.8600e-003**	**1.8000e-004**	**7.0400e-003**	**0.0000**	**22.0369**	**22.0369**	**1.0400e-003**	**0.0000**	**22.0588**

3.5 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.4033	3.4327	2.3568	3.4900e-003		0.2316	0.2316		0.2175	0.2175	0.0000	311.3228	311.3228	0.0766	0.0000	312.9319
Total	**0.4033**	**3.4327**	**2.3568**	**3.4900e-003**		**0.2316**	**0.2316**		**0.2175**	**0.2175**	**0.0000**	**311.3228**	**311.3228**	**0.0766**	**0.0000**	**312.9319**

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Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2150	2.1600	2.8968	5.6300e-003	0.1608	0.0337	0.1944	0.0460	0.0310	0.0770	0.0000	504.0410	504.0410	3.6200e-003	0.0000	504.1172
Worker	0.0885	0.1353	1.4228	3.3800e-003	0.2851	2.0800e-003	0.2872	0.0757	1.9200e-003	0.0776	0.0000	244.7545	244.7545	0.0126	0.0000	245.0180
Total	**0.3035**	**2.2952**	**4.3196**	**9.0100e-003**	**0.4458**	**0.0357**	**0.4816**	**0.1217**	**0.0329**	**0.1546**	**0.0000**	**748.7955**	**748.7955**	**0.0162**	**0.0000**	**749.1351**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.4033	3.4327	2.3568	3.4900e-003		0.2316	0.2316		0.2175	0.2175	0.0000	311.3225	311.3225	0.0766	0.0000	312.9315
Total	**0.4033**	**3.4327**	**2.3568**	**3.4900e-003**		**0.2316**	**0.2316**		**0.2175**	**0.2175**	**0.0000**	**311.3225**	**311.3225**	**0.0766**	**0.0000**	**312.9315**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2150	2.1600	2.8968	5.6300e-003	0.1503	0.0337	0.1840	0.0434	0.0310	0.0744	0.0000	504.0410	504.0410	3.6200e-003	0.0000	504.1172
Worker	0.0885	0.1353	1.4228	3.3800e-003	0.2628	2.0800e-003	0.2649	0.0703	1.9200e-003	0.0722	0.0000	244.7545	244.7545	0.0126	0.0000	245.0180
Total	**0.3035**	**2.2952**	**4.3196**	**9.0100e-003**	**0.4132**	**0.0357**	**0.4489**	**0.1137**	**0.0329**	**0.1466**	**0.0000**	**748.7955**	**748.7955**	**0.0162**	**0.0000**	**749.1351**

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3.5 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3483	3.0355	2.2880	3.5000e-003		0.1950	0.1950		0.1833	0.1833	0.0000	308.9844	308.9844	0.0756	0.0000	310.5723
Total	**0.3483**	**3.0355**	**2.2880**	**3.5000e-003**		**0.1950**	**0.1950**		**0.1833**	**0.1833**	**0.0000**	**308.9844**	**308.9844**	**0.0756**	**0.0000**	**310.5723**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1994	1.9870	2.7663	5.6400e-003	0.1614	0.0318	0.1931	0.0462	0.0292	0.0754	0.0000	497.3168	497.3168	3.6200e-003	0.0000	497.3927
Worker	0.0789	0.1225	1.2867	3.3900e-003	0.2862	2.0300e-003	0.2882	0.0760	1.8800e-003	0.0779	0.0000	236.3918	236.3918	0.0116	0.0000	236.6361
Total	**0.2783**	**2.1095**	**4.0530**	**9.0300e-003**	**0.4475**	**0.0338**	**0.4814**	**0.1222**	**0.0311**	**0.1533**	**0.0000**	**733.7086**	**733.7086**	**0.0153**	**0.0000**	**734.0287**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3483	3.0355	2.2880	3.5000e-003		0.1950	0.1950		0.1833	0.1833	0.0000	308.9841	308.9841	0.0756	0.0000	310.5720
Total	**0.3483**	**3.0355**	**2.2880**	**3.5000e-003**		**0.1950**	**0.1950**		**0.1833**	**0.1833**	**0.0000**	**308.9841**	**308.9841**	**0.0756**	**0.0000**	**310.5720**

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Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1994	1.9870	2.7663	5.6400e-003	0.1509	0.0318	0.1827	0.0436	0.0292	0.0728	0.0000	497.3168	497.3168	3.6200e-003	0.0000	497.3927
Worker	0.0789	0.1225	1.2867	3.3900e-003	0.2639	2.0300e-003	0.2659	0.0705	1.8800e-003	0.0724	0.0000	236.3918	236.3918	0.0116	0.0000	236.6361
Total	**0.2783**	**2.1095**	**4.0530**	**9.0300e-003**	**0.4147**	**0.0338**	**0.4486**	**0.1141**	**0.0311**	**0.1452**	**0.0000**	**733.7086**	**733.7086**	**0.0153**	**0.0000**	**734.0287**

3.5 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3069	2.7359	2.2342	3.5000e-003		0.1677	0.1677		0.1577	0.1577	0.0000	305.5302	305.5302	0.0743	0.0000	307.0913
Total	**0.3069**	**2.7359**	**2.2342**	**3.5000e-003**		**0.1677**	**0.1677**		**0.1577**	**0.1577**	**0.0000**	**305.5302**	**305.5302**	**0.0743**	**0.0000**	**307.0913**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1889	1.8237	2.6874	5.6000e-003	0.1613	0.0305	0.1918	0.0462	0.0280	0.0742	0.0000	485.9306	485.9306	3.5000e-003	0.0000	486.0040
Worker	0.0716	0.1116	1.1649	3.3700e-003	0.2862	1.9900e-003	0.2882	0.0760	1.8400e-003	0.0779	0.0000	226.4418	226.4418	0.0107	0.0000	226.6670
Total	**0.2605**	**1.9353**	**3.8523**	**8.9700e-003**	**0.4475**	**0.0325**	**0.4800**	**0.1222**	**0.0299**	**0.1521**	**0.0000**	**712.3724**	**712.3724**	**0.0142**	**0.0000**	**712.6710**

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Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3069	2.7359	2.2342	3.5000e-003		0.1677	0.1677		0.1577	0.1577	0.0000	305.5299	305.5299	0.0743	0.0000	307.0909
Total	**0.3069**	**2.7359**	**2.2342**	**3.5000e-003**		**0.1677**	**0.1677**		**0.1577**	**0.1577**	**0.0000**	**305.5299**	**305.5299**	**0.0743**	**0.0000**	**307.0909**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1889	1.8237	2.6874	5.6000e-003	0.1509	0.0305	0.1813	0.0436	0.0280	0.0716	0.0000	485.9306	485.9306	3.5000e-003	0.0000	486.0040
Worker	0.0716	0.1116	1.1649	3.3700e-003	0.2639	1.9900e-003	0.2658	0.0705	1.8400e-003	0.0724	0.0000	226.4418	226.4418	0.0107	0.0000	226.6670
Total	**0.2605**	**1.9353**	**3.8523**	**8.9700e-003**	**0.4147**	**0.0325**	**0.4472**	**0.1141**	**0.0299**	**0.1440**	**0.0000**	**712.3724**	**712.3724**	**0.0142**	**0.0000**	**712.6710**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2766	2.5000	2.2019	3.5100e-003		0.1458	0.1458		0.1371	0.1371	0.0000	302.1514	302.1514	0.0736	0.0000	303.6973
Total	**0.2766**	**2.5000**	**2.2019**	**3.5100e-003**		**0.1458**	**0.1458**		**0.1371**	**0.1371**	**0.0000**	**302.1514**	**302.1514**	**0.0736**	**0.0000**	**303.6973**

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Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1790	1.5923	2.6131	5.6200e-003	0.1619	0.0280	0.1899	0.0463	0.0257	0.0721	0.0000	476.6206	476.6206	3.4300e-003	0.0000	476.6928
Worker	0.0668	0.1034	1.0834	3.3800e-003	0.2873	1.9900e-003	0.2893	0.0763	1.8400e-003	0.0781	0.0000	218.0064	218.0064	0.0102	0.0000	218.2195
Total	**0.2458**	**1.6957**	**3.6965**	**9.0000e-003**	**0.4492**	**0.0300**	**0.4792**	**0.1226**	**0.0276**	**0.1502**	**0.0000**	**694.6270**	**694.6270**	**0.0136**	**0.0000**	**694.9122**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2766	2.5000	2.2019	3.5100e-003		0.1458	0.1458		0.1371	0.1371	0.0000	302.1510	302.1510	0.0736	0.0000	303.6969
Total	**0.2766**	**2.5000**	**2.2019**	**3.5100e-003**		**0.1458**	**0.1458**		**0.1371**	**0.1371**	**0.0000**	**302.1510**	**302.1510**	**0.0736**	**0.0000**	**303.6969**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1790	1.5923	2.6131	5.6200e-003	0.1514	0.0280	0.1794	0.0438	0.0257	0.0695	0.0000	476.6206	476.6206	3.4300e-003	0.0000	476.6928
Worker	0.0668	0.1034	1.0834	3.3800e-003	0.2649	1.9900e-003	0.2669	0.0708	1.8400e-003	0.0726	0.0000	218.0064	218.0064	0.0102	0.0000	218.2195
Total	**0.2458**	**1.6957**	**3.6965**	**9.0000e-003**	**0.4163**	**0.0300**	**0.4462**	**0.1146**	**0.0276**	**0.1421**	**0.0000**	**694.6270**	**694.6270**	**0.0136**	**0.0000**	**694.9122**

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3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2471	2.2629	2.1582	3.5000e-003		0.1246	0.1246		0.1172	0.1172	0.0000	301.0339	301.0339	0.0725	0.0000	302.5568
Total	**0.2471**	**2.2629**	**2.1582**	**3.5000e-003**		**0.1246**	**0.1246**		**0.1172**	**0.1172**	**0.0000**	**301.0339**	**301.0339**	**0.0725**	**0.0000**	**302.5568**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1718	1.3487	2.5326	5.6100e-003	0.1613	0.0250	0.1863	0.0461	0.0230	0.0692	0.0000	476.2221	476.2221	3.4900e-003	0.0000	476.2954
Worker	0.0629	0.0965	1.0205	3.3900e-003	0.2862	2.0100e-003	0.2882	0.0760	1.8600e-003	0.0779	0.0000	214.7709	214.7709	9.7500e-003	0.0000	214.9757
Total	**0.2348**	**1.4451**	**3.5531**	**9.0000e-003**	**0.4475**	**0.0270**	**0.4745**	**0.1222**	**0.0249**	**0.1470**	**0.0000**	**690.9930**	**690.9930**	**0.0132**	**0.0000**	**691.2711**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2471	2.2629	2.1582	3.5000e-003		0.1246	0.1246		0.1172	0.1172	0.0000	301.0335	301.0335	0.0725	0.0000	302.5565
Total	**0.2471**	**2.2629**	**2.1582**	**3.5000e-003**		**0.1246**	**0.1246**		**0.1172**	**0.1172**	**0.0000**	**301.0335**	**301.0335**	**0.0725**	**0.0000**	**302.5565**

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Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1718	1.3487	2.5326	5.6100e-003	0.1508	0.0250	0.1758	0.0436	0.0230	0.0666	0.0000	476.2221	476.2221	3.4900e-003	0.0000	476.2954
Worker	0.0629	0.0965	1.0205	3.3900e-003	0.2639	2.0100e-003	0.2659	0.0705	1.8600e-003	0.0724	0.0000	214.7709	214.7709	9.7500e-003	0.0000	214.9757
Total	**0.2348**	**1.4451**	**3.5531**	**9.0000e-003**	**0.4147**	**0.0270**	**0.4417**	**0.1141**	**0.0249**	**0.1390**	**0.0000**	**690.9930**	**690.9930**	**0.0132**	**0.0000**	**691.2711**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2209	2.0197	2.1226	3.4900e-003		0.1047	0.1047		0.0986	0.0986	0.0000	299.9946	299.9946	0.0718	0.0000	301.5017
Total	**0.2209**	**2.0197**	**2.1226**	**3.4900e-003**		**0.1047**	**0.1047**		**0.0986**	**0.0986**	**0.0000**	**299.9946**	**299.9946**	**0.0718**	**0.0000**	**301.5017**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1676	1.2194	2.4735	5.5800e-003	0.1607	0.0246	0.1853	0.0460	0.0227	0.0686	0.0000	473.8667	473.8667	3.5500e-003	0.0000	473.9413
Worker	0.0593	0.0903	0.9577	3.3800e-003	0.2851	2.0100e-003	0.2871	0.0757	1.8600e-003	0.0776	0.0000	210.5367	210.5367	9.3100e-003	0.0000	210.7321
Total	**0.2269**	**1.3096**	**3.4312**	**8.9600e-003**	**0.4458**	**0.0266**	**0.4724**	**0.1217**	**0.0245**	**0.1462**	**0.0000**	**684.4034**	**684.4034**	**0.0129**	**0.0000**	**684.6734**

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Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2209	2.0197	2.1226	3.4900e-003		0.1047	0.1047		0.0986	0.0986	0.0000	299.9943	299.9943	0.0718	0.0000	301.5013
Total	**0.2209**	**2.0197**	**2.1226**	**3.4900e-003**		**0.1047**	**0.1047**		**0.0986**	**0.0986**	**0.0000**	**299.9943**	**299.9943**	**0.0718**	**0.0000**	**301.5013**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1676	1.2194	2.4735	5.5800e-003	0.1502	0.0246	0.1749	0.0434	0.0227	0.0661	0.0000	473.8667	473.8667	3.5500e-003	0.0000	473.9413
Worker	0.0593	0.0903	0.9577	3.3800e-003	0.2628	2.0100e-003	0.2649	0.0703	1.8600e-003	0.0721	0.0000	210.5367	210.5367	9.3100e-003	0.0000	210.7321
Total	**0.2269**	**1.3096**	**3.4312**	**8.9600e-003**	**0.4131**	**0.0266**	**0.4397**	**0.1137**	**0.0245**	**0.1382**	**0.0000**	**684.4034**	**684.4034**	**0.0129**	**0.0000**	**684.6734**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2036	1.8606	2.1072	3.4900e-003		0.0906	0.0906		0.0852	0.0852	0.0000	300.0980	300.0980	0.0713	0.0000	301.5949
Total	**0.2036**	**1.8606**	**2.1072**	**3.4900e-003**		**0.0906**	**0.0906**		**0.0852**	**0.0852**	**0.0000**	**300.0980**	**300.0980**	**0.0713**	**0.0000**	**301.5949**

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Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1543	0.9700	2.3701	5.5500e-003	0.1607	0.0243	0.1850	0.0460	0.0224	0.0683	0.0000	471.4649	471.4649	3.2000e-003	0.0000	471.5321
Worker	0.0562	0.0851	0.9047	3.3800e-003	0.2851	2.0100e-003	0.2871	0.0757	1.8700e-003	0.0776	0.0000	207.4682	207.4682	8.9500e-003	0.0000	207.6561
Total	**0.2105**	**1.0551**	**3.2748**	**8.9300e-003**	**0.4457**	**0.0263**	**0.4721**	**0.1217**	**0.0242**	**0.1459**	**0.0000**	**678.9331**	**678.9331**	**0.0122**	**0.0000**	**679.1882**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2036	1.8606	2.1072	3.4900e-003		0.0906	0.0906		0.0852	0.0852	0.0000	300.0976	300.0976	0.0713	0.0000	301.5946
Total	**0.2036**	**1.8606**	**2.1072**	**3.4900e-003**		**0.0906**	**0.0906**		**0.0852**	**0.0852**	**0.0000**	**300.0976**	**300.0976**	**0.0713**	**0.0000**	**301.5946**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1543	0.9700	2.3701	5.5500e-003	0.1502	0.0243	0.1745	0.0434	0.0224	0.0658	0.0000	471.4649	471.4649	3.2000e-003	0.0000	471.5321
Worker	0.0562	0.0851	0.9047	3.3800e-003	0.2628	2.0100e-003	0.2649	0.0703	1.8700e-003	0.0721	0.0000	207.4682	207.4682	8.9500e-003	0.0000	207.6561
Total	**0.2105**	**1.0551**	**3.2748**	**8.9300e-003**	**0.4131**	**0.0263**	**0.4394**	**0.1137**	**0.0242**	**0.1379**	**0.0000**	**678.9331**	**678.9331**	**0.0122**	**0.0000**	**679.1882**

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3.5 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1920	1.7524	2.1135	3.5200e-003		0.0800	0.0800		0.0752	0.0752	0.0000	302.4646	302.4646	0.0714	0.0000	303.9643
Total	**0.1920**	**1.7524**	**2.1135**	**3.5200e-003**		**0.0800**	**0.0800**		**0.0752**	**0.0752**	**0.0000**	**302.4646**	**302.4646**	**0.0714**	**0.0000**	**303.9643**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1546	0.9789	2.3461	5.6400e-003	0.1619	0.0241	0.1860	0.0463	0.0222	0.0685	0.0000	479.3945	479.3945	3.3300e-003	0.0000	479.4645
Worker	0.0541	0.0817	0.8763	3.4400e-003	0.2873	2.0800e-003	0.2894	0.0763	1.9300e-003	0.0782	0.0000	208.7564	208.7564	8.9200e-003	0.0000	208.9436
Total	**0.2088**	**1.0606**	**3.2224**	**9.0800e-003**	**0.4492**	**0.0262**	**0.4753**	**0.1226**	**0.0241**	**0.1467**	**0.0000**	**688.1509**	**688.1509**	**0.0123**	**0.0000**	**688.4081**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1920	1.7524	2.1135	3.5200e-003		0.0800	0.0800		0.0752	0.0752	0.0000	302.4642	302.4642	0.0714	0.0000	303.9639
Total	**0.1920**	**1.7524**	**2.1135**	**3.5200e-003**		**0.0800**	**0.0800**		**0.0752**	**0.0752**	**0.0000**	**302.4642**	**302.4642**	**0.0714**	**0.0000**	**303.9639**

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Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1546	0.9789	2.3461	5.6400e-003	0.1514	0.0241	0.1755	0.0437	0.0222	0.0659	0.0000	479.3945	479.3945	3.3300e-003	0.0000	479.4645
Worker	0.0541	0.0817	0.8763	3.4400e-003	0.2649	2.0800e-003	0.2670	0.0708	1.9300e-003	0.0727	0.0000	208.7564	208.7564	8.9200e-003	0.0000	208.9436
Total	**0.2088**	**1.0606**	**3.2224**	**9.0800e-003**	**0.4162**	**0.0262**	**0.4424**	**0.1145**	**0.0241**	**0.1386**	**0.0000**	**688.1509**	**688.1509**	**0.0123**	**0.0000**	**688.4081**

3.5 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1777	1.6195	2.0948	3.5000e-003		0.0685	0.0685		0.0645	0.0645	0.0000	301.4019	301.4019	0.0707	0.0000	302.8874
Total	**0.1777**	**1.6195**	**2.0948**	**3.5000e-003**		**0.0685**	**0.0685**		**0.0645**	**0.0645**	**0.0000**	**301.4019**	**301.4019**	**0.0707**	**0.0000**	**302.8874**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1505	0.9685	2.2904	5.6200e-003	0.1613	0.0241	0.1854	0.0461	0.0222	0.0683	0.0000	477.4830	477.4830	3.3300e-003	0.0000	477.5530
Worker	0.0515	0.0775	0.8349	3.4300e-003	0.2862	2.0900e-003	0.2883	0.0760	1.9300e-003	0.0779	0.0000	205.5370	205.5370	8.6200e-003	0.0000	205.7180
Total	**0.2020**	**1.0460**	**3.1253**	**9.0500e-003**	**0.4474**	**0.0262**	**0.4736**	**0.1221**	**0.0241**	**0.1462**	**0.0000**	**683.0200**	**683.0200**	**0.0120**	**0.0000**	**683.2710**

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Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1777	1.6195	2.0948	3.5000e-003		0.0685	0.0685		0.0645	0.0645	0.0000	301.4015	301.4015	0.0707	0.0000	302.8871
Total	**0.1777**	**1.6195**	**2.0948**	**3.5000e-003**		**0.0685**	**0.0685**		**0.0645**	**0.0645**	**0.0000**	**301.4015**	**301.4015**	**0.0707**	**0.0000**	**302.8871**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1505	0.9685	2.2904	5.6200e-003	0.1508	0.0241	0.1749	0.0436	0.0222	0.0657	0.0000	477.4830	477.4830	3.3300e-003	0.0000	477.5530
Worker	0.0515	0.0775	0.8349	3.4300e-003	0.2639	2.0900e-003	0.2659	0.0705	1.9300e-003	0.0725	0.0000	205.5370	205.5370	8.6200e-003	0.0000	205.7180
Total	**0.2020**	**1.0460**	**3.1253**	**9.0500e-003**	**0.4146**	**0.0262**	**0.4408**	**0.1141**	**0.0241**	**0.1382**	**0.0000**	**683.0200**	**683.0200**	**0.0120**	**0.0000**	**683.2710**

3.5 Building Construction - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1777	1.6195	2.0948	3.5000e-003		0.0685	0.0685		0.0645	0.0645	0.0000	301.4019	301.4019	0.0707	0.0000	302.8874
Total	**0.1777**	**1.6195**	**2.0948**	**3.5000e-003**		**0.0685**	**0.0685**		**0.0645**	**0.0645**	**0.0000**	**301.4019**	**301.4019**	**0.0707**	**0.0000**	**302.8874**

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Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1456	0.9398	2.2502	5.6200e-003	0.1613	0.0231	0.1844	0.0461	0.0213	0.0674	0.0000	477.2473	477.2473	3.2300e-003	0.0000	477.3152
Worker	0.0494	0.0743	0.8027	3.4300e-003	0.2862	2.1000e-003	0.2883	0.0760	1.9500e-003	0.0780	0.0000	203.4598	203.4598	8.3900e-003	0.0000	203.6360
Total	**0.1950**	**1.0141**	**3.0529**	**9.0500e-003**	**0.4474**	**0.0252**	**0.4726**	**0.1221**	**0.0232**	**0.1453**	**0.0000**	**680.7071**	**680.7071**	**0.0116**	**0.0000**	**680.9512**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1777	1.6195	2.0948	3.5000e-003		0.0685	0.0685		0.0645	0.0645	0.0000	301.4015	301.4015	0.0707	0.0000	302.8871
Total	**0.1777**	**1.6195**	**2.0948**	**3.5000e-003**		**0.0685**	**0.0685**		**0.0645**	**0.0645**	**0.0000**	**301.4015**	**301.4015**	**0.0707**	**0.0000**	**302.8871**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1456	0.9398	2.2502	5.6200e-003	0.1508	0.0231	0.1739	0.0436	0.0213	0.0648	0.0000	477.2473	477.2473	3.2300e-003	0.0000	477.3152
Worker	0.0494	0.0743	0.8027	3.4300e-003	0.2639	2.1000e-003	0.2660	0.0705	1.9500e-003	0.0725	0.0000	203.4598	203.4598	8.3900e-003	0.0000	203.6360
Total	**0.1950**	**1.0141**	**3.0529**	**9.0500e-003**	**0.4146**	**0.0252**	**0.4398**	**0.1141**	**0.0232**	**0.1373**	**0.0000**	**680.7071**	**680.7071**	**0.0116**	**0.0000**	**680.9512**

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3.5 Building Construction - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1777	1.6195	2.0948	3.5000e-003		0.0685	0.0685		0.0645	0.0645	0.0000	301.4019	301.4019	0.0707	0.0000	302.8874
Total	**0.1777**	**1.6195**	**2.0948**	**3.5000e-003**		**0.0685**	**0.0685**		**0.0645**	**0.0645**	**0.0000**	**301.4019**	**301.4019**	**0.0707**	**0.0000**	**302.8874**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1436	0.9324	2.2260	5.6200e-003	0.1612	0.0231	0.1844	0.0461	0.0213	0.0674	0.0000	477.1353	477.1353	3.2400e-003	0.0000	477.2033
Worker	0.0474	0.0715	0.7746	3.4300e-003	0.2862	2.1100e-003	0.2883	0.0760	1.9600e-003	0.0780	0.0000	201.6695	201.6695	8.1900e-003	0.0000	201.8416
Total	**0.1911**	**1.0039**	**3.0007**	**9.0500e-003**	**0.4474**	**0.0253**	**0.4727**	**0.1221**	**0.0233**	**0.1454**	**0.0000**	**678.8048**	**678.8048**	**0.0114**	**0.0000**	**679.0449**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1777	1.6195	2.0948	3.5000e-003		0.0685	0.0685		0.0645	0.0645	0.0000	301.4015	301.4015	0.0707	0.0000	302.8871
Total	**0.1777**	**1.6195**	**2.0948**	**3.5000e-003**		**0.0685**	**0.0685**		**0.0645**	**0.0645**	**0.0000**	**301.4015**	**301.4015**	**0.0707**	**0.0000**	**302.8871**

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Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1436	0.9324	2.2260	5.6200e-003	0.1508	0.0231	0.1739	0.0436	0.0213	0.0648	0.0000	477.1353	477.1353	3.2400e-003	0.0000	477.2033
Worker	0.0474	0.0715	0.7746	3.4300e-003	0.2639	2.1100e-003	0.2660	0.0705	1.9600e-003	0.0725	0.0000	201.6695	201.6695	8.1900e-003	0.0000	201.8416
Total	**0.1911**	**1.0039**	**3.0007**	**9.0500e-003**	**0.4146**	**0.0253**	**0.4399**	**0.1141**	**0.0233**	**0.1373**	**0.0000**	**678.8048**	**678.8048**	**0.0114**	**0.0000**	**679.0449**

3.5 Building Construction - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1770	1.6133	2.0867	3.4900e-003		0.0683	0.0683		0.0642	0.0642	0.0000	300.2471	300.2471	0.0705	0.0000	301.7269
Total	**0.1770**	**1.6133**	**2.0867**	**3.4900e-003**		**0.0683**	**0.0683**		**0.0642**	**0.0642**	**0.0000**	**300.2471**	**300.2471**	**0.0705**	**0.0000**	**301.7269**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1413	0.9203	2.2018	5.5900e-003	0.1606	0.0229	0.1835	0.0459	0.0211	0.0670	0.0000	475.1773	475.1773	3.2100e-003	0.0000	475.2447
Worker	0.0455	0.0687	0.7473	3.4200e-003	0.2851	2.1200e-003	0.2872	0.0757	1.9600e-003	0.0777	0.0000	199.3747	199.3747	7.9900e-003	0.0000	199.5424
Total	**0.1868**	**0.9890**	**2.9491**	**9.0100e-003**	**0.4457**	**0.0250**	**0.4707**	**0.1217**	**0.0230**	**0.1447**	**0.0000**	**674.5520**	**674.5520**	**0.0112**	**0.0000**	**674.7871**

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Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1770	1.6133	2.0867	3.4900e-003		0.0683	0.0683		0.0642	0.0642	0.0000	300.2467	300.2467	0.0705	0.0000	301.7266
Total	**0.1770**	**1.6133**	**2.0867**	**3.4900e-003**		**0.0683**	**0.0683**		**0.0642**	**0.0642**	**0.0000**	**300.2467**	**300.2467**	**0.0705**	**0.0000**	**301.7266**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1413	0.9203	2.2018	5.5900e-003	0.1502	0.0229	0.1731	0.0434	0.0211	0.0644	0.0000	475.1773	475.1773	3.2100e-003	0.0000	475.2447
Worker	0.0455	0.0687	0.7473	3.4200e-003	0.2628	2.1200e-003	0.2650	0.0703	1.9600e-003	0.0722	0.0000	199.3747	199.3747	7.9900e-003	0.0000	199.5424
Total	**0.1868**	**0.9890**	**2.9491**	**9.0100e-003**	**0.4130**	**0.0250**	**0.4380**	**0.1136**	**0.0230**	**0.1367**	**0.0000**	**674.5520**	**674.5520**	**0.0112**	**0.0000**	**674.7871**

3.5 Building Construction - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1777	1.6195	2.0948	3.5000e-003		0.0685	0.0685		0.0645	0.0645	0.0000	301.4019	301.4019	0.0707	0.0000	302.8874
Total	**0.1777**	**1.6195**	**2.0948**	**3.5000e-003**		**0.0685**	**0.0685**		**0.0645**	**0.0645**	**0.0000**	**301.4019**	**301.4019**	**0.0707**	**0.0000**	**302.8874**

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Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1399	0.9194	2.1853	5.6100e-003	0.1612	0.0230	0.1842	0.0461	0.0212	0.0673	0.0000	476.8820	476.8820	3.2200e-003	0.0000	476.9497
Worker	0.0439	0.0665	0.7266	3.4300e-003	0.2862	2.1300e-003	0.2883	0.0760	1.9800e-003	0.0780	0.0000	198.8347	198.8347	7.8500e-003	0.0000	198.9995
Total	**0.1838**	**0.9858**	**2.9120**	**9.0400e-003**	**0.4474**	**0.0251**	**0.4725**	**0.1221**	**0.0232**	**0.1453**	**0.0000**	**675.7168**	**675.7168**	**0.0111**	**0.0000**	**675.9493**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1777	1.6195	2.0948	3.5000e-003		0.0685	0.0685		0.0645	0.0645	0.0000	301.4015	301.4015	0.0707	0.0000	302.8871
Total	**0.1777**	**1.6195**	**2.0948**	**3.5000e-003**		**0.0685**	**0.0685**		**0.0645**	**0.0645**	**0.0000**	**301.4015**	**301.4015**	**0.0707**	**0.0000**	**302.8871**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1399	0.9194	2.1853	5.6100e-003	0.1507	0.0230	0.1737	0.0435	0.0212	0.0647	0.0000	476.8820	476.8820	3.2200e-003	0.0000	476.9497
Worker	0.0439	0.0665	0.7266	3.4300e-003	0.2639	2.1300e-003	0.2660	0.0705	1.9800e-003	0.0725	0.0000	198.8347	198.8347	7.8500e-003	0.0000	198.9995
Total	**0.1838**	**0.9858**	**2.9120**	**9.0400e-003**	**0.4146**	**0.0251**	**0.4397**	**0.1141**	**0.0232**	**0.1372**	**0.0000**	**675.7168**	**675.7168**	**0.0111**	**0.0000**	**675.9493**

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3.5 Building Construction - 2030

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1702	1.0333	2.1051	4.0200e-003		0.0193	0.0193		0.0193	0.0193	0.0000	341.5281	341.5281	0.0137	0.0000	341.8160
Total	**0.1702**	**1.0333**	**2.1051**	**4.0200e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**341.5281**	**341.5281**	**0.0137**	**0.0000**	**341.8160**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1385	0.9156	2.1736	5.6100e-003	0.1612	0.0230	0.1842	0.0461	0.0212	0.0673	0.0000	476.7673	476.7673	3.2300e-003	0.0000	476.8351
Worker	0.0423	0.0642	0.7060	3.4300e-003	0.2862	2.1400e-003	0.2883	0.0760	1.9800e-003	0.0780	0.0000	197.7276	197.7276	7.6900e-003	0.0000	197.8891
Total	**0.1808**	**0.9799**	**2.8795**	**9.0400e-003**	**0.4474**	**0.0252**	**0.4725**	**0.1221**	**0.0232**	**0.1453**	**0.0000**	**674.4949**	**674.4949**	**0.0109**	**0.0000**	**674.7242**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1702	1.0333	2.1051	4.0200e-003		0.0193	0.0193		0.0193	0.0193	0.0000	341.5277	341.5277	0.0137	0.0000	341.8156
Total	**0.1702**	**1.0333**	**2.1051**	**4.0200e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**341.5277**	**341.5277**	**0.0137**	**0.0000**	**341.8156**

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Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1385	0.9156	2.1736	5.6100e-003	0.1507	0.0230	0.1737	0.0435	0.0212	0.0647	0.0000	476.7673	476.7673	3.2300e-003	0.0000	476.8351
Worker	0.0423	0.0642	0.7060	3.4300e-003	0.2639	2.1400e-003	0.2660	0.0705	1.9800e-003	0.0725	0.0000	197.7276	197.7276	7.6900e-003	0.0000	197.8891
Total	**0.1808**	**0.9799**	**2.8795**	**9.0400e-003**	**0.4146**	**0.0252**	**0.4397**	**0.1141**	**0.0232**	**0.1372**	**0.0000**	**674.4949**	**674.4949**	**0.0109**	**0.0000**	**674.7242**

3.5 Building Construction - 2031

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1702	1.0333	2.1051	4.0200e-003		0.0193	0.0193		0.0193	0.0193	0.0000	341.5281	341.5281	0.0137	0.0000	341.8160
Total	**0.1702**	**1.0333**	**2.1051**	**4.0200e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**341.5281**	**341.5281**	**0.0137**	**0.0000**	**341.8160**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1386	0.9162	2.1664	5.6300e-003	0.1612	0.0227	0.1840	0.0461	0.0209	0.0670	0.0000	478.7047	478.7047	3.2800e-003	0.0000	478.7736
Worker	0.0408	0.0622	0.6919	3.4500e-003	0.2862	2.1600e-003	0.2883	0.0760	2.0100e-003	0.0780	0.0000	197.7477	197.7477	7.6300e-003	0.0000	197.9080
Total	**0.1795**	**0.9784**	**2.8584**	**9.0800e-003**	**0.4474**	**0.0249**	**0.4723**	**0.1221**	**0.0229**	**0.1451**	**0.0000**	**676.4524**	**676.4524**	**0.0109**	**0.0000**	**676.6815**

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Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1702	1.0333	2.1051	4.0200e-003		0.0193	0.0193		0.0193	0.0193	0.0000	341.5277	341.5277	0.0137	0.0000	341.8156
Total	**0.1702**	**1.0333**	**2.1051**	**4.0200e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**341.5277**	**341.5277**	**0.0137**	**0.0000**	**341.8156**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1386	0.9162	2.1664	5.6300e-003	0.1508	0.0227	0.1735	0.0435	0.0209	0.0645	0.0000	478.7047	478.7047	3.2800e-003	0.0000	478.7736
Worker	0.0408	0.0622	0.6919	3.4500e-003	0.2639	2.1600e-003	0.2660	0.0705	2.0100e-003	0.0725	0.0000	197.7477	197.7477	7.6300e-003	0.0000	197.9080
Total	**0.1795**	**0.9784**	**2.8584**	**9.0800e-003**	**0.4146**	**0.0249**	**0.4395**	**0.1141**	**0.0229**	**0.1370**	**0.0000**	**676.4524**	**676.4524**	**0.0109**	**0.0000**	**676.6815**

3.5 Building Construction - 2032

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1708	1.0372	2.1132	4.0400e-003		0.0193	0.0193		0.0193	0.0193	0.0000	342.8367	342.8367	0.0138	0.0000	343.1257
Total	**0.1708**	**1.0372**	**2.1132**	**4.0400e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**342.8367**	**342.8367**	**0.0138**	**0.0000**	**343.1257**

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Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1384	0.9176	2.1715	5.6600e-003	0.1619	0.0229	0.1848	0.0463	0.0211	0.0674	0.0000	480.6068	480.6068	3.3000e-003	0.0000	480.6760
Worker	0.0396	0.0605	0.6779	3.4600e-003	0.2873	2.1700e-003	0.2894	0.0763	2.0100e-003	0.0783	0.0000	197.7179	197.7179	7.5300e-003	0.0000	197.8761
Total	**0.1779**	**0.9781**	**2.8493**	**9.1200e-003**	**0.4492**	**0.0250**	**0.4742**	**0.1226**	**0.0231**	**0.1457**	**0.0000**	**678.3247**	**678.3247**	**0.0108**	**0.0000**	**678.5521**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1708	1.0372	2.1132	4.0400e-003		0.0193	0.0193		0.0193	0.0193	0.0000	342.8363	342.8363	0.0138	0.0000	343.1252
Total	**0.1708**	**1.0372**	**2.1132**	**4.0400e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**342.8363**	**342.8363**	**0.0138**	**0.0000**	**343.1252**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1384	0.9176	2.1715	5.6600e-003	0.1514	0.0229	0.1742	0.0437	0.0211	0.0648	0.0000	480.6068	480.6068	3.3000e-003	0.0000	480.6760
Worker	0.0396	0.0605	0.6779	3.4600e-003	0.2649	2.1700e-003	0.2670	0.0708	2.0100e-003	0.0728	0.0000	197.7179	197.7179	7.5300e-003	0.0000	197.8761
Total	**0.1779**	**0.9781**	**2.8493**	**9.1200e-003**	**0.4162**	**0.0250**	**0.4413**	**0.1145**	**0.0231**	**0.1376**	**0.0000**	**678.3247**	**678.3247**	**0.0108**	**0.0000**	**678.5521**

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3.5 Building Construction - 2033

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1695	1.0293	2.0971	4.0100e-003		0.0192	0.0192		0.0192	0.0192	0.0000	340.2196	340.2196	0.0137	0.0000	340.5064
Total	**0.1695**	**1.0293**	**2.0971**	**4.0100e-003**		**0.0192**	**0.0192**		**0.0192**	**0.0192**	**0.0000**	**340.2196**	**340.2196**	**0.0137**	**0.0000**	**340.5064**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1368	0.9083	2.1538	5.6100e-003	0.1607	0.0227	0.1834	0.0460	0.0209	0.0669	0.0000	476.9897	476.9897	3.2700e-003	0.0000	477.0585
Worker	0.0380	0.0584	0.6586	3.4300e-003	0.2851	2.1500e-003	0.2872	0.0757	2.0000e-003	0.0777	0.0000	195.5563	195.5563	7.3600e-003	0.0000	195.7109
Total	**0.1748**	**0.9668**	**2.8124**	**9.0400e-003**	**0.4458**	**0.0249**	**0.4706**	**0.1217**	**0.0229**	**0.1446**	**0.0000**	**672.5460**	**672.5460**	**0.0106**	**0.0000**	**672.7693**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1695	1.0293	2.0971	4.0100e-003		0.0192	0.0192		0.0192	0.0192	0.0000	340.2192	340.2192	0.0137	0.0000	340.5060
Total	**0.1695**	**1.0293**	**2.0971**	**4.0100e-003**		**0.0192**	**0.0192**		**0.0192**	**0.0192**	**0.0000**	**340.2192**	**340.2192**	**0.0137**	**0.0000**	**340.5060**

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Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1368	0.9083	2.1538	5.6100e-003	0.1502	0.0227	0.1730	0.0434	0.0209	0.0643	0.0000	476.9897	476.9897	3.2700e-003	0.0000	477.0585
Worker	0.0380	0.0584	0.6586	3.4300e-003	0.2628	2.1500e-003	0.2650	0.0703	2.0000e-003	0.0723	0.0000	195.5563	195.5563	7.3600e-003	0.0000	195.7109
Total	**0.1748**	**0.9668**	**2.8124**	**9.0400e-003**	**0.4131**	**0.0249**	**0.4380**	**0.1137**	**0.0229**	**0.1366**	**0.0000**	**672.5460**	**672.5460**	**0.0106**	**0.0000**	**672.7693**

3.5 Building Construction - 2034

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1695	1.0293	2.0971	4.0100e-003		0.0192	0.0192		0.0192	0.0192	0.0000	340.2196	340.2196	0.0137	0.0000	340.5064
Total	**0.1695**	**1.0293**	**2.0971**	**4.0100e-003**		**0.0192**	**0.0192**		**0.0192**	**0.0192**	**0.0000**	**340.2196**	**340.2196**	**0.0137**	**0.0000**	**340.5064**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1364	0.9066	2.1512	5.6100e-003	0.1607	0.0228	0.1835	0.0460	0.0210	0.0669	0.0000	477.0275	477.0275	3.2800e-003	0.0000	477.0963
Worker	0.0367	0.0571	0.6453	3.4300e-003	0.2851	2.1500e-003	0.2872	0.0757	1.9900e-003	0.0777	0.0000	195.0045	195.0045	7.2500e-003	0.0000	195.1569
Total	**0.1731**	**0.9637**	**2.7965**	**9.0400e-003**	**0.4458**	**0.0249**	**0.4707**	**0.1217**	**0.0229**	**0.1446**	**0.0000**	**672.0320**	**672.0320**	**0.0105**	**0.0000**	**672.2532**

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Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1695	1.0293	2.0971	4.0100e-003		0.0192	0.0192		0.0192	0.0192	0.0000	340.2192	340.2192	0.0137	0.0000	340.5060
Total	**0.1695**	**1.0293**	**2.0971**	**4.0100e-003**		**0.0192**	**0.0192**		**0.0192**	**0.0192**	**0.0000**	**340.2192**	**340.2192**	**0.0137**	**0.0000**	**340.5060**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1364	0.9066	2.1512	5.6100e-003	0.1503	0.0228	0.1730	0.0434	0.0210	0.0644	0.0000	477.0275	477.0275	3.2800e-003	0.0000	477.0963
Worker	0.0367	0.0571	0.6453	3.4300e-003	0.2628	2.1500e-003	0.2650	0.0703	1.9900e-003	0.0723	0.0000	195.0045	195.0045	7.2500e-003	0.0000	195.1569
Total	**0.1731**	**0.9637**	**2.7965**	**9.0400e-003**	**0.4131**	**0.0249**	**0.4380**	**0.1137**	**0.0229**	**0.1366**	**0.0000**	**672.0320**	**672.0320**	**0.0105**	**0.0000**	**672.2532**

3.5 Building Construction - 2035

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1546	0.9118	2.0518	3.9300e-003		0.0115	0.0115		0.0115	0.0115	0.0000	333.6769	333.6769	0.0124	0.0000	333.9381
Total	**0.1546**	**0.9118**	**2.0518**	**3.9300e-003**		**0.0115**	**0.0115**		**0.0115**	**0.0115**	**0.0000**	**333.6769**	**333.6769**	**0.0124**	**0.0000**	**333.9381**

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Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1334	0.8879	2.1085	5.5100e-003	0.1576	0.0224	0.1800	0.0451	0.0206	0.0657	0.0000	467.8927	467.8927	3.2200e-003	0.0000	467.9603
Worker	0.0349	0.0551	0.6222	3.3700e-003	0.2796	2.1000e-003	0.2817	0.0743	1.9500e-003	0.0762	0.0000	190.8101	190.8101	7.0300e-003	0.0000	190.9577
Total	**0.1683**	**0.9429**	**2.7308**	**8.8800e-003**	**0.4372**	**0.0245**	**0.4617**	**0.1194**	**0.0225**	**0.1419**	**0.0000**	**658.7028**	**658.7028**	**0.0103**	**0.0000**	**658.9180**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1546	0.9118	2.0518	3.9300e-003		0.0115	0.0115		0.0115	0.0115	0.0000	333.6765	333.6765	0.0124	0.0000	333.9377
Total	**0.1546**	**0.9118**	**2.0518**	**3.9300e-003**		**0.0115**	**0.0115**		**0.0115**	**0.0115**	**0.0000**	**333.6765**	**333.6765**	**0.0124**	**0.0000**	**333.9377**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1334	0.8879	2.1085	5.5100e-003	0.1474	0.0224	0.1698	0.0426	0.0206	0.0632	0.0000	467.8927	467.8927	3.2200e-003	0.0000	467.9603
Worker	0.0349	0.0551	0.6222	3.3700e-003	0.2578	2.1000e-003	0.2599	0.0689	1.9500e-003	0.0709	0.0000	190.8101	190.8101	7.0300e-003	0.0000	190.9577
Total	**0.1683**	**0.9429**	**2.7308**	**8.8800e-003**	**0.4052**	**0.0245**	**0.4296**	**0.1115**	**0.0225**	**0.1340**	**0.0000**	**658.7028**	**658.7028**	**0.0103**	**0.0000**	**658.9180**

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3.6 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2480	2.6385	1.9145	2.9000e-003		0.1480	0.1480		0.1362	0.1362	0.0000	269.0144	269.0144	0.0824	0.0000	270.7454
Paving	0.0220					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.2699**	**2.6385**	**1.9145**	**2.9000e-003**		**0.1480**	**0.1480**		**0.1362**	**0.1362**	**0.0000**	**269.0144**	**269.0144**	**0.0824**	**0.0000**	**270.7454**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0177	0.0271	0.2846	6.8000e-004	0.0570	4.2000e-004	0.0574	0.0151	3.8000e-004	0.0155	0.0000	48.9509	48.9509	2.5100e-003	0.0000	49.0036
Total	**0.0177**	**0.0271**	**0.2846**	**6.8000e-004**	**0.0570**	**4.2000e-004**	**0.0574**	**0.0151**	**3.8000e-004**	**0.0155**	**0.0000**	**48.9509**	**48.9509**	**2.5100e-003**	**0.0000**	**49.0036**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2480	2.6385	1.9145	2.9000e-003		0.1480	0.1480		0.1362	0.1362	0.0000	269.0141	269.0141	0.0824	0.0000	270.7450
Paving	0.0220					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.2699**	**2.6385**	**1.9145**	**2.9000e-003**		**0.1480**	**0.1480**		**0.1362**	**0.1362**	**0.0000**	**269.0141**	**269.0141**	**0.0824**	**0.0000**	**270.7450**

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Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0177	0.0271	0.2846	6.8000e-004	0.0526	4.2000e-004	0.0530	0.0141	3.8000e-004	0.0144	0.0000	48.9509	48.9509	2.5100e-003	0.0000	49.0036
Total	**0.0177**	**0.0271**	**0.2846**	**6.8000e-004**	**0.0526**	**4.2000e-004**	**0.0530**	**0.0141**	**3.8000e-004**	**0.0144**	**0.0000**	**48.9509**	**48.9509**	**2.5100e-003**	**0.0000**	**49.0036**

3.6 Paving - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2103	2.2397	1.8915	2.9100e-003		0.1225	0.1225		0.1127	0.1127	0.0000	265.8121	265.8121	0.0828	0.0000	267.5499
Paving	0.0221					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.2324**	**2.2397**	**1.8915**	**2.9100e-003**		**0.1225**	**0.1225**		**0.1127**	**0.1127**	**0.0000**	**265.8121**	**265.8121**	**0.0828**	**0.0000**	**267.5499**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0158	0.0245	0.2573	6.8000e-004	0.0572	4.1000e-004	0.0576	0.0152	3.8000e-004	0.0156	0.0000	47.2784	47.2784	2.3300e-003	0.0000	47.3272
Total	**0.0158**	**0.0245**	**0.2573**	**6.8000e-004**	**0.0572**	**4.1000e-004**	**0.0576**	**0.0152**	**3.8000e-004**	**0.0156**	**0.0000**	**47.2784**	**47.2784**	**2.3300e-003**	**0.0000**	**47.3272**

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Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2103	2.2397	1.8915	2.9100e-003		0.1225	0.1225		0.1127	0.1127	0.0000	265.8118	265.8118	0.0828	0.0000	267.5495
Paving	0.0221					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.2324**	**2.2397**	**1.8915**	**2.9100e-003**		**0.1225**	**0.1225**		**0.1127**	**0.1127**	**0.0000**	**265.8118**	**265.8118**	**0.0828**	**0.0000**	**267.5495**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0158	0.0245	0.2573	6.8000e-004	0.0528	4.1000e-004	0.0532	0.0141	3.8000e-004	0.0145	0.0000	47.2784	47.2784	2.3300e-003	0.0000	47.3272
Total	**0.0158**	**0.0245**	**0.2573**	**6.8000e-004**	**0.0528**	**4.1000e-004**	**0.0532**	**0.0141**	**3.8000e-004**	**0.0145**	**0.0000**	**47.2784**	**47.2784**	**2.3300e-003**	**0.0000**	**47.3272**

3.6 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0207	0.2166	0.2083	3.2000e-004		0.0117	0.0117		0.0108	0.0108	0.0000	29.0572	29.0572	9.1900e-003	0.0000	29.2503
Paving	2.4500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0231**	**0.2166**	**0.2083**	**3.2000e-004**		**0.0117**	**0.0117**		**0.0108**	**0.0108**	**0.0000**	**29.0572**	**29.0572**	**9.1900e-003**	**0.0000**	**29.2503**

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Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5900e-003	2.4800e-003	0.0259	7.0000e-005	6.3600e-003	4.0000e-005	6.4000e-003	1.6900e-003	4.0000e-005	1.7300e-003	0.0000	5.0320	5.0320	2.4000e-004	0.0000	5.0370
Total	**1.5900e-003**	**2.4800e-003**	**0.0259**	**7.0000e-005**	**6.3600e-003**	**4.0000e-005**	**6.4000e-003**	**1.6900e-003**	**4.0000e-005**	**1.7300e-003**	**0.0000**	**5.0320**	**5.0320**	**2.4000e-004**	**0.0000**	**5.0370**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0207	0.2166	0.2083	3.2000e-004		0.0117	0.0117		0.0108	0.0108	0.0000	29.0572	29.0572	9.1900e-003	0.0000	29.2503
Paving	2.4500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0231**	**0.2166**	**0.2083**	**3.2000e-004**		**0.0117**	**0.0117**		**0.0108**	**0.0108**	**0.0000**	**29.0572**	**29.0572**	**9.1900e-003**	**0.0000**	**29.2503**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5900e-003	2.4800e-003	0.0259	7.0000e-005	5.8600e-003	4.0000e-005	5.9100e-003	1.5700e-003	4.0000e-005	1.6100e-003	0.0000	5.0320	5.0320	2.4000e-004	0.0000	5.0370
Total	**1.5900e-003**	**2.4800e-003**	**0.0259**	**7.0000e-005**	**5.8600e-003**	**4.0000e-005**	**5.9100e-003**	**1.5700e-003**	**4.0000e-005**	**1.6100e-003**	**0.0000**	**5.0320**	**5.0320**	**2.4000e-004**	**0.0000**	**5.0370**

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3.7 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	15.7978					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0432	0.2841	0.2429	3.9000e-004		0.0225	0.0225		0.0225	0.0225	0.0000	33.1923	33.1923	3.5000e-003	0.0000	33.2659
Total	**15.8410**	**0.2841**	**0.2429**	**3.9000e-004**		**0.0225**	**0.0225**		**0.0225**	**0.0225**	**0.0000**	**33.1923**	**33.1923**	**3.5000e-003**	**0.0000**	**33.2659**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.3803	0.5817	6.1182	0.0145	1.2259	8.9300e-003	1.2348	0.3256	8.2400e-003	0.3338	0.0000	1,052.4444	1,052.4444	0.0539	0.0000	1,053.5772
Total	**0.3803**	**0.5817**	**6.1182**	**0.0145**	**1.2259**	**8.9300e-003**	**1.2348**	**0.3256**	**8.2400e-003**	**0.3338**	**0.0000**	**1,052.4444**	**1,052.4444**	**0.0539**	**0.0000**	**1,053.5772**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	15.7978					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0432	0.2841	0.2429	3.9000e-004		0.0225	0.0225		0.0225	0.0225	0.0000	33.1923	33.1923	3.5000e-003	0.0000	33.2659
Total	**15.8410**	**0.2841**	**0.2429**	**3.9000e-004**		**0.0225**	**0.0225**		**0.0225**	**0.0225**	**0.0000**	**33.1923**	**33.1923**	**3.5000e-003**	**0.0000**	**33.2659**

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Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.3803	0.5817	6.1182	0.0145	1.1302	8.9300e-003	1.1391	0.3021	8.2400e-003	0.3103	0.0000	1,052.4444	1,052.4444	0.0539	0.0000	1,053.5772
Total	**0.3803**	**0.5817**	**6.1182**	**0.0145**	**1.1302**	**8.9300e-003**	**1.1391**	**0.3021**	**8.2400e-003**	**0.3103**	**0.0000**	**1,052.4444**	**1,052.4444**	**0.0539**	**0.0000**	**1,053.5772**

3.7 Architectural Coating - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	15.8586					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0390	0.2618	0.2420	3.9000e-004		0.0197	0.0197		0.0197	0.0197	0.0000	33.3200	33.3200	3.1700e-003	0.0000	33.3865
Total	**15.8976**	**0.2618**	**0.2420**	**3.9000e-004**		**0.0197**	**0.0197**		**0.0197**	**0.0197**	**0.0000**	**33.3200**	**33.3200**	**3.1700e-003**	**0.0000**	**33.3865**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.3392	0.5267	5.5328	0.0146	1.2306	8.7500e-003	1.2393	0.3268	8.1000e-003	0.3349	0.0000	1,016.4849	1,016.4849	0.0500	0.0000	1,017.5350
Total	**0.3392**	**0.5267**	**5.5328**	**0.0146**	**1.2306**	**8.7500e-003**	**1.2393**	**0.3268**	**8.1000e-003**	**0.3349**	**0.0000**	**1,016.4849**	**1,016.4849**	**0.0500**	**0.0000**	**1,017.5350**

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Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	15.8586					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0390	0.2618	0.2420	3.9000e-004		0.0197	0.0197		0.0197	0.0197	0.0000	33.3200	33.3200	3.1700e-003	0.0000	33.3865
Total	**15.8976**	**0.2618**	**0.2420**	**3.9000e-004**		**0.0197**	**0.0197**		**0.0197**	**0.0197**	**0.0000**	**33.3200**	**33.3200**	**3.1700e-003**	**0.0000**	**33.3865**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.3392	0.5267	5.5328	0.0146	1.1346	8.7500e-003	1.1433	0.3033	8.1000e-003	0.3114	0.0000	1,016.4849	1,016.4849	0.0500	0.0000	1,017.5350
Total	**0.3392**	**0.5267**	**5.5328**	**0.0146**	**1.1346**	**8.7500e-003**	**1.1433**	**0.3033**	**8.1000e-003**	**0.3114**	**0.0000**	**1,016.4849**	**1,016.4849**	**0.0500**	**0.0000**	**1,017.5350**

3.7 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.7621					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.8600e-003	0.0266	0.0267	4.0000e-005		1.8700e-003	1.8700e-003		1.8700e-003	1.8700e-003	0.0000	3.7022	3.7022	3.1000e-004	0.0000	3.7088
Total	**1.7659**	**0.0266**	**0.0267**	**4.0000e-005**		**1.8700e-003**	**1.8700e-003**		**1.8700e-003**	**1.8700e-003**	**0.0000**	**3.7022**	**3.7022**	**3.1000e-004**	**0.0000**	**3.7088**

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Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0342	0.0533	0.5566	1.6100e-003	0.1367	9.5000e-004	0.1377	0.0363	8.8000e-004	0.0372	0.0000	108.1889	108.1889	5.1200e-003	0.0000	108.2965
Total	**0.0342**	**0.0533**	**0.5566**	**1.6100e-003**	**0.1367**	**9.5000e-004**	**0.1377**	**0.0363**	**8.8000e-004**	**0.0372**	**0.0000**	**108.1889**	**108.1889**	**5.1200e-003**	**0.0000**	**108.2965**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.7621					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.8600e-003	0.0266	0.0267	4.0000e-005		1.8700e-003	1.8700e-003		1.8700e-003	1.8700e-003	0.0000	3.7022	3.7022	3.1000e-004	0.0000	3.7088
Total	**1.7659**	**0.0266**	**0.0267**	**4.0000e-005**		**1.8700e-003**	**1.8700e-003**		**1.8700e-003**	**1.8700e-003**	**0.0000**	**3.7022**	**3.7022**	**3.1000e-004**	**0.0000**	**3.7088**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0342	0.0533	0.5566	1.6100e-003	0.1261	9.5000e-004	0.1270	0.0337	8.8000e-004	0.0346	0.0000	108.1889	108.1889	5.1200e-003	0.0000	108.2965
Total	**0.0342**	**0.0533**	**0.5566**	**1.6100e-003**	**0.1261**	**9.5000e-004**	**0.1270**	**0.0337**	**8.8000e-004**	**0.0346**	**0.0000**	**108.1889**	**108.1889**	**5.1200e-003**	**0.0000**	**108.2965**

CalEEMod Version: CalEEMod.2013.2.2

Date: 5/11/2016 5:21 PM

WatermanConstructionEstimate

San Bernardino-South Coast County, Mitigation Report

Construction Mitigation Summary

Phase	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demolition	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Site Preparation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

OFFROAD Equipment Mitigation

Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPF	Oxidation Catalyst
Air Compressors	Diesel	No Change	0	1	No Change	0.00
Excavators	Diesel	No Change	0	5	No Change	0.00
Concrete/Industrial Saws	Diesel	No Change	0	1	No Change	0.00
Cranes	Diesel	No Change	0	1	No Change	0.00
Forklifts	Diesel	No Change	0	3	No Change	0.00
Graders	Diesel	No Change	0	1	No Change	0.00
Pavers	Diesel	No Change	0	2	No Change	0.00
Rollers	Diesel	No Change	0	2	No Change	0.00
Rubber Tired Dozers	Diesel	No Change	0	6	No Change	0.00
Tractors/Loaders/Backhoes	Diesel	No Change	0	9	No Change	0.00
Generator Sets	Diesel	No Change	0	1	No Change	0.00
Paving Equipment	Diesel	No Change	0	2	No Change	0.00
Scrapers	Diesel	No Change	0	2	No Change	0.00
Welders	Diesel	No Change	0	1	No Change	0.00

WatermanConstructionEstimate

San Bernardino-South Coast County, Mitigation Report

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Unmitigated tons/yr						Unmitigated mt/yr					
Air Compressors	8.60400E-002	5.72420E-001	5.11520E-001	8.20000E-004	4.40500E-002	4.40500E-002	0.00000E+000	7.02145E+001	7.02145E+001	6.98000E-003	0.00000E+000	7.03612E+001
Concrete/Industrial Saws	1.37840E-001	1.02375E+000	9.34280E-001	1.56000E-003	7.19000E-002	7.19000E-002	0.00000E+000	1.34414E+002	1.34414E+002	1.11400E-002	0.00000E+000	1.34648E+002
Cranes	7.57060E-001	7.05896E+000	3.79694E+000	1.31000E-002	2.93830E-001	2.71750E-001	0.00000E+000	1.14889E+003	1.14889E+003	2.52050E-001	0.00000E+000	1.15418E+003
Excavators	4.87450E-001	5.28061E+000	5.15920E+000	8.07000E-003	2.57740E-001	2.37130E-001	0.00000E+000	7.40048E+002	7.40048E+002	2.29430E-001	0.00000E+000	7.44866E+002
Forklifts	8.19930E-001	6.72780E+000	8.69930E+000	1.21800E-002	3.92990E-001	3.62740E-001	0.00000E+000	1.06769E+003	1.06769E+003	2.37460E-001	0.00000E+000	1.07267E+003
Generator Sets	7.39660E-001	6.48754E+000	9.08550E+000	1.62800E-002	2.89320E-001	2.89320E-001	0.00000E+000	1.39889E+003	1.39889E+003	5.93600E-002	0.00000E+000	1.40014E+003
Graders	3.29720E-001	3.29877E+000	1.82224E+000	2.41000E-003	1.85140E-001	1.70330E-001	0.00000E+000	2.20176E+002	2.20176E+002	6.85300E-002	0.00000E+000	2.21615E+002
Pavers	1.83510E-001	2.04071E+000	1.55274E+000	2.49000E-003	1.00090E-001	9.20800E-002	0.00000E+000	2.28467E+002	2.28467E+002	7.06500E-002	0.00000E+000	2.29951E+002
Paving Equipment	1.40690E-001	1.58399E+000	1.38351E+000	2.21000E-003	7.84200E-002	7.21500E-002	0.00000E+000	2.02847E+002	2.02847E+002	6.27300E-002	0.00000E+000	2.04164E+002
Rollers	1.54720E-001	1.47013E+000	1.07809E+000	1.44000E-003	1.03710E-001	9.54100E-002	0.00000E+000	1.32570E+002	1.32570E+002	4.09900E-002	0.00000E+000	1.33431E+002
Rubber Tired Dozers	1.52235E+000	1.67292E+001	1.26957E+001	1.18900E-002	7.75140E-001	7.13130E-001	0.00000E+000	1.09558E+003	1.09558E+003	3.38420E-001	0.00000E+000	1.10269E+003
Scrapers	8.98370E-001	1.11127E+001	6.92153E+000	1.15500E-002	4.40270E-001	4.05050E-001	0.00000E+000	1.05439E+003	1.05439E+003	3.28200E-001	0.00000E+000	1.06128E+003
Tractors/Loaders/Backhoes	1.54500E+000	1.39388E+001	1.81216E+001	2.59000E-002	7.69980E-001	7.11320E-001	0.00000E+000	2.28896E+003	2.28896E+003	5.43310E-001	0.00000E+000	2.30037E+003
Welders	6.26370E-001	3.41684E+000	4.16298E+000	6.33000E-003	1.25570E-001	1.25570E-001	0.00000E+000	4.65846E+002	4.65846E+002	5.08900E-002	0.00000E+000	4.66915E+002

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Mitigated tons/yr						Mitigated mt/yr					
Air Compressors	8.60400E-002	5.72420E-001	5.11520E-001	8.20000E-004	4.40500E-002	4.40500E-002	0.00000E+000	7.02145E+001	7.02145E+001	6.98000E-003	0.00000E+000	7.03611E+001
Concrete/Industrial Saws	1.37840E-001	1.02375E+000	9.34280E-001	1.56000E-003	7.19000E-002	7.19000E-002	0.00000E+000	1.34414E+002	1.34414E+002	1.11400E-002	0.00000E+000	1.34648E+002
Cranes	7.57060E-001	7.05895E+000	3.79694E+000	1.31000E-002	2.93830E-001	2.71750E-001	0.00000E+000	1.14889E+003	1.14889E+003	2.52050E-001	0.00000E+000	1.15418E+003
Excavators	4.87450E-001	5.28061E+000	5.15920E+000	8.07000E-003	2.57740E-001	2.37120E-001	0.00000E+000	7.40048E+002	7.40048E+002	2.29430E-001	0.00000E+000	7.44866E+002
Forklifts	8.19930E-001	6.72779E+000	8.69929E+000	1.21800E-002	3.92990E-001	3.62740E-001	0.00000E+000	1.06768E+003	1.06768E+003	2.37460E-001	0.00000E+000	1.07267E+003
Generator Sets	7.39660E-001	6.48754E+000	9.08549E+000	1.62800E-002	2.89320E-001	2.89320E-001	0.00000E+000	1.39889E+003	1.39889E+003	5.93600E-002	0.00000E+000	1.40013E+003
Graders	3.29720E-001	3.29877E+000	1.82224E+000	2.41000E-003	1.85140E-001	1.70330E-001	0.00000E+000	2.20176E+002	2.20176E+002	6.85300E-002	0.00000E+000	2.21615E+002
Pavers	1.83510E-001	2.04071E+000	1.55274E+000	2.49000E-003	1.00090E-001	9.20800E-002	0.00000E+000	2.28467E+002	2.28467E+002	7.06500E-002	0.00000E+000	2.29951E+002
Paving Equipment	1.40690E-001	1.58399E+000	1.38350E+000	2.21000E-003	7.84200E-002	7.21500E-002	0.00000E+000	2.02847E+002	2.02847E+002	6.27300E-002	0.00000E+000	2.04164E+002
Rollers	1.54720E-001	1.47013E+000	1.07809E+000	1.44000E-003	1.03710E-001	9.54100E-002	0.00000E+000	1.32569E+002	1.32569E+002	4.09900E-002	0.00000E+000	1.33430E+002
Rubber Tired Dozers	1.52235E+000	1.67292E+001	1.26957E+001	1.18900E-002	7.75140E-001	7.13120E-001	0.00000E+000	1.09558E+003	1.09558E+003	3.38420E-001	0.00000E+000	1.10268E+003
Scrapers	8.98370E-001	1.11127E+001	6.92152E+000	1.15500E-002	4.40270E-001	4.05050E-001	0.00000E+000	1.05439E+003	1.05439E+003	3.28200E-001	0.00000E+000	1.06128E+003
Tractors/Loaders/Backhoes	1.54500E+000	1.39387E+001	1.81216E+001	2.59000E-002	7.69980E-001	7.11320E-001	0.00000E+000	2.28896E+003	2.28896E+003	5.43310E-001	0.00000E+000	2.30037E+003
Welders	6.26360E-001	3.41683E+000	4.16297E+000	6.33000E-003	1.25570E-001	1.25570E-001	0.00000E+000	4.65846E+002	4.65846E+002	5.08900E-002	0.00000E+000	4.66914E+002

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Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Air Compressors	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.28179E-006	1.28179E-006	0.00000E+000	0.00000E+000	1.13699E-006
Concrete/Industrial Saws	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.19035E-006	1.19035E-006	0.00000E+000	0.00000E+000	1.18828E-006
Cranes	0.00000E+000	1.41664E-006	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.19246E-006	1.19246E-006	0.00000E+000	0.00000E+000	1.19565E-006
Excavators	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	4.21710E-005	0.00000E+000	1.18911E-006	1.18911E-006	0.00000E+000	0.00000E+000	1.18142E-006
Forklifts	0.00000E+000	1.48637E-006	1.14952E-006	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.18949E-006	1.18949E-006	0.00000E+000	0.00000E+000	1.18396E-006
Generator Sets	0.00000E+000	0.00000E+000	1.10065E-006	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.19380E-006	1.19380E-006	0.00000E+000	0.00000E+000	1.19274E-006
Graders	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.18087E-006	1.18087E-006	0.00000E+000	0.00000E+000	1.17320E-006
Pavers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.18179E-006	1.18179E-006	0.00000E+000	0.00000E+000	1.21765E-006
Paving Equipment	0.00000E+000	0.00000E+000	7.22799E-006	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.23246E-006	1.23246E-006	0.00000E+000	0.00000E+000	1.22451E-006
Rollers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.20691E-006	1.20691E-006	0.00000E+000	0.00000E+000	1.19913E-006
Rubber Tired Dozers	0.00000E+000	1.19551E-006	1.57534E-006	0.00000E+000	0.00000E+000	1.40227E-005	0.00000E+000	1.19572E-006	1.19572E-006	0.00000E+000	0.00000E+000	1.18801E-006
Scrapers	0.00000E+000	8.99873E-007	1.44477E-006	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.19501E-006	1.19501E-006	0.00000E+000	0.00000E+000	1.18725E-006
Tractors/Loaders/Backhoes	0.00000E+000	1.43485E-006	1.10365E-006	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.18831E-006	1.18831E-006	0.00000E+000	0.00000E+000	1.19111E-006
Welders	1.59650E-005	2.92668E-006	2.40213E-006	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.20211E-006	1.20211E-006	0.00000E+000	0.00000E+000	1.19936E-006

Fugitive Dust Mitigation

Yes/No	Mitigation Measure	Mitigation Input		Mitigation Input		Mitigation Input	
No	Soil Stabilizer for unpaved Roads	PM10 Reduction	0.00	PM2.5 Reduction	0.00		
Yes	Replace Ground Cover of Area Disturbed	PM10 Reduction	5.00	PM2.5 Reduction	5.00		
Yes	Water Exposed Area	PM10 Reduction	55.00	PM2.5 Reduction	55.00	Frequency (per day)	2.00
No	Unpaved Road Mitigation	Moisture Content %	0.00	Vehicle Speed (mph)	15.00		
Yes	Clean Paved Road	% PM Reduction	9.00				

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		Unmitigated		Mitigated		Percent Reduction	
Phase	Source	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Architectural Coating	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Architectural Coating	Roads	2.59	0.69	2.39	0.64	0.08	0.07
Building Construction	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	Roads	8.49	2.32	7.86	2.16	0.07	0.07
Demolition	Fugitive Dust	2.72	0.41	1.16	0.18	0.57	0.57
Demolition	Roads	0.42	0.11	0.39	0.10	0.08	0.07
Grading	Fugitive Dust	10.08	4.18	4.31	1.79	0.57	0.57
Grading	Roads	0.08	0.02	0.08	0.02	0.08	0.07
Paving	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Paving	Roads	0.12	0.03	0.11	0.03	0.08	0.07
Site Preparation	Fugitive Dust	5.42	2.98	2.32	1.27	0.57	0.57
Site Preparation	Roads	0.03	0.01	0.03	0.01	0.08	0.07

Operational Percent Reduction Summary

Category	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.15	0.01
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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Operational Mobile Mitigation

Project Setting:

Mitigation Selected	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value 3
No	Land Use	Increase Density	0.00			
No	Land Use	Increase Diversity	0.29	0.63		
No	Land Use	Improve Walkability Design	0.00			
No	Land Use	Improve Destination Accessibility	0.00			
No	Land Use	Increase Transit Accessibility	0.25			
No	Land Use	Integrate Below Market Rate Housing	0.00			
	Land Use	Land Use SubTotal	0.00			
No	Neighborhood Enhancements	Improve Pedestrian Network				
No	Neighborhood Enhancements	Provide Traffic Calming Measures				
No	Neighborhood Enhancements	Implement NEV Network	0.00			
	Neighborhood Enhancements	Neighborhood Enhancements Subtotal	0.00			
No	Parking Policy Pricing	Limit Parking Supply	0.00			
No	Parking Policy Pricing	Unbundle Parking Costs	0.00			
No	Parking Policy Pricing	On-street Market Pricing	0.00			
	Parking Policy Pricing	Parking Policy Pricing Subtotal	0.00			
No	Transit Improvements	Provide BRT System	0.00			
No	Transit Improvements	Expand Transit Network	0.00			
No	Transit Improvements	Increase Transit Frequency	0.00			
	Transit Improvements	Transit Improvements Subtotal	0.00			
		Land Use and Site Enhancement Subtotal	0.00			
No	Commute	Implement Trip Reduction Program				
No	Commute	Transit Subsidy				
No	Commute	Implement Employee Parking "Cash Out"				
No	Commute	Workplace Parking Charge				
No	Commute	Encourage Telecommuting and Alternative Work Schedules	0.00			
No	Commute	Market Commute Trip Reduction Option	0.00			
No	Commute	Employee Vanpool/Shuttle	0.00		2.00	
No	Commute	Provide Ride Sharing Program				
	Commute	Commute Subtotal	0.00			
No	School Trip	Implement School Bus Program	0.00			
		Total VMT Reduction	0.00			

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Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
No	Only Natural Gas Hearth	
No	No Hearth	
No	Use Low VOC Cleaning Supplies	
No	Use Low VOC Paint (Residential Interior)	50.00
No	Use Low VOC Paint (Residential Exterior)	100.00
No	Use Low VOC Paint (Non-residential Interior)	250.00
No	Use Low VOC Paint (Non-residential Exterior)	250.00
No	% Electric Lawnmower	
No	% Electric Leafblower	
No	% Electric Chainsaw	

Energy Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Exceed Title 24		
No	Install High Efficiency Lighting		
No	On-site Renewable		

Appliance Type	Land Use Subtype	% Improvement
ClothWasher		30.00
DishWasher		15.00
Fan		50.00
Refrigerator		15.00

Water Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Apply Water Conservation on Strategy		
No	Use Reclaimed Water		
No	Use Grey Water		
No	Install low-flow bathroom faucet	32.00	
No	Install low-flow Kitchen faucet	18.00	
No	Install low-flow Toilet	20.00	
No	Install low-flow Shower	20.00	
No	Turf Reduction		
No	Use Water Efficient Irrigation Systems	6.10	
No	Water Efficient Landscape		

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Solid Waste Mitigation

Mitigation Measures	Input Value
Institute Recycling and Composting Services	
Percent Reduction in Waste Disposed	

Biological Technical Report for the Waterman + Baseline Neighborhood Specific Plan Project

May 16, 2016

Prepared for:

Placeworks
3 MacArthur Place, Suite 1100
Santa Ana CA 92707

Prepared by:

Alden Environmental, Inc.
3245 University Avenue, #1188
San Diego, CA 92104

Waterman + Baseline Neighborhood Specific Plan Project
Biological Technical Report

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A	Plant Species Observed

1.0 INTRODUCTION

This report describes existing biological conditions in the proposed Waterman + Baseline Neighborhood Specific Plan Area (SPA). This report provides the City of San Bernardino (City), U.S. Fish and Wildlife Service (USFWS), U.S. Army Corps of Engineers (Corps), Regional Water Quality Control Board (RWQCB), and California Department of Fish and Wildlife (CDFW) with information to assess impacts to biological resources under the California Environmental Quality Act (CEQA) and federal and State of California (State) laws and regulations.

1.1 PROJECT LOCATION

The SPA is located centrally in the City. The SPA boundaries are loosely formed by Sierra Way to the west, Tippecanoe Avenue and the concrete-lined flood control channel on the east, 3rd Street to the south, and Highland Avenue to the north (Figure 1). The SPA is on the San Bernardino North and San Bernardino South quadrangles of U.S. Geological Survey (USGS) 7.5-minute series topography (Figure 2).

1.2 PROJECT DESCRIPTION

The proposed Waterman + Baseline Neighborhood Specific Plan Project (Specific Plan Project) would establish a land use and development framework, identify needed transportation and infrastructure improvements, and serve as a marketing tool for attracting developers to key sites and for boosting economic development. The Specific Plan Project is intended to encourage residential and neighborhood-serving commercial establishments on major corridors such as Baseline Avenue and Waterman Avenue, direct the creation of employment generating uses to the southern portion of the SPA closer to the Civic Center and Downtown, and protect and enhance the existing residential neighborhoods.

Figure 3 depicts the proposed land use plan for the SPA. This is the preferred land use plan for the Specific Plan Project and accommodates an increase in existing residential uses from an estimated 2,049 units to approximately 4,341 units and an increase in commercial uses from roughly 2,366,385 square feet to approximately 3,570,448 square feet and establishes six distinct districts to guide future development of key parcels throughout the SPA. The gross acreage of the SPA is approximately 850 acres. The net acreage of the SPA is approximately 710 acres, which includes parcels of land within the six districts and excludes 140 acres of existing roadways.

2.0 METHODS AND SURVEY LIMITATIONS

2.1 LITERATURE REVIEW

As part of preparation for biological resources surveys of the SPA, Alden Environmental, Inc. queried the California Natural Diversity Database (CNDDB) and the USFWS Species Database for species reported within two miles of the SPA. The California Native Plant Society (CNPS) Rare and Endangered Plant Inventory was queried for sensitive plant species reported within the USGS San Bernardino North and San Bernardino South quadrangles (CNPS 2015). Additionally, 2015 aerial imagery, USGS topography, soils mapping (U.S. Department of Agriculture Natural

Resources Conservation Service [USDA NRCS] 2015), and the USFWS National Wetlands Inventory were reviewed.

2.2 BIOLOGICAL SURVEYS

Field work was performed by biologist Lee Ripma in the SPA on August 6, 2015 to conduct a general biological survey of plant and animal species and to map vegetation community/land cover types. Ms. Ripma assessed habitats in SPA for the burrowing owl (*Athene cunicularia*) and sensitive plant species and conducted a jurisdictional delineation of Waters of the U.S. (WUS) and Waters of the State (WS).

Vegetation communities/land cover types were mapped on 2015 aerial photography with a scale of one inch equals 300 feet. The jurisdictional delineation of WUS and WS was conducted in accordance with Corps and CDFW guidelines as follows.

Wetland WUS are determined using the using the three criteria (vegetation, hydrology, and soils) established for wetland delineations as described within the *Wetlands Delineation Manual* (Environmental Laboratory 1987) and *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Supplement* (Corps 2008). Two points were sampled to see if the three criteria were met. Areas were determined to be non-wetland WUS where the wetland criteria were not met, but there was evidence of an ordinary high water mark.

CDFW wetland boundaries are determined based on the presence of riparian vegetation or regular surface flow. Non-wetland streambeds are delineated based on the definition of a streambed as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supporting fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports riparian vegetation." CDFW jurisdictional limits for streambeds are determined by the top of the bank.

Lists were made of all plant and animal species observed or detected during the surveys (Appendix A for plants; animals are listed in Section 3.4, *Animal Species Observed*), and representative photographs were taken throughout the undeveloped portions of the SPA (available upon request).

2.3 SURVEY LIMITATIONS

The survey was conducted in August, which is not during the blooming season for most annual plant species. The list of plant species in Appendix A, therefore, is not necessarily a comprehensive account of all species that are present. Those species that are of special status and may have potential to occur in the SPA, however, are addressed in this report in Section 4.2.1, *Sensitive Plant Species and Their Potential to Occur*.

Noted animal species were identified by direct observation, vocalizations, or the observance of scat, tracks, or other signs. The list of species identified in Section 3.4, *Animal Species Observed*, is not necessarily a comprehensive account of all species that utilize the SPA as species that are nocturnal, secretive, or seasonally restricted may not have been observed. Those species that are of special status and may have potential to occur in the SPA, however, are addressed in this report in Section 4.3.1, *Sensitive Animal Species and Their Potential to Occur*.

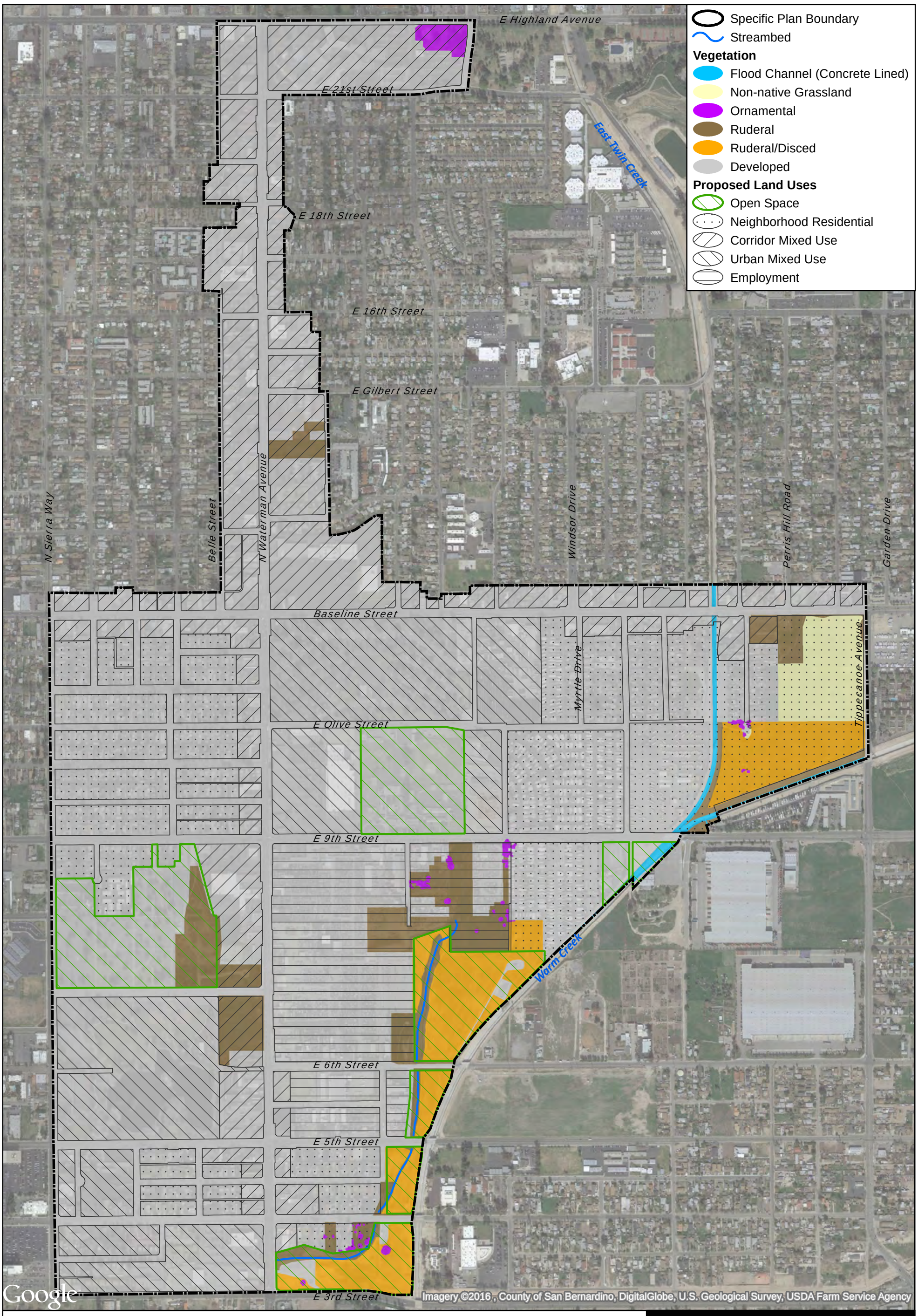


Figure 3

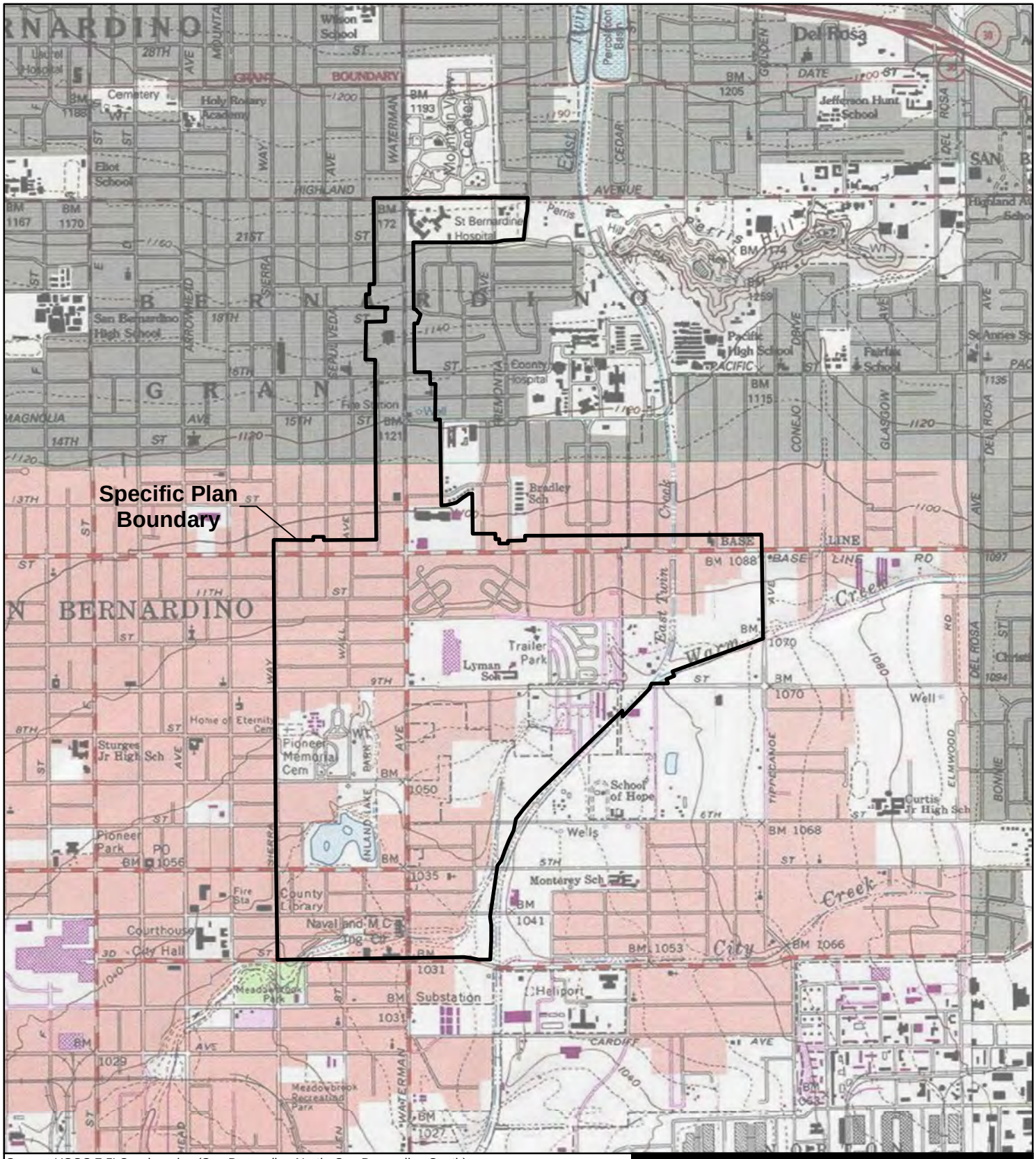
Biological Resources/Impacts

WATERMAN + BASELINE NEIGHBORHOOD SPECIFIC PLAN PROJECT

N W E S

0 400 800 Feet

ALDEN ENVIRONMENTAL, INC



Source: USGS 7.5' Quadrangles (San Bernardino North, San Bernardino South);
Copyright:© 2013 National Geographic Society, i-cubed

Figure 2

Project Location

WATERMAN + BASELINE NEIGHBORHOOD SPECIFIC PLAN PROJECT

N
W E
S

0 1,000 2,000 Feet

ALDEN ENVIRONMENTAL, INC

Figure 1

Regional Location

WATERMAN + BASELINE NEIGHBORHOOD SPECIFIC PLAN PROJECT

N W E S

0 2 4 Miles

ALDEN ENVIRONMENTAL, INC

2.4 NOMENCLATURE

Nomenclature used in this report generally comes Baldwin et al. (2012) or the Jepson Flora Project (2013) for plants; Collins and Taggart (2006) for reptiles and amphibians; American Ornithologists' Union (2015) for birds; and Baker et al. (2003) for mammals. Plant species status is from the CNPS (2015). Animal species status is from CDFW (2015).

3.0 SURVEY RESULTS

3.1 PHYSICAL CHARACTERISTICS

The SPA is mostly developed and consists of land uses including residential, industrial, commercial, public facilities, a public park, roadways, and flood channels for Warm Creek and East Twin Creek. The East Twin Creek channel converges with the Warm Creek channel in the SPA. Both flood channels are concrete-lined and direct water from north and northeast of the SPA, respectively, through the eastern portion of the SPA, and south of the SPA until the Warm Creek flood channel converges with the Santa Ana River approximately 2.2 miles to the south of the SPA.

The undeveloped portions of the SPA area have been repeatedly disturbed by human activities in the past (some continuing into the present), and these areas predominantly support ruderal vegetation (i.e., non-native plants growing on highly disturbed land).

Elevations in the SPA range from a high of approximately 1,180 feet above mean sea level (AMSL) in the north to a low of approximately 1,030 AMSL in the south. Soils in the SPA include Hanford coarse sandy loam (two to nine percent slopes), Grangeville fine sandy loam, and Tujunga gravelly loamy sand (along East Twin and Warm creeks; USDA NRCS 2015).

3.2 VEGETATION COMMUNITIES/LAND COVER TYPES

Four vegetation communities and two land cover types occur in the SPA as shown in Table 1 and on Figure 3. The vegetation communities in the SPA are described following the table. The developed portions of the SPA and the flood channels are described in Section 3.1, *Physical Characteristics*.

Table 1 Vegetation Communities/Land Cover Types in the SPA	
	Gross Acreage
Vegetation Communities	
Non-native grassland	14.2
Ornamental	4.1
Ruderal	48.1
Ruderal/Disced	47.5
Land Cover Types	
Concrete-lined flood channel	4.1
Developed	732.0
TOTAL	**850.0**

3.2.1 Non-Native Grassland

Non-native grassland occurs as a dense to sparse cover of non-native grasses, sometimes associated with species of showy-flowered, native, annual forbs. Typical species in non-native grassland in the SPA include slender wild oat (*Avena barbata*), red brome (*Bromus madritensis* ssp. *rubens*), ripgut grass (*Bromus diandrus*), and Bermuda grass (*Cynodon dactylon*). Most of the annual, introduced species that comprise the majority of species and biomass within non-native grassland originated from the Mediterranean region, an area with a long history of agriculture and a climate similar to California. These two factors, in addition to intensive grazing and agricultural practices in conjunction with severe droughts, contributed to the successful invasion and establishment of these species and the replacement of native grasses with non-native (Jackson 1985). Non-native grassland is located in the east-central portion of the SPA adjacent to Tippecanoe Avenue.

3.2.2 Ornamental

Ornamental represents areas that have been landscaped, usually for decorative purposes and with non-native plant species. Ornamental plantings can be found in scattered patches in the southeastern portion of the SPA, as well as in a large area in the north associated with the San Bernardino Medical Center. Ornamental species in the SPA include those such as Canary Island date palm (*Phoenix canariensis*) and New Mexican locust (*Robinia neomexicana*).

3.2.3 Ruderal

Ruderal vegetation includes land containing a preponderance of non-native plant species in a highly disturbed setting. Some of the non-native species in this community in the SPA include Australian tumbleweed (*Salsola australis*), prostrate pigweed (*Amaranthus albus*), bur-clover (*Medicago polymorpha*), sweetclover (*Melilotus albus* and *M. indicus*), and tree tobacco (*Nicotiana glauca*). Ruderal vegetation occurs in patches throughout the central and southern portions of the SPA.

3.2.4 Ruderal/Disced

Ruderal/disced land is land that supports ruderal vegetation and that has been recently disced. Ruderal/disced land occurs along the southeastern border of the SPA.

3.3 PLANT SPECIES OBSERVED

Thirty-six species of plants were observed in the SPA. A list of these plant species is presented in Appendix A. Twenty-seven of these species are not native to California.

3.4 ANIMAL SPECIES OBSERVED

Seven common species of animals were observed in the SPA, as listed below.

Birds
Black phoebe (*Sayornis nigricans*)
Eurasian collared-dove (*Streptopelia decaocto*)
Killdeer (*Charadrius vociferus*)
Mourning dove (*Zenaida macroura*)
Northern mockingbird (*Mimus polyglottos*)
Western kingbird (*Tyrannus verticalis*)

Mammal
California ground squirrel (*Otospermophilus beecheyi*)

3.5 WILDLIFE MOVEMENT CORRIDORS AND NURSERY SITES

Wildlife corridors connect otherwise isolated areas of habitat and allow movement or dispersal of plants and animals. Local wildlife corridors allow wildlife access to resources such as food, water, and shelter within the framework of its daily routine. Regional corridors provide these functions over a larger scale and link two or more large habitat areas, allowing the dispersal of organisms and the consequent mixing of genes between populations.

A corridor is a specific route that is used for the movement and migration of species, and may be different from a linkage in that it represents a smaller or narrower avenue for movement. A linkage is an area of land that supports or contributes to the long-term movement of animals and genetic exchange by providing live-in habitat that connects to other habitat areas. Many linkages occur as stepping-stone linkages that are comprised of a fragmented archipelago arrangement of habitat over a linear distance.

While common animal species that tolerate nearby development (such as those observed in the SPA) likely use undeveloped portions of the SPA as part of live-in habitat, these species tend to be ubiquitous and not reliant on particular corridors or linkages. The SPA is surrounded by development and, itself, is almost completely developed. It does not provide habitat that connects otherwise isolated areas of habitat, nor does it provide habitat for movement or dispersal of plants and animals. While the two creeks in the SPA may have, at one time (i.e., prior to being channelized and lined with concrete), provided corridors for wildlife movement through the SPA, they no longer provide this function.

Wildlife nursery sites are specific, established locations used repeatedly by some wildlife species for breeding purposes. Examples of nursery sites include heron rookeries and bat maternal colony roosts. No such wildlife nursery sites are expected to occur in the SPA based on its developed and disturbed nature.

4.0 SENSITIVE BIOLOGICAL RESOURCES

Sensitive biological resources can include vegetation communities, plant species, animal species, WUS, WS, wildlife movement corridors, and nursery sites.

4.1 SENSITIVE VEGETATION COMMUNITIES

Sensitive vegetation communities are vegetation assemblages, associations, or sub-associations that have cumulative losses throughout the region, have relatively limited distribution, support or potentially support sensitive plant or wildlife species, or have particular value to other wildlife. Typically, sensitive vegetation communities are considered as such whether or not they have been disturbed. Sensitive vegetation communities are regulated by various local, State, and federal resource agencies. The CNDDB provides an inventory of vegetation communities that are considered sensitive by State and federal resource agencies, academic institutions, and conservation groups such as the CNPS. Determination of the level of sensitivity is based on the Nature Conservancy Heritage Program Status Ranks that rank both species and plant communities on a global and statewide basis according to the number and size of remaining occurrences, as well as recognized threats such as proposed development, habitat degradation, and invasion by non-native species. No sensitive vegetation communities occur in the SPA.

4.2 SENSITIVE PLANT SPECIES

Sensitive plant species include those that are:

- listed or proposed for listing by the USFWS or CDFW as Threatened, Endangered, or Rare
- of CNPS Rare Plant Rank 1B (Rare, Threatened, or Endangered in California and elsewhere)
- of CNPS Rare Plant Rank 2B (Rare, Threatened, or Endangered in California but more common elsewhere)

Noteworthy, but not sensitive, plant species are considered to be those of CNPS Rare Plant Rank 3 (plants about which more information is needed—a review list) and CNPS Rare Plant Rank 4 (plants of limited distribution—a watch list). The CNPS is a Statewide resource conservation organization that has developed an inventory of California's sensitive plant species (CNPS 2015). The CNPS listing is sanctioned by the CDFW and essentially serves as an early warning list of potential candidate species for Threatened or Endangered status.

According to the USFWS, a federal Endangered species is defined as a species facing extinction throughout all or a significant portion of its geographic range, and a federal Threatened species is defined as a species that is likely to become Endangered within the foreseeable future throughout

all or a significant part of its range. CDFW defines an Endangered species as one whose prospects of survival and reproduction are in immediate jeopardy; a Threatened species as one present in such small numbers throughout its range that it is likely to become an Endangered species in the near future in the absence of special protection or management; and a Rare species as one present in such small numbers throughout its range that it may become Endangered if its present environment worsens.

No sensitive plant species were observed in the SPA, although it is acknowledged that the survey was conducted in August (see Section 2.3, *Survey Limitations*), which is outside the blooming period for most annual species. The next section in this report addresses sensitive plant species reported within two miles of the SPA and their potential for occurrence in the SPA.

4.2.1 Sensitive Plant Species and Their Potential to Occur

Thirteen sensitive plant species have been reported within two miles of the SPA to the CNDDB and/or to the CNPS Inventory of Rare and Endangered Plants in the USGS San Bernardino North and South quadrangles. These species are addressed in Table 2. None has potential to occur in the SPA due to the absence of potential habitat. That, coupled with the highly disturbed nature of the SPA, indicates that future focused surveys for sensitive plant species may not be warranted.

Table 2 SENSITIVE PLANT SPECIES AND THEIR POTENTIAL TO OCCUR				
SPECIES	**SENSITIVITY**	**HABITAT(S)**	**LIFE FORM** **BLOOM PERIOD**	**POTENTIAL TO OCCUR**
Marsh sandwort (*Arenaria paludicola*)	Federal Endangered State Endangered CNPS Rare Plant Rank 1B.1	Sandy openings in freshwater or brackish marshes and swamps.	Perennial, stoloniferous herb May to August	None. No potential habitat in the SPA.
Horn's milk-vetch (*Astragalus hornii* var. *hornii*)	CNPS Rare Plant Rank 1B.1	Alkaline margins of lakes, meadows, seeps, and playas.	Annual herb May to October	None. No potential habitat in the SPA.
Thread-leaved brodiaea (*Brodiaea filifolia*)	Federal Threatened State Endangered CNPS Rare Plant Rank 1B.1	Chaparral, cismontane woodland, coastal scrub, playas, valley and foothill grassland, and vernal pools often associated with clay soils.	Perennial, bulbiferous herb March to June	None. No potential habitat in the SPA.
Bristly sedge (*Carex comosa*)	CNPS Rare Plant Rank 2B.1	Coastal prairie; margins of lakes, marshes, swamps, valley and foothill grassland.	Perennial rhizomatous herb May to September	None. Presumed extirpated from San Bernardino County (CNPS 2015).
Salt marsh bird's beak (*Chloropyron maritimum* ssp. *maritimum*)	Federal Endangered State Endangered CNPS Rare Plant Rank 1B.2	Coastal dunes, coastal salt marshes and swamps.	Annual herb (hemiparasitic) May to October	None. No potential habitat in the SPA.
Parry's spineflower (*Chorizanthe parryi* var. *parryi*)	CNPS Rare Plant Rank 1B.1	Sandy or rocky openings in chaparral, cismontane woodland, coastal scrub, and valley and foothill grassland.	Annual herb April to June	None. Grassland in the SPA is a non-native community in an urban and disturbed setting, and the CNDDB record for the species is from 1882 in the vicinity of Colton.
Peruvian dodder (*Cuscuta obtusiflora* var. *glandulosa*)	CNPS Rare Plant Rank 2B.2	Freshwater marshes and swamps.	Annual vine (parasitic) July to October	None. No potential habitat in the SPA.

Table 2 (continued) **SENSITIVE PLANT SPECIES AND THEIR POTENTIAL TO OCCUR**				
SPECIES	**SENSITIVITY**	**HABITAT(S)**	**LIFE FORM** **BLOOM PERIOD**	**POTENTIAL TO OCCUR**
Slender-horned spineflower (*Dodecahema leptoceras*)	Federal Endangered State Endangered CNPS Rare Plant Rank 1B.1	Sandy chaparral, cismontane woodland, and coastal scrub.	Annual herb April to June	None. No potential habitat in the SPA.
Santa Ana River woollystar (*Eriastrum densifolium* ssp. *sanctorum*)	Federal Endangered State Endangered CNPS Rare Plant Rank 1B.1	Sandy or gravelly chaparral and coastal scrub.	Perennial herb April to September	None. No potential habitat in the SPA.
Parish's desert thorn (*Lycium parishii*)	CNPS Rare Plant Rank 2B.3	Coastal scrub and Sonoran desert scrub	Perennial shrub March to April	None. No potential habitat in the SPA.
Gambel's water cress (*Nasturtium gambelii*)	Federal Endangered State Threatened CNPS Rare Plant Rank 1B.1	Freshwater or brackish marshes and swamps.	Perennial rhizomatous herb April to October	None. No potential habitat in the SPA.
Salt spring checkerbloom (*Sidalcea neomexicana*)	CNPS Rare Plant Rank 2B.2	Mesic, alkaline chaparral, coastal scrub, lower montane coniferous forest, Mojavean desert scrub, and playas.	Perennial herb March to June	None. No potential habitat in the SPA.
San Bernardino aster (*Symphyotrichum defoliatum*)	CNPS Rare Plant Rank 1B.2	Near ditches, streams, and springs. Cismontane woodland, coastal scrub, lower montane coniferous forest. Meadows and seeps, marshes and swamps. Vernally mesic valley and foothill grassland.	Perennial rhizomatous herb July to November	None. Grassland in the SPA is not vernally mesic. The CNDDB record for the species is from 1917 in what may be the current junction of 6th Street and Interstate 215 west of the SPA.

4.3 SENSITIVE ANIMAL SPECIES

Sensitive animal species include:

- species listed or proposed for listing as Threatened or Endangered by USFWS or CDFW
- species designated as Fully Protected by CDFW
- federal Birds of Conservation Concern
- State Species of Special Concern
- State Watch List birds
- nesting birds

According to the USFWS, a federal Endangered species is defined as a species facing extinction throughout all or a significant portion of its geographic range, and a federal Threatened species is defined as a species that is likely to become Endangered within the foreseeable future throughout all or a significant part of its range. CDFW defines an Endangered species as one whose prospects of survival and reproduction are in immediate jeopardy; a Threatened species as one present in such small numbers throughout its range that it is likely to become an Endangered species in the near future in the absence of special protection or management; a Fully Protected species as one that is rare or faces possible extinction; and a California Species of Special Concern as one that is declining in numbers.

Species that are federal or State listed Threatened or Endangered are afforded a degree of protection that entails a permitting process including specific mitigation measures to compensate for impacts to the species. Species that are proposed to be listed by the USFWS are treated similarly to listed species by that agency. Recommendations of the USFWS, however, are advisory rather than mandatory in the case of proposed species. As regulated by the CDFW, Fully Protected species may not be taken or possessed at any time, and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research and relocation of the bird species for the protection of livestock. Wildlife species classified as State Species of Special Concern by the CDFW are not typically provided legal protection; however, there are exceptions for some species such as burrowing owl.

Through the Bird of Conservation Concern report, the USFWS aims to identify accurately the migratory and non-migratory bird species (beyond those already designated as federal Threatened or Endangered) that represent the USFWS' highest conservation priorities and draw attention to species in need of conservation action.

The State Watch List includes birds that are/were: a) not on the current list of Species of Special Concern but were on previous lists and have not been State listed under the CESA; b) previously State or federal listed and now are on neither list; or c) on the list of Fully Protected species.

The federal Migratory Bird Treaty Act (MBTA), which restricts the killing, taking, collecting, selling, or purchasing of native bird species or their parts, nests, or eggs, also provides legal protection for almost all nesting bird species occurring in the United States. Section 3513 of California Fish and Game Code states that it is unlawful to take or possess any migratory non-game birds protected by the MBTA.

In addition, pursuant to California Fish and Game Code Section 3503, it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Raptors and owls (birds of prey) and their active nests are also protected by California Fish and Game Code Section 3503.5, which states that it is unlawful to take, possess, or destroy any birds of prey or to take, possess, or destroy the nest or eggs of any such bird unless authorized by the CDFW.

4.3.1 Sensitive Animal Species and Their Potential to Occur

Eleven sensitive animal species have been reported within two miles of the SPA to the CNDDB and/or the USFWS Species Database. These species are addressed in Table 3.

Table 3 SENSITIVE ANIMAL SPECIES AND THEIR POTENTIAL TO OCCUR			
SPECIES	**LISTING OR SENSITIVITY**	**HABITAT(S)**	**POTENTIAL TO OCCUR**
INVERTEBRATES			
Delhi sands flower-loving fly (*Rhaphiomidas terminatus abdominalis*)	Federal Endangered	Sandy substrates (i.e., Delhi sand deposits) with a sparse cover of perennial shrubs and other vegetation. Three indicator plant species are usually present: California buckwheat (*Eriogonum fasciculatum*), telegraph weed (*Heterotheca grandiflora*), and croton (*Croton californicus*; USFWS 1997). Presumably occupied in the once extensive dune system of the upper Santa Ana River Valley including portions of what is now the City of Colton, west through portions of the City of Ontario, and south to the Santa Ana River. Today, it exists on only a few disjunct sites within a radius of about eight miles in southwestern San Bernardino and northwestern Riverside counties (USFWS 1997).	None. No potential habitat in the SPA.
VERTEBRATES			
Reptiles			
Southern rubber boa (*Charina umbratica*)	State Threatened	Oak-conifer and mixed-conifer forests with rocks and logs or other debris at elevations between 5,000 to 8,200 feet above mean sea level.	None. No potential habitat in the SPA.
Coast horned lizard (*Phrynosoma blainvillii*)	State Species of Special Concern	Coastal sage scrub, chaparral, open oak woodlands, and open coniferous forests. Important habitat components include basking sites, adequate scrub cover, areas of loose soil, and an abundance of harvester ants (*Pogonomyrmex* sp.), a primary prey item.	None. No potential habitat in the SPA.

Table 3 (continued) **SENSITIVE ANIMAL SPECIES AND THEIR POTENTIAL TO OCCUR**			
SPECIES	**LISTING OR SENSITIVITY**	**HABITAT(S)**	**POTENTIAL TO OCCUR**
VERTEBRATES (continued)			
Birds			
Burrowing owl (*Athene cunicularia*)	Federal Bird of Conservation Concern State Species of Special Concern	In general, burrowing owl habitat is composed of drier, open areas that can include prairies, grasslands, and savannas. The burrowing owl can also be found living in deserts, farmlands, pastures, cemeteries, airports, vacant lots, university campuses, golf courses and other urban areas (Cornell Lab of Ornithology 2014, The Peregrine Fund 2014). Burrowing Owls are dependent on the presence of fossorial mammals (primarily prairie dogs and ground squirrels), whose burrows are used for nesting and roosting (Klute et al. 2003). In southern California, the most commonly used rodent burrow is that of the California ground squirrel (Collins 1979).	Low to moderate based on the habitat assessment. Could utilize non-native grassland and ruderal communities in the SPA. The California ground squirrel was observed in the SPA. The burrowing owl was reported to the CNDDB in 2006 approximately one mile east of the SPA. It was just east of Sterling Avenue at 3rd Street, along City Creek, north of the San Bernardino International Airport.
Swainson's hawk (*Buteo swainsoni*)	Federal Bird of Conservation Concern State Threatened	In California, breeding populations occur in desert, shrubsteppe, grassland, and agricultural habitats. However, the overwhelming majority of the species' breeding territories are in the Great Basin and Central Valley. Winters in South America. (Woodbridge 1998).	Very low. Potential habitats in the SPA include non-native grassland, ruderal, and ruderal/disced communities. However, these communities occur within a highly developed setting and are not located in the Great Basin and Central Valley areas of California. A very old CNDDB record for the Swainson's hawk includes a museum specimen collected from the City Center area as designated on an 1896 USGS topographic map.
Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*)	Federal Threatened Federal Bird of Conservation Concern State Endangered	Extensive stands of mature riparian woodland.	None. No potential habitat in the SPA. Reported to the CNDDB in the Santa Ana River and Warm Creek in the 1930s.

Table 3 (continued) **SENSITIVE ANIMAL SPECIES AND THEIR POTENTIAL TO OCCUR**			
SPECIES	**LISTING OR SENSITIVITY**	**HABITAT(S)**	**POTENTIAL TO OCCUR**
VERTEBRATES (continued)			
Birds			
California horned lark (*Eremophila alpestris actia*)	State Watch List	Sandy beaches, agricultural fields, grasslands and open areas on coastal slopes and in lowlands from Sonoma County to northern Baja California, Mexico.	Low to moderate. Could utilize non-native grassland, ruderal, and ruderal/disced communities in the SPA. Reported to the CNDDB in 2001 just south of the Santa Ana River, north of Interstate 10, in an agricultural field north of the Mountain View Power Plant.
Mammals			
San Bernardino kangaroo rat (*Dipodomys merriami parvus*)	Federal Endangered State Species of Special Concern	Sagebrush, shad scale, and creosote bush desert scrubs in a great variety of soil types.	None. No potential habitat in the SPA.
Western yellow bat (*Lasiurus xanthinus*)	State Species of Special Concern	Wooded areas and desert scrub. Roosts in foliage, particularly in thorny vegetation palms and other desert riparian habitats.	None. No potential habitat in the SPA.
Pocketed free-tailed bat (*Nyctinomops femorosaccus*)	State Species of Special Concern	Feeds on flying insects over ponds, streams, or arid desert habitat. Prefers rocky desert areas with high cliffs or rock outcrops in which it roosts.	None. No potential habitat in the SPA.
American badger (*Taxidea taxus*)	State Species of Special Concern	Uncommon, carnivorous resident in areas with dry, friable soils in herbaceous, shrub, and open stages of most habitats. Primary prey items include rodents.	None. While ruderal or non-native grassland communities could be potential habitat, they are disjunct and likely not large enough to support a badger home range.

4.4 WATERS OF THE U.S. AND WATERS OF THE STATE

Generally, wetlands are lands where saturation with water is the dominant factor determining the nature of soil development and the types of plant and animal communities living in the soil and on its surface. Wetlands vary widely because of regional and local differences in soils, topography, climate, hydrology, water chemistry, vegetation, and other factors (Environmental Protection Agency 2013). WUS and WS encompass wetlands but also may include non-wetland, ephemeral and intermittent streams that may or may not be vegetated. Ephemeral streams flow only after precipitation. Runoff from rainfall is the primary source of water for ephemeral streams. Intermittent streams flow when smaller upstream waters are flowing and when groundwater provides enough water for stream flow. Runoff from rainfall supplements the flow of intermittent streams. WUS and WS are sensitive because they are regulated by the Corps under the Clean Water Act and CDFW under California Fish and Game Code and the Porter-Cologne Water Quality Control Act of 1970 (see Section 5.0, *Regulatory Context*).

There are no wetlands in the SPA, but there is an ephemeral stream in the southern portion of the SPA that is non-wetland WUS and non-wetland WS (streambed; Figure 3). This stream has an average width of approximately 25 feet from bank to bank and occupies approximately 2.2 acres in the SPA. It does not support riparian vegetation other than a single western cottonwood tree (*Populus fremontii* ssp. *fremontii*).

The concrete-lined flood channels of Warm Creek and East Twin Creek in the SPA are not anticipated to be regulated by the Corps but may be regulated by the CDFW and, therefore, be considered sensitive. Determination of jurisdiction would be made during consultation with the agencies if/when impacts are proposed by a specific project.

4.5 WILDLIFE MOVEMENT CORRIDORS AND NURSERY SITES

As explained in Section 3.5, *Wildlife Movement Corridors and Nursery Sites,* there are no wildlife movement corridors or nursery sites in the SPA.

5.0 REGULATORY CONTEXT

5.1 REGULATORY ISSUES

Biological resources in the SPA are subject to regulatory administration by the federal government and State, as follows.

5.1.1 Federal

Endangered Species Act

The federal Endangered Species Act (FESA) designates Threatened and Endangered animals and plants and provides measures for their protection and recovery. “Take” of listed animal species and of listed plant species in areas under federal jurisdiction is prohibited without obtaining a federal permit. Take is defined as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct.” Harm includes any act that

actually kills or injures fish or wildlife, including significant habitat modification or degradation that significantly impairs essential behavioral patterns of fish or wildlife. Activities that damage the habitat of (i.e., harm) listed wildlife species require approval from the USFWS for terrestrial species. The FESA also generally requires determination of Critical Habitat for listed species. If a project would involve a federal action potentially affecting Critical Habitat, the federal agency would be required to consult with USFWS. There are no federal listed species present or with potential to occur in the SPA (Tables 2 and 3), and no Critical Habitat is designated in the SPA.

Migratory Bird Treaty Act

The MBTA (16 U.S. Code Sections 703-711) includes provisions for protection of migratory birds, including the non-permitted take of migratory birds. The MBTA regulates or prohibits taking, killing, possession of, or harm to migratory bird species listed in Title 50 Code of Federal Regulations Section 10.13. Migratory birds include geese, ducks, shorebirds, raptors, songbirds, and many others. Disturbance that causes nest abandonment and/or loss of reproductive effort (killing or abandonment of eggs or young) is considered a "take." The MBTA is an international treaty for the conservation and management of bird species that migrate through more than one country, and is enforced in the United States by the USFWS. The MBTA was amended in 1972 to include protection for migratory birds of prey (raptors). A number of species of birds are present in the SPA, and there is the possibility that some nest there. Those birds and their nests are likely protected by the MBTA.

Clean Water Act

Under Section 404 of the Clean Water Act, the Corps is charged with regulating the discharge of dredge and fill materials into jurisdictional WUS.

Section 401 of the Clean Water Act requires that any applicant for a federal license or permit to conduct any activity that may result in a discharge to WUS must obtain a Water Quality Certification, or a waiver thereof, from the state in which the discharge originates. In California, the RWQCB issues Water Quality Certifications.

One streambed occurs in the SPA that is subject to the Clean Water Act (Figure 3). And, while not anticipated, the Corps may take jurisdiction over the concrete-lined flood channels in the SPA. Jurisdiction would be determined during consultation with the agency if/when impacts are proposed by a specific project.

5.1.2 State of California

California Environmental Quality Act

Primary environmental legislation in California is found in the CEQA and its implementing guidelines (State CEQA Guidelines), requiring that projects with potential adverse effects or impacts on the environment undergo environmental review. Adverse impacts to the environment are typically mitigated as a result of the environmental review process in accordance with existing laws and regulations.

California Endangered Species Act

The California Endangered Species Act (CESA) established that it is State policy to conserve, protect, restore, and enhance endangered species and their habitats. Under State law, plant and animal species may be formally designated Rare, Threatened, or Endangered by official listing by the California Fish and Game Commission. CESA authorizes that private entities may "take" plant or wildlife species listed as Endangered or Threatened under the FESA and CESA, pursuant to a federal Incidental Take Permit if the CDFW certifies that the incidental take is consistent with the CESA (Fish & Game Code Section 2080.1[a]). For State-only listed species, Section 2081 of the CESA authorizes the CDFW to issue an Incidental Take Permit for a State listed Threatened or Endangered species if specific criteria are met. There is only one State listed species with potential to occur in the SPA (Swainson's hawk; Table 3), and that potential is very low (Table 3).

Native Plant Protection Act

Sections 1900–1913 of the California Fish and Game Code (Native Plant Protection Act) direct the CDFW to carry out the Legislature's intent to "…preserve, protect and enhance endangered or rare native plants of this state." The Native Plant Protection Act gives the California Fish and Game Commission the power to designate native plants as "Endangered" or "Rare" and protect Endangered and Rare plants from take. There are no State Endangered or Rare plants with potential to occur in the SPA (Table 2).

California Fish and Game Code

California Fish and Game Code provides specific protection and listing for several types of biological resources. Section 1600 of California Fish and Game Code requires a Streambed Alteration Agreement for any activity that would alter the flow, change or use any material from the bed, channel, or bank of any perennial, intermittent, or ephemeral river, stream, and/or lake. Typical activities that require a Streambed Alteration Agreement include excavation or fill placed within a channel, vegetation clearing, structures for diversion of water, installation of culverts and bridge supports, cofferdams for construction dewatering, and bank reinforcement. Notification is required prior to any such activities, and CDFW will issue a Streambed Alteration Agreement with any necessary mitigation to ensure protection of the State's fish and wildlife resources. One streambed occurs in the SPA that is subject to California Fish and Game Code (Figure 3). The CDFW may also take jurisdiction over the concrete-lined flood in the SPA. Jurisdiction would be determined during consultation with the agency if/when impacts are proposed by a specific project.

Pursuant to California Fish and Game Code Section 3503, it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Raptors and owls and their active nests are protected by California Fish and Game Code Section 3503.5, which states that it is unlawful to take, possess, or destroy any birds of prey or to take, possess, or destroy the nest or eggs of any such bird unless authorized by the CDFW. Section 3513 states that it is unlawful to take or possess any migratory non-game bird as designated in the MBTA. These regulations could require that construction activities (particularly vegetation removal or construction near nests) be reduced or

eliminated during critical phases of the nesting cycle unless surveys by a qualified biologist demonstrate that nests, eggs, or nesting birds will not be disturbed, subject to approval by CDFW and/or USFWS. A number of species of birds are present in the SPA, and there is the possibility that some nest there.

Porter-Cologne Water Quality Control Act of 1970

The Porter-Cologne Water Quality Control Act of 1970 grants the State Water Resource Control Board and its regional offices power to protect water quality and is the primary vehicle for implementation of the State's responsibilities under Section 401 of the Clean Water Act. The Porter-Cologne Act grants the State Water Resource Control Board authority and responsibility to adopt plans and policies, regulate discharges to surface and groundwater, regulate waste disposal sites, and require cleanup of discharges of hazardous materials and other pollutants. Typically, the State Water Resource Control Board and RWQCB act in concert with the Corps under Section 401 of the Clean Water Act in relation to permitting fill of WUS.

5.1.3 City of San Bernardino

The Natural Resources and Conservation Element of the City's General Plan (City 2005) establishes policies related to biological resources. Those policies are listed in Table 4.

Table 4 CITY OF SAN BERNARDINO GENERAL PLAN POLICIES POTENTIALLY APPLICABLE TO DEVELOPMENT IN THE SPA	
Goal 12.1: "Conserve and enhance San Bernardino's biological resources."	
Policy 12.1.1	Acquire and maintain current information regarding the status and location of sensitive biological elements (species and natural communities) within the planning area, as shown on Figure NRC-1 (NR-3).
Policy 12.1.2	Site and develop land uses in a manner that is sensitive to the unique characteristics of and that minimizes the impacts upon sensitive biological resources (LU-1).
Policy 12.1.3	Require that all proposed land uses in the "Biological Resource Management Area" (BRMA), Figure NRC-2, be subject to review by the Environmental Review Committee (ERC). The SPA is not within a Biological Resource [Management] Area or Riparian Corridor shown on Figure NRC-2.
Policy 12.1.4	Require that development in the BRMA: a. Submit a report prepared by a qualified professional(s) that addresses the Proposed Project's impact on sensitive species and habitat, especially those that are identified in State and Federal conservation programs; b. Identify mitigation measures necessary to eliminate significant adverse impacts to sensitive biological resources; c. Define a program for monitoring, evaluating the effectiveness of, and ensuring the adequacy of the specified mitigation measures; and d. Discuss restoration of significant habitats The SPA is not within a Biological Resource [Management] Area or Riparian Corridor shown on Figure NRC-2.
Goal 12.2: "Protect riparian corridors to provide habitat for fish and wildlife."	
Policies **12.2.1** **12.2.2** **12.2.3** **12.2.4** **12.2.5**	There are no Riparian Corridors in the SPA that provide habitat for fish and wildlife.
Goal 12.3: "Establish open space corridors between and to protected wildlands."	
Policies **12.3.1** **12.3.2** **12.3.3** **12.3.4** **12.3.5**	There are no protected wildlands within or adjacent to the SPA.

6.0 IMPACT ANALYSIS

Potential impacts associated with implementation of the Specific Plan Project are analyzed below. The biological impacts are assessed according to guidelines set forth in Appendix G of the CEQA Guidelines. Mitigation would be required for impacts associated with future development in the SPA that are considered significant.

In order to determine whether impacts to biological resources may be significant, the following questions from Appendix G of the CEQA Guidelines were answered. Would future development in the SPA:

a.) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS?

b.) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFW or USFWS?

c.) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

d.) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?

e.) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

f.) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Mitigation would be required for impacts that are considered significant under these guidelines associated with future development in the SPA.

While the City's General Plan policies identified in Table 4 would serve to help guide development to reduce impacts to sensitive biological resources within the SPA, they would not be specific enough to guarantee that future development would not significantly impact sensitive biological resources. Therefore, project-specific biology studies could be required to determine the degree of impact associated with future development.

6.1 IMPACTS TO CANDIDATE, SENSITIVE, OR SPECIAL STATUS SPECIES

Would future development in the SPA have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS?

Three special status avian species were determined to have potential to occur in the SPA as follows. If the status of these species changes over the course of development of the SPA, the status change and analysis of impacts would be addressed in future project-specific biological technical reports per CEQA.

- **Burrowing Owl**—State Species of Species of Special Concern with low to moderate potential to occur in non-native grassland and ruderal communities in the SPA (Table 3). Wildlife species classified as State Species of Special Concern by the CDFW are not typically provided legal protection; however, there are exceptions for some species such as the burrowing owl.

  The following types of activities have potential to impact the burrowing owl, its nests or eggs, and destroy or degrade its potential habitat in the SPA: grading, disking, cultivation, earthmoving, burrow blockage, heavy equipment compacting and crushing burrow tunnels, flooding, burning, and mowing (if burrows are impacted; CDFW 2012). If burrowing owls have been documented to occupy burrows on a project site in the SPA, or within 500 feet of a project site in the past three years (CDFW 2012), the current scientific literature supports the conclusion that the habitat should be considered occupied, and mitigation should be required by the CEQA lead agency (CDFW 2012).

  Therefore, if the burrowing owl occupies a project site in the SPA, or habitat within 500 feet of a project site, construction of the project has potential to have a substantial adverse effect (significant impact) on this species, and mitigation may be required (see Section 7.1, *Burrowing Owl*).

- **California Horned Lark**—State Watch List species with low to moderate potential to occur in non-native grassland, ruderal, and ruderal/disced communities in the SPA (Table 3). As a State Watch List species, the California horned lark is not a Species of Special Concern, it is not State or federal listed, and it is not State Fully Protected. Its level of sensitivity is low. Impacts to this species from habitat loss would, therefore, be less than significant, and no mitigation would be required. Direct impacts to the species (i.e., direct mortality) from future development projects in the SPA would not be anticipated as the birds would be expected to fly away; no mitigation would be required. Impacts to nesting horned larks are addressed under Nesting Birds below.

- **Swainson's Hawk**—federal Bird of Conservation Concern and State Threatened species with very low potential to utilize non-native grassland, ruderal, and ruderal/disced communities in the SPA. Since these communities occur within a highly developed setting and are not located within the current breeding distribution for the species (the species winters in South America), impacts to the Swainson's hawk from future development projects in the SPA would not be anticipated, and no mitigation would be required.

- **Nesting Birds**—Nesting birds protected by California Fish and Game Code and the MBTA have potential to occur in the SPA. Five protected avian species (i.e., protected while nesting) were observed in the SPA (see Section 3.4, *Animal Species Observed*; the Eurasian collared-dove is not protected), although it is likely that more protected species are present.

Potential impacts to nesting birds could result if clearing of vegetation or construction occur during the nesting season (generally February through August and, for raptors and owls, January through August). Clearing of vegetation or construction activities during the nesting season could cause destruction or abandonment of active nests or mortality of adults, young, or eggs. Construction of a project during this time period could have a substantial adverse effect (significant impact) on nesting birds protected by California Fish and Game Code and the MBTA, and mitigation would likely be required (see Section 7.2, *Nesting Birds*). If vegetation clearing and construction occurs outside the nesting season(s), no mitigation would be required.

6.2 IMPACTS TO SENSITIVE NATURAL COMMUNITIES

Would future development in the SPA have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFW or USFWS?

There are no sensitive vegetation communities in the SPA (see Section 4.1, *Sensitive Vegetation Communities*). Therefore, future development in the SPA would not have a substantial adverse effect (significant impact) on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFW or USFWS. No mitigation would be required.

6.3 IMPACTS TO FEDERALLY PROTECTED WETLANDS

Would future development in the SPA have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

There are no wetlands in the SPA, but there is an ephemeral stream in the southern portion of the SPA that was delineated as non-wetland WUS (and non-wetland WS; streambed on Figure 3). There is potential for portions of this streambed to be impacted during future employment and neighborhood residential development in the SPA (Figure 3). Additionally, portions of the concrete-lined flood channels of Warm Creek and East Twin Creek, which may be regulated by the Corps (and CDFW), could be impacted during future neighborhood residential development in the SPA (Figure 3). Corps (and/or CDFW) jurisdiction over the concrete-lined flood channels would be determined during consultation with the agency(ies) if/when impacts are proposed by a specific project.

Impacts to federal (and State) waters require permitting under Sections 404 and 401 of the federal Clean Water Act (and Section 1600 of California Fish and Game Code), which means that impacts to the streambed (and potentially to portions of concrete-lined Warm and East Twin creeks) would be expected to have a substantial adverse effect (significant impact) on WUS (and WS), and mitigation would likely be required (see Section 7.3, *Non-wetland Waters of the U.S. [and State]*).

6.4 IMPACTS TO WILDLIFE MOVEMENT AND NURSERY SITES

Would future development in the SPA interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?

The SPA does not provide habitat that connects otherwise isolated areas of habitat, nor does it provide habitat for movement or dispersal of plants and animals, and wildlife nursery sites are not expected to occur in the SPA based on its developed and disturbed nature. Therefore, future development in the SPA would not interfere with the movement of wildlife or impede the use of wildlife nursery sites, and no mitigation would be required.

6.5 CONFLICT WITH LOCAL POLICIES OR ORDINANCES

Would future development in the SPA conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

As presented in Table 4, future development in the SPA would not conflict with local policies protecting biological resources; no mitigation would be required.

6.6 CONFLICT WITH PLAN PROVISIONS

Would future development in the SPA conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan?

There is no adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan that influences land use planning in the City. Therefore, future development in the SPA would not conflict with plan provisions; no mitigation would be required.

7.0 MITIGATION FRAMEWORK

As indicated at the end of Section 6.0, *Impact Analysis*, policies established by the City's General Plan would serve to help guide development to reduce impacts to sensitive biological resources within the SPA. However, more specific mitigation measures are expected to be required to ensure that impacts to sensitive biological resources are either avoided or minimized.

As identified in Section 6.0, *Impact Analysis*, future development in the SPA has the potential to significantly impact the burrowing owl, nesting birds, and non-wetland WUS (and WS). As required by CEQA, each future development that could impact sensitive biological resources would be required to conduct project-specific biological surveys and prepare a biological technical report in accordance with City requirements. The report would include an analysis to determine the potential impacts associated with the proposed development in accordance with the CEQA Significance Thresholds. The report would also specify mitigation measures required to avoid impacts or minimize significant impacts to sensitive biological resources to less-than-significant levels.

Based on the known sensitive resources in the SPA from the August 6, 2015 surveys, the following types of mitigation could be required for potential significant impacts to the burrowing owls, nesting birds, and non-wetland WUS (and WS) identified in Section 6.0, *Impact Analysis*. These mitigation measures would avoid or minimize the impacts to less-than-significant levels.

7.1 BURROWING OWL

If potential burrowing owl habitat occurs on a project site in the SPA, then the following types of measures may be required to mitigate for potential impacts to the burrowing owl.

A pre-construction, take avoidance survey shall be conducted in accordance with the burrowing owl survey guidelines in the Staff Report on Burrowing Owl Mitigation (Staff Report; CDFW 2012). The guidelines recommend conducting four site visits: 1) at least one between February 15 and April 15 and 2) a minimum of three site visits, at least three weeks apart, between April 15 and July 15, with at least one visit after June 15. The pre-construction survey should be completed no less than 14 days prior to initiating ground disturbance. The survey should cover the project site and all potential burrowing owl habitat within 500 feet of the site as feasible. If there is no sign of burrowing owl occupation, then no mitigation is required. "Occupation" is defined as a burrow that shows sign of burrowing owl occupancy within the last three years. If sign of occupation is present, the following mitigation shall be implemented.

Direct impacts to occupied burrowing owl burrows shall be avoided during the breeding period from February 1 through August 31 and during the non-breeding season (CDFW 2012). Burrow exclusion is a technique of installing one-way doors in burrow openings during the non-breeding season to temporarily exclude burrowing owl, or permanently exclude burrowing owl and close burrows after verifying burrows are empty by site monitoring and scoping. Eviction of burrowing owl during the non-breeding season would require prior CDFW approval of a Burrowing Owl Exclusion Plan (CDFW 2012).

Mitigation for direct, permanent impacts to nesting, occupied, and satellite burrows and/or burrowing owl habitat shall be required such that the habitat acreage and number of burrows and burrowing owls impacted are replaced based on the burrowing owl life history information provided in Appendix A of the Staff Report (CDFW 2012), site-specific analysis, and consultation with the CDFW. A Burrowing Owl Mitigation Plan shall be prepared and submitted to the City and CDFW for approval prior to impacts to the burrowing owl and/or its habitat.

7.2 NESTING BIRDS

To mitigate for potential impacts to nesting birds from vegetation clearing and construction of future projects in the SPA, the following types of measures may be required.

Vegetation clearing shall take place outside the general avian breeding season (which generally occurs from February through August). Tree removal/trimming shall take place outside the raptor/owl breeding season (which generally occurs from January through August). If vegetation clearing and tree removal/trimming cannot occur outside the general avian and raptor/owl breeding seasons, then a pre-construction survey for avian nesting shall be conducted by a qualified biologist on the project site and within 500 feet of the site (on undeveloped land and as

feasible) within seven calendar days prior to the start of vegetation clearing/construction. The project applicant shall provide the City with the results of the pre-construction survey for approval prior to commencement of vegetation clearing and tree removal/trimming.

If nests are not observed, and the City approves the results of the pre-construction survey, vegetation clearing and tree removal/trimming may proceed. If nests are found, work may proceed provided that activity is: 1) located at least 500 feet from raptor/owl nests; 2) located at least 300 feet from federal or State listed bird species' nests; and 3) located at least 100 feet from non-listed bird species' nests. A qualified biologist shall conspicuously mark the buffer so that vegetation clearing and tree removal/trimming does not encroach into the buffer until the nest is no longer active (i.e., the nestlings fledge, the nest fails, or the nest is abandoned, as determined by a qualified biologist).

7.3 NON-WETLAND WATERS OF THE U.S. (AND STATE)

To mitigate for potential impacts to non-wetland WUS (and State; streambed [and potentially the Warm Creek and East Twin Creek flood channels]) from construction of future employment and neighborhood residential projects in the SPA, the following types of measures may be required.

Non-wetland WUS (and WS) shall be avoided to the extent feasible. Where avoidance is not feasible, mitigation will likely be required by federal and State regulations. The types of mitigation required may include on-site protection, enhancement, and/or restoration. Mitigation is typically required at a 1:1 ratio and to be accomplished in close proximity to the impacts or at least in the same watershed. The final mitigation requirements and locations for the mitigation, however, are subject to the permit process with the Corps (and CDFW).

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Appendix A

Plant Species Observed

Appendix A

PLANT SPECIES OBSERVED

SCIENTIFIC NAME	COMMON NAME
Adoxaceae	
Sambucus nigra ssp. *caerulea*	blue elderberry
Amaranthaceae	
*Amaranthus albus**	prostrate pigweed
*Amaranthus blitoides**	prostrate amaranth
Arecaceae	
*Washingtonia robusta**	Mexican fan palm
*Phoenix canariensis**	Canary Island date palm
Asteraceae	
Erigeron canadensis	horseweed
Helianthus annuus	western sunflower
Sonchus asper ssp. *asper**	prickly sow-thistle
Xanthium strumarium	cocklebur
Brassicaceae	
*Sisymbrium orientale**	Indian hedgemustard
Caryophyllaceae	
Spergula arvensis	stickwort
Chenopodiaceae	
*Chenopodium album**	lamb's quarters
*Salsola australis**	Australian tumbleweed
Convolvulaceae	
*Convolvulus arvensis**	field bindweed
Euphorbiaceae	
*Euphorbia maculata**	spotted spurge
*Ricinus communis**	castor bean
Fabaceae	
*Albizia julibrissin**	Persian silk tree
*Medicago polymorpha**	bur-clover
*Medicago sativa**	alfalfa
*Melilotus albus**	white sweetclover
*Melilotus indicus**	Indian sweetclover

Appendix A (continued)

PLANT SPECIES OBSERVED

SCIENTIFIC NAME	COMMON NAME
Fabaceae (continued)	
*Parkinsonia aculeate**	Mexican palo verde
*Robinia neomexicana**	New Mexican locust
Myrtaceae	
*Eucalyptus globulus**	Tasmanium bluegum
Poaceae	
*Avena barbata**	slender wild oat
*Bromus diandrus**	ripgut grass
Bromus madritensis ssp. *rubens**	red brome
*Cynodon dactylon**	Bernuda grass
*Leersia oryzoides**	rice cutgrass
*Paspalum dilatatum**	Dallis grass
Portulacaceae	
*Portulaca oleracea**	purslane
Salicaceae	
Populus fremontii ssp. *fremontii*	western cottonwood
Simaroubaceae	
*Ailanthus altissima**	tree of heaven
Solanaceae	
Datura wrightii	sacred thorn-apple
*Nicotiana glauca**	tree tobacco
Zygophyllaceae	
Tribulus terrestris	puncture vine

*Non-native species

A CULTURAL RESOURCES OVERVIEW AND INVESTIGATION FOR THE WATERMAN & BASELINE NEIGHBORHOOD TRANSFORMATION SPECIFIC PLAN PROJECT AREA, SAN BERNARDINO, COUNTY OF SAN BERNARDINO COUNTY, CALIFORNIA

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A CULTURAL RESOURCES OVERVIEW AND INVESTIGATION FOR THE WATERMAN & BASELINE NEIGHBORHOOD TRANSFORMATION SPECIFIC PLAN PROJECT AREA, SAN BERNARDINO, COUNTY OF SAN BERNARDINO COUNTY, CALIFORNIA

by,

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McKenna et al., Whittier CA

INTRODUCTION

The proposed Waterman & Baseline Neighborhood Transformation Specific Plan (Specific Plan; SP) has been initiated by the City of San Bernardino to promote the transformation of the neighborhood centered around the intersection on Waterman Avenue and Baseline Avenue (Figure 1). The Specific Plan project area involves approximately 710 acres centrally located in the City of San Bernardino and loosely bounded by Sierra Way to the west, Tippecanoe Avenue and the flood control channel on the east, 3rd Street to the south, and Highland Avenue to the north.

McKenna et al. (Appendix A, of Whittier, California, initiated the cultural resources overview and investigation of this area at the request of PlaceWorks, Santa Ana, California. This investigation was designed to identify previously recorded and/or unrecorded resources within the project area boundaries, assess the relative sensitivity for buried resources, and to provide recommendations for future studies, as deemed appropriate.

The proposed project will require a General Plan amendment(s) and Zone Change(s), thereby necessitating compliance with both SB-18 and AB-52. These tasks are considered government-to-government consultation between the City of San Bernardino and local Native American communities. This technical report has been prepared for compliance with the California Environmental Quality Act, as amended, and City guidelines for the completion of cultural resources studies.

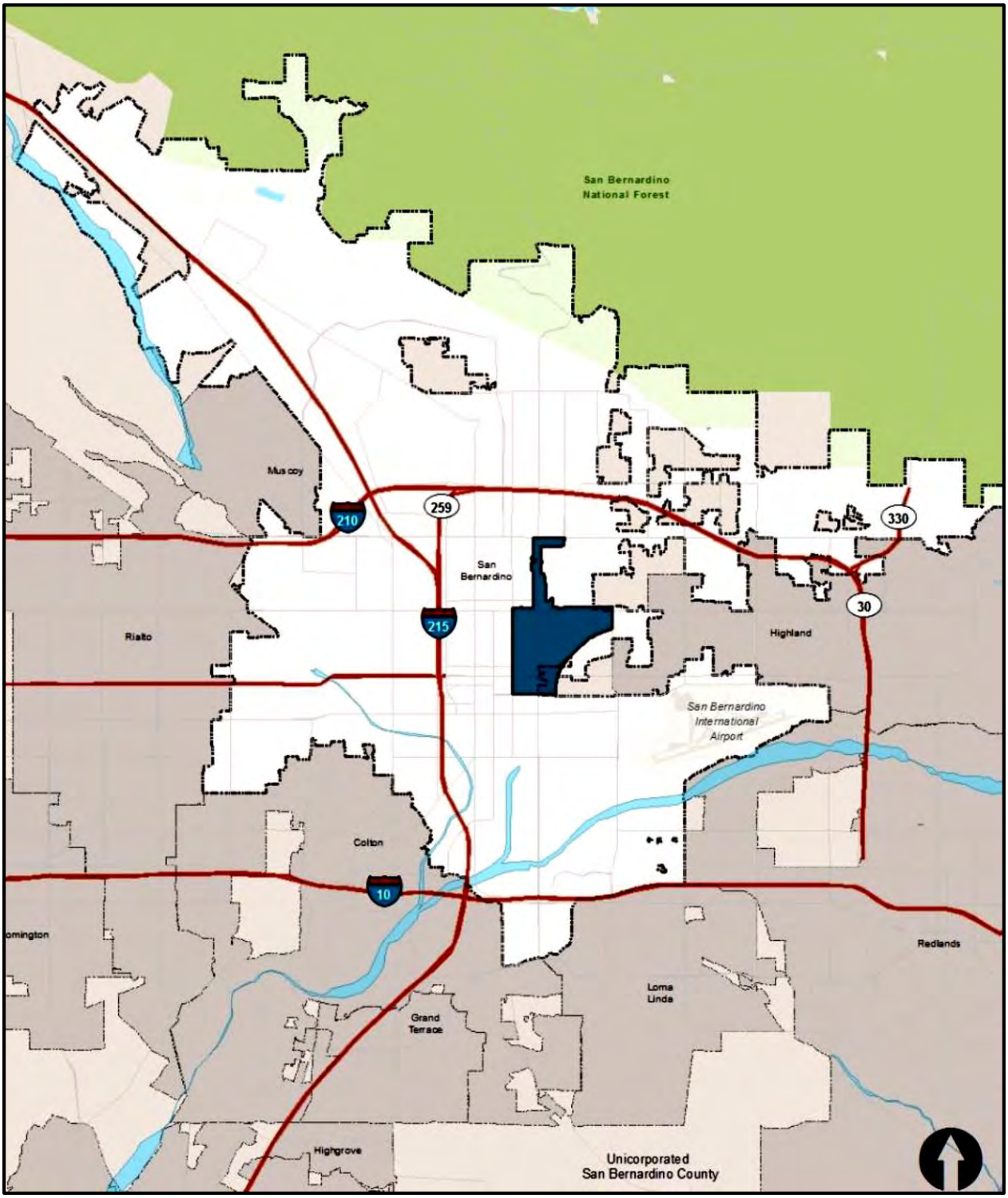

Figure 1. Project Area Boundaries.

Upon adoption of a General Plan amendment and Zone Change, the Plan area would be designated a Specific Plan area within the General Plan and unique zones will established on the City's zoning map. The Waterman & Baseline Neighborhood Transformation Specific Plan will establish an area-wide set of development regulations and requirements, and will regulate land uses and development densities, guide circulation and infrastructure planning, provide financing mechanisms for public improvement. The Specific Plan will also have legal authority as a regulatory document.

PROJECT DESCRIPTION

The Specific Plan area is currently designated for residential, commercial, and industrial uses by the City of San Bernardino's 2005 General Plan. The majority of properties fronting Waterman Avenue are designated "Commercial Office" north of 13th Street and "Commercial General-1" south of 13th to 3rd Street. Along Baseline Street, most of the parcels fronting the corridor from Sierra Way to Pepper Tree Lane are designated "Commercial General-1" and parcels from Pepper Tree Lane to Tipeecanoe [sic] Avenue are designated "Commercial Heavy."

There are two public facility sites within the Specific Plan area: including Robert E. Neal Elementary School and the Pioneer Memorial Cemetery. Just north of Pioneer Cemetery is the historic Jewish Cemetery and there is on large public park (Seccombe Lake).

In the southern portion of the Specific Plan area, east of Waterman Avenue and between 9th and 6th Street, there is a clustering of parcels designated as "Light Industrial", and a second smaller cluster designated for "Heavy Industrial." In the southwestern corner of the SP project area there is also a small grouping of properties designated for "Commercial Office." The remaining parcels are designated for residential uses, including "Residential Suburban" (4.5 du/ac), "Residential Urban" (9 du/ac), "Residential Medium" (14 du/ac), "Residential Medium High" (24 du/ac), and "Residential High" (30 du/ac).

Following adoption of the Specific Plan, the project area will be officially designated as a "Specific Plan area" by the City of San Bernardino General Plan (per PlaceWorks 2015), reading as follows:

City of San Bernardino Zoning Map

> The zoning of the Specific Plan area closely matches the land use designations shown in the 2005 General Plan. The majority of properties fronting Waterman Avenue are zoned Commercial Office north of 13th Street and

Commercial General-1 south of 13th to 3rd Street. Along Baseline Street, most of the parcels fronting the corridor from Sierra Way to Pepper Tree Lane are zoned Commercial General-1 and parcels from Pepper Tree Lane to Tippecanoe Avenue are zoned Commercial Heavy. According to the Zoning Map, Robert E. Neal Elementary School and the Pioneer Memorial Cemetery are both zoned as Public Facilities and Seccombe Lake is zoned as a Public Park. In the southern portion of the Specific Plan area, east of Waterman Avenue, there is a clustering of parcels zoned Light Industrial fronting the south side of 9th Street, and a smaller grouping of parcels zoned Heavy Industrial closer to Waterman Avenue and also fronting along 9th Street. In the southwestern corner of the Specific Plan area there is a small grouping of properties zoned Commercial Office fronting Sierra Way between 5th Street and 3rd Street. The remaining parcels in the Specific Plan area are designated for residential uses including: Residential Suburban (4.5 du/ac), Residential Urban (8 du/ac), Residential Medium (12 du/ac), Residential Medium High (24 du/ac), and Residential High (31 du/ac) … Following adoption of the Specific Plan, the Specific Plan area will have unique zones established for Plan Area properties that will be shown on the City of San Bernardino Zoning Map.

Planning Districts

To implement the vision for the neighborhood, the Specific Plan creates six "districts" that together would achieve a mix of residential uses and commercial uses … Overall, the implementation of the Specific Plan would increase existing residential uses from an estimated 2,049 units to approximately 4,341 units, and would increase commercial uses from roughly 2,366,385 square feet to approximately 4,428,127 square feet. The six districts included in the Specific Plan are:

District 1 - Uptown Professional District. The Uptown Professional District is approximately 82 acres located in the northern portion of the Specific Plan area. It includes all the parcels fronting Waterman Avenue between Highland Avenue and 13th Street. The Specific Plan seeks to consolidate the medical uses scattered along Waterman Avenue into a focused district that leverages the demand generated by St. Bernardine Medical Center. District 1 will be zoned entirely as a mixed use district allowing for office uses, neighborhood serving commercial uses and limited residential uses

up to 20 dwelling units an acre with a focus on senior housing. The Specific Plan also seeks to create a stronger connection to the Midtown District for its employees, patients, and visitors.

District 2 - Westside Neighborhood District. The Westside Neighborhood District includes approximately 127 acres at the western end of the Specific Plan area. The boundaries of this district are formed by Sierra Way to the west, Waterman Avenue to the east, and 5th Street on the south. The district also includes the parcels fronting both sides of Baseline Street. The primary vision for this district is to improve and preserve the existing single family neighborhoods to the west of Waterman Avenue. The District would also encourage mixed use development focusing on neighborhood serving commercial uses along Baseline Street and Waterman Avenue.

District 3 - Midtown Core District. Located in the center of the Specific Plan area, the Midtown Core district is designated to become the heart of the neighborhood. The boundaries of the district are Waterman Avenue on the west, 9th Street on the south, with no formal roadway boundaries to the north or east. Centered on a redesigned Olive Avenue, this 120-acre district is envisioned as a pedestrian-oriented avenue with a variety of housing options, commercial shops and eating establishments along Waterman & Baseline Avenues– all within walking distance to a repurposed public K-12 school campus. Mixed use development will be encouraged including residential uses up to 30 dwelling units an acre.

District 4 - Eastside Neighborhood District. The Eastside Neighborhood District includes approximately 144 acres at the eastern end of the Specific Plan area adjacent to the Midtown Core. The boundaries of this district are loosely formed by Tippecanoe Avenue and the flood control channel to the east and south, the parcels fronting Baseline to the north, with no formal boundary to the west. This district is envisioned to have mixed use development along Baseline Street that complements and enhances the existing single family neighborhoods to the south. As many of the parcels in this district are located in or adjacent to the flood control channel a linear park or trail system is envisioned to run along the southern and eastern edges of the district.

District 5 - Gateway District. The Gateway District will welcome residents and visitors shape to the Specific Plan area can connect and distinguish the

neighborhood from the Civic Center/Downtown. The Gateway Lake district is approximately 97 acres located south of 7th Street, east of Sierra Way, north of 3rd Street and west of Waterman Avenue. This district is envisioned to promote the identity of San Bernardino through enhanced landscaping and signage and high quality mixed-use development at Seccombe Lake. District 5 allows for mixed use development along Waterman Avenue, with a small single family enhancement area in the center of area. The majority of the district, including Seccombe Lake, will allow for higher density residential development up to 30 dwelling units per acre with compatible neighborhood serving commercial uses in the form of vertical or horizontal mixed use.

District 6 - Employment District. The sixth and final district has been identified as an employment generating and flexible business mixed use district. The 140-acre district is located south of 9th Street, east of Waterman Avenue, north of 3rd Street and west of the flood control channel. While the existing uses on-site are overwhelmingly auto-related, the implementation of this Specific Plan will transform this district into a hub of office, commercial, and business park uses (mix of business and support services) to establish new job opportunities in close proximately to new and existing residential development. With the implementation of the Specific Plan the parcels fronting Waterman Avenue will allow for development of mixed use projects including residential up to 20 dwelling units per acre. Traveling south, between 5th and 4th Streets there is a small grouping of single family homes that are zoned to remain as a residential neighborhood. Finally, similar to District 4, many of parcels in this district are located in or adjacent to the flood control channel which presents an opportunity to create a linear park or trail system along the eastern edge of the district.

PROJECT LOCATION AND SETTING

The Waterman & Baseline Neighborhood Transformation Specific Plan project area is located at the center/east center of the City of San Bernardino, an urban/metropolitan area also generically referred to as being within the "Inland Empire." The City of San Bernardino has a population of approximately 210,000 residents in an overall area of 81 square miles in the San Bernardino Valley of Southern California. The City serves as the County seat and the City, itself, is the 17th largest city in the State of California. Cities bounding San Bernardino include Rialto, Colton, Loma Linda, Redlands, Highland and Muscoy (see Figure 1).

The Specific Plan project area is located in the Inland Empire and provides access to downtown San Bernardino, the San Bernardino and Ontario airports, and major freeways. The area contains historic residential neighborhoods and structures, existing building stock, convenient connections to local and regional transportation networks and major economic development centers, and diverse demographics. Historically, the area surrounding the intersection of Waterman Avenue and Baseline Street Avenue was referred to as the "Midtown district" in the City of San Bernardino. Major landmarks within the area include: St. Bernardine's Medical Center, the Waterman Gardens public housing project, the Robert E. Neal Elementary School, Seccombe Lake Park, the Pioneer Memorial Cemetery, the Jewish Cemetery, the U.S. Army Reserve Center, and some of the offices for the County of San Bernardino.

The Specific Plan boundaries are loosely formed by Sierra Way to the west, Tippecanoe Avenue and the flood control channel on the east, 3rd Street to the south and Highland Avenue to the north (Figures 2 and 3). The area covers approximately 710 acres and includes portions of Township 1 North, Range 4 West, Sections 34 and 35; and Township 1 South, Range 4 West, Sections 1, 2, and 3.

The SP project area is generally associated with Lytle Creek floodplain (from north/northwest of the project area), but also associated Warm Creek, originating from the northeast. Drover (1979) characterized the area as part of the Peninsular Range geologic province with granitic outcrops and occasional pools of standing water. Citing Drover (1979:3-4), the native soils are described as "... decomposing granite and are relatively shallow, erosion cuts showing two feet in depth with more significant gradation in the valley bottoms.

Some basalt outcrops are also present, rock thereof showing thermal cracking from local brush fires some of which appear to have occurred recently." Gray (1961:57) noted marine sedimentation occurred in the early Miocene and probably continued into the Pliocene epochs, resulting in the formation of the Santa Ana Mountains. Flooding relief was moderate, but erosion continues to carve deep cuts resulting in the surrounding land forms (McKenna 1988:7). Geological testing was completed in nearby Fontana by Leighton and Associates, Inc. (1988) has dated the older alluvium in the area to approximately 25,000 years B.P. (before present). Additional data indicated the surface areas continued to erode while the substrate remains relatively intact.

Despite the urban developments within the SP project area, the area is dominated by the presence of sandy top soils. The Desert Sage Scrub habitat, characterized by the presence of buck-wheat, sage, and deer weed, would have been present, but has been replaced by grasses, ice plants along the freeway slopes, and a few pepper trees. Buckwheat is still evident (see Bean and Saubel 1972; Mead 1972; Drover 1979; and ARMC

1980). The removal of native vegetation may be attributed to both historic and modern impacts to the area.

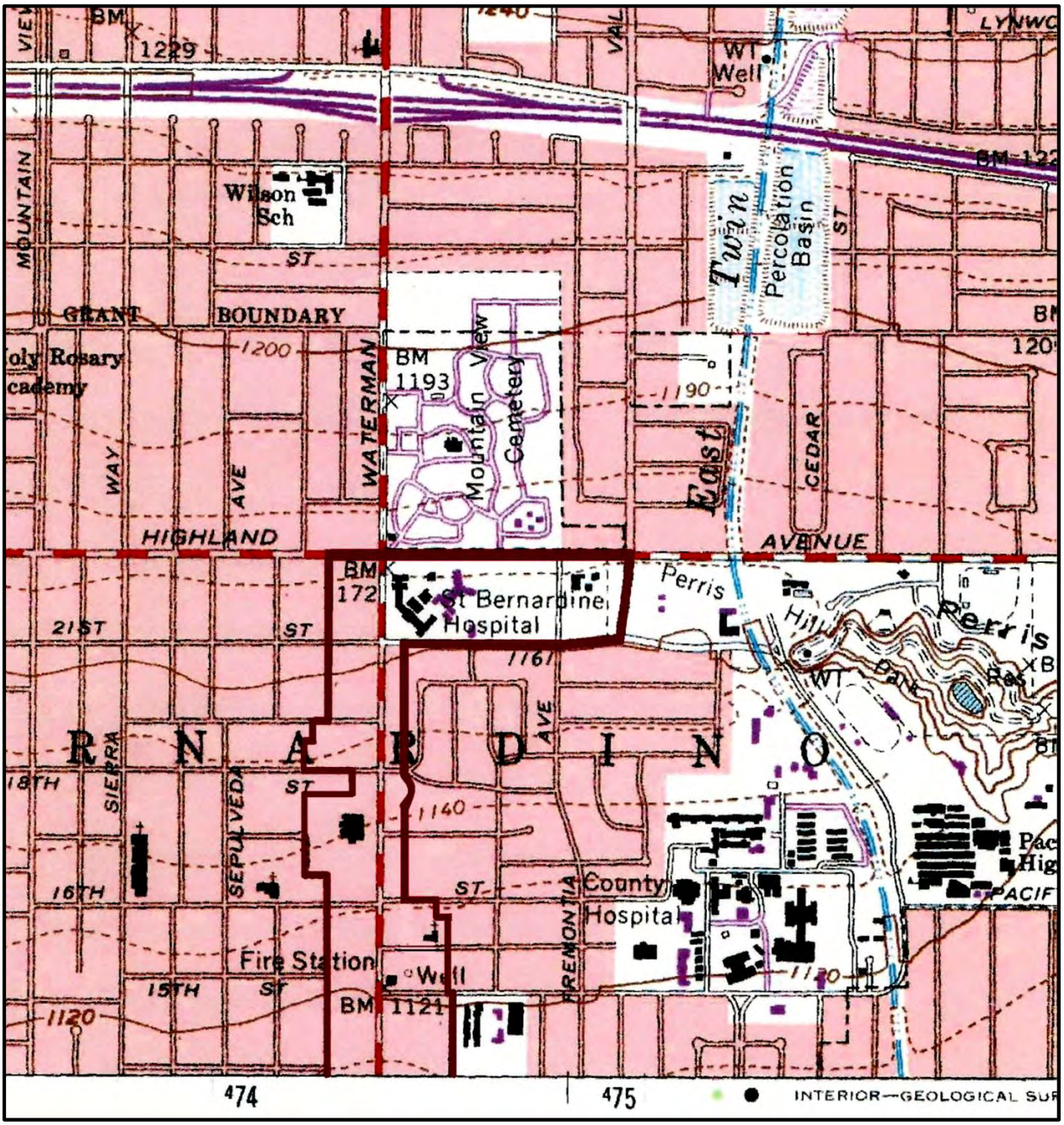

Figure 2. Northern Extension of the SP Project Area (USGS San Bernardino North Quadrangle).

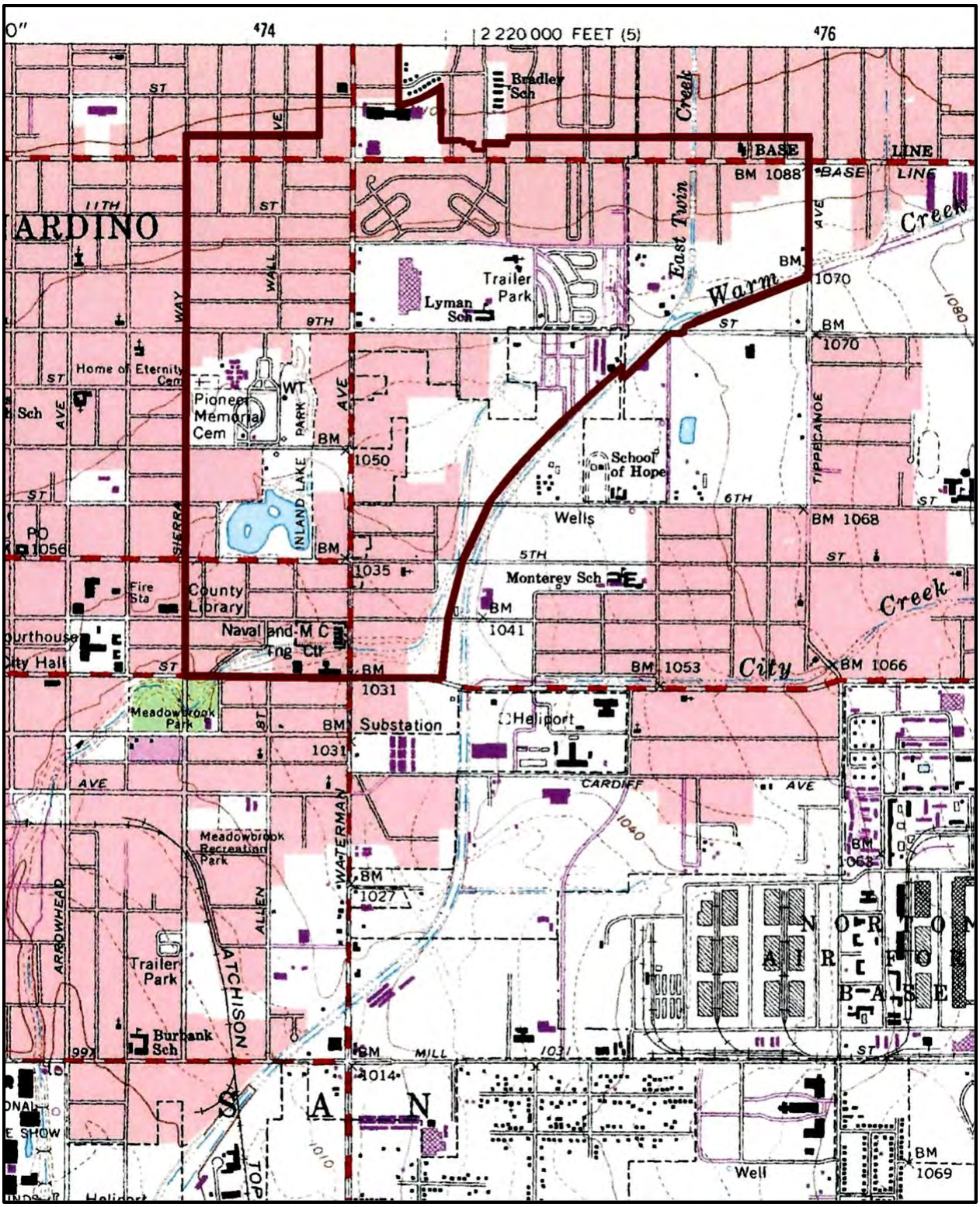

Figure 3. Southern Extension of the SP Project Area (USGS San Bernardino South Quadrangle).

This portion of San Bernardino County is reported to have been considerably different during prehistoric times (Bissell 1993:3-4; Petrified cypress tree remains have been recovered from the nearby Puente Hills, R. Reynolds 1994, Personal Communication). Heusser (1978) postulated pines may have once covered the general area between 10,000 and 6000 B.C. These dates are synonymous with the Early Prehistoric Horizon (pre 6000 B.C.) currently accepted by Southern California archaeologists.

A shift in weather conditions (i.e. warmer weather) resulted in the replacement of pines with oak woodland and, eventually, grasslands. According to Heusser (1978), the grasslands were re-placed by sage scrub and chaparral during the Late Prehistoric Horizon (post A.D. 750).

Natural resources available to prehistoric (and historic) populations can be found within a relatively short distance of the current project area – in the San Gabriel and San Bernardino Mountains, Lylte Creek, and other associated blue-line drainages. These include the resources associated with the nearby Coastal Communities (i.e. saltwater estuaries, beach and coastal strand habitats, and the marine community).

Riparian woodlands, fresh water marsh lands, grasslands, oak woodlands, additional scrub communities, and chaparral can all be identified in the general area. Studies of a basin identified south and west of the current project area yielded archaeological data addressing the presence of a fresh water marsh/estuary exploited by prehistoric populations (McKenna 1992).

CULTURE HISTORY BACKGROUND

- Prehistory -

The current project area is located in an ethnographic area associated with both the Gabrielino (*Tongva*) of the Los Angeles, San Gabriel, Rio Hondo, and Santa Ana River drainage (roughly Los Angeles and western San Bernardino and Riverside Counties) of today (McCawley 1996:23; Kroeber 1925:621; and Bean and Smith 1978:538), and the Serrano of northwestern Riverside and southwestern San Bernardino Counties.

McCawley (1996: 55), in his most recently published volume on the Gabrielinos, ascribes the Gabrielino territory to include the current project area, although others would assign the area to Serrano or Luiseno territory – and possibly, Cahuilla. It is essentially a crossroads where all four Native American populations overlap. McCawley asserts that the ethnographic Gabrielinos, his “first Angelinos”, were not the same culture that first inhabited the area (1996:1), a premise which is gaining strength in the archaeological community.

A paper presented at the Natural Resources in the Puente Hills-Chino Hills Corridor Symposium: Implications for Land Use and Planning (McKenna (1995) presented this same argument. The Gabrielino, as currently defined, are recognized as a society identified by Late Prehistoric/Proto-historic ethnographic records and archaeological data identifying Late Prehistoric occupation of Southern California. Changes identified between the earlier periods and the Late Prehistoric Period are evident in the archaeological record and in variations seen in technologies, social/community patterns and, in some cases, population estimates.

Populations preceding the “Gabrielino,” while related, can be identified as separate or variant forms of the Gabrielino culture, but originating with the Gabrielino. As such, there is little evidence to separate the Gabrielino/Tongva from their surrounding relatives (i.e. the Serrano or Luiseno), except by geographical association with the various Mission. In this case, the term “Gabrielino” is a reference derived from the Spanish Mission Period and reflect Mission settlement associations (Mission San Gabriel de Arcangel), not prehistoric kinship, lack of kinship, societal commonality or variation.

Early studies of the Southern California Native populations emphasized anthropological and/or ethnographic studies (see Smith and Taggart 1909; Benedict 1924; Bolton 1927; Robinson 1939; and Kroeber 1925). More recently, however, the investigations of the Gabrielino have relied on archaeological data (i.e. Drover 1980; Drover, Koerper, and Langenwalter 1983; McKenna 1985 and 1986; Hudson 1969 and 1971; Rice and Cottrell 1976; Wallace 1955; Warren 1968; Greenwood 1978; and Mason et al. 1994; etc.). Additional studies have been presented in association with the Society for California Archaeology, presenting updated information on Southern California in general.

The Native American populations utilized numerous plants and animals for food, shelter, and medicines. Citing Kroeber (1976: 649-650), they used seeds most often, followed by foliage, shoots, fruits, and berries. Mountain shrubs, ash, elder, and willow were used for shelters and tool materials (e.g. bows). Over twenty plants were used regularly for medicinal purposes. Fauna used as food sources included deer, rabbits, wood rats, squirrels, quail, and ducks. Animals specifically not used were dog, coyote, bear, tree squirrel, pigeon, dove, mud hen, eagle, buzzard, raven, lizards, frogs, and turtles (Kroeber 1976: 652).

Along the coast, the people regularly exploited the wetlands and ocean resources. They used numerous styles of bows, bedrock mortars, portable mortars, pipes, chisels, metates, manos, and various forms of chipped stone tools. Prior to the establishment of the Mission system, populations tended to live in larger villages with a series of "daughter" or

"satellite" sites (limited activity areas) with lesser populations. Seasonal migration was practiced for the exploitation of resources and protection from seasonal weather conditions (Scientific Resource Surveys 1979:7). Cooking was generally conducted outdoors with hearths within structures usually used for heat.

Archaeological data and correlations with ethnographic data have resulted in the determination of a chronology for Southern California prehistoric times. Data provided by Wallace (1955), Warren (1968) and later by Koerper and Drover (1983) and Mason (1984; summarized in McKenna 1986). The chronology generally accepted for Southern California coastal sites is as follows:

> Early Man Horizon: Pre-dating 6,000 B.C.; is characterized by the presence of large projectile points and scrapers, suggesting a reliance on hunting rather than gathering;
>
> Milling Stone Horizon: 6,000 to 1,000 B.C.; characterized by the presence of hand stones, milling stones, choppers, and scraper planes; tools associated with seed gathering and shell fish processing with limited hunting activities; evidence of a major shift in the exploitation of natural resources;
>
> Intermediate Horizon: 1,000 B.C. to A.D. 750; reflects the transitional period between the Milling Stone and the Late Prehistoric Horizons; little is known of this time period, but evidence suggests interactions with outside groups and a shift in material culture reflecting this contact;
>
> Late Prehistoric Horizon: A.D. 750 to European Contact; characterized by the presence of small projectile points; use of the bow and arrow; steatite containers and trade items, asphaltum; cremations; grave goods; mortars and pestles; and bedrock mortars.

Investigations and analyses of sites in the Newport Bay/Irvine area of Orange County (Mason and Peterson 1994) have yielded significant data resulting in refinements of the Coastal Chronology. Their conclusions were based on the radiocarbon dates from 326 samples representing thirty-one archaeological sites or cultural contexts. Summarizing their results, Mason and Peterson (1994:55) found that the majority of sites were occupied during the Milling Stone (Horizon) period or the Late Prehistoric (Horizon) period "... without much overlap ...". Only four sites yielded results suggesting occupation during more than one cultural period (i.e. CA-ORA-64).

In a few instances, dates suggested occupation during the Intermediate (Horizon) period. Mixtures of dates appeared in limited areas and could be directly associated with areas of agricultural activities. The frequency distribution of radiocarbon dates from the Mason and Peterson investigations were grouped in blocks of fifty year intervals and yielded a range from of dates from 200 B.P. (before present) to 9280 B.P. (dates from CA-ORA-246 indicate occupation of the Newport Bay area as early as the Paleo-Coastal period or (Early Man Horizon).

Mason and Peterson's conclusions (1994:57) do not necessarily change the basic chronology, but distinguish more individualistic periods of occupation that are not necessarily evident in the analysis of an artifact assemblage. Their refined chronology is presented in Table 1.

Table 1. Refined Coastal Chronology as Defined by Mason and Peterson (1994).

Cultural Horizons	Defined 1986	Cultural Periods	Redefined 1994	Temporal Correlations
Paleo-Coastal	Pre-6000 B.C.	Paleo-Coastal	Pre-8000 B.P.	Pre-6000 B.C.
Milling Stone	6000 to 1000 B.C.	Milling Stone 1	8000 to 5800 B.P.	6000 to 3800 B.C.
		Milling Stone 2	5800 to 4650 B.P.	3800 to 2650 B.C.
		Milling Stone 3	4650 to 3000 B.P.	2650 to 1000 B.C.
Intermediate	1000 B.C. to A.D. 750	Intermediate	3000 to 1350 B.P.	1000 B.C. to A.D. 650
Late Prehistoric	A.D. 750 to European Contact	Late Prehistoric 1	1350 to 650 B.P.	A.D. 650 to 1350
		Late Prehistoric 2	650 to 200 B.P.	A.D. 1350 to Contact

The Mason and Peterson chronology emphasizes that the definition of sites by artifact assemblage, as used to established earlier chronologies, is still valid. However, with the modern technology and site dating techniques, site occupations can be more definitively ascertained and such studies have resulted in determining that Milling Stone and Late Prehistoric sites are relatively discrete. Variations appear within these two generalized periods which can be explained by temporally discrete assemblages and occupations. Future studies of sites yielding statistically valid artifact assemblages and radiocarbon samples can be conducted to further the under-standing of Native American activities in the area of Southern California and in understanding the relative lack of data for the Intermediate Horizon/ period.

- The Historic Period -

The earliest known records of European contact with Southern California Native Americans date to the mid-1500s, representing minor contact during early explorations by the Spanish. Intensive contact was not established until the 1770s, when Father Garces traversed the Mojave Desert and entered coastal Southern California through the Cajon Pass (Walker 1986). In the 1770s, the Spanish padres, under the direction of Junipero Serra, began the process of establishing a series of missions throughout Alta California, as California was then known.

Noted earlier, the project area is within the boundaries of lands held by the Mission San Gabriel de Archangel. There was no mission in the San Bernardino Valley. The area was under the general jurisdiction of the Mission San Gabriel de Archangel and this Mission serviced the local population (Native American and others) through the establishment of the *Asistencia* in present-day Redlands. Lyman (1996:59) references the use of the Asistencia by Mormon settlers after 1850. Whitehead (1978: 142) states:

> In California the San Bernardino Mission in the San Bernardino alley, which was an extension of the San Gabriel Mission, had progressed well, except for some raids by the desert Indians from the north. In 1829, however, a large group of Indians attacked the mission itself [Asistencia], destroying the buildings and stealing or scattering the livestock. The San Gabriel padres did not abandon the neophytes this time, but immediately rebuilt the mission on the same grounds, and made it more substantial than before.

In general, the various missions continued to hold large tracts until the Mexican government declared its independence from Spain and issued orders for the secularization of the Missions (ca. 1824). By 1833-34, the majority of Mission lands were taken from the Catholic Church and reissued to individuals who had served as Spanish or Mexican soldiers, settlers, financiers, etc. The Mexican government hoped to initiate a pattern of settlement in Alta California by relocating populations from other Mexican settlements to recently established Alta California settlements (Hanna 1951; McWilliams 1973; Dumke 1944; and Scott 1977).

Maps provided by Avina (1932); the Bureau of Land Management; and Beck and Haase (1977) illustrate the extent of the Rancho/Grant system. In this case, the City of San Bernardino is within the historic boundaries of the Rancho San Bernardino. Avina (1932:68) describes the Rancho San Bernardino as "…eight square leagues in San Ber-

nardino County, June 1842 by Alvarado to Jose del Carmen Lugo, grandson of Francisco, a Mexican soldier of Sinaloa, and his brothers Jose Maria and Vicente Lugo, and to Diego Sepulveda." This rancho consisted of 35,509.41 acres and Alvarado was related to the Lugos.

As indicated by Avina's description, the Lugo family was one of the early families to settle in "Alta California" following Spanish explorations and the establishment of the mission system. In ca. 1800, the Lugos identified as being in the Los Angeles area (which included San Bernardino) included:

Luis Goniaga Lugo (Soldier)	1769-1773
Francisco Lugo (Soldier)	1774-1780
Ignacio Lugo (Soldier)	1774-1780
Seferino Lugo (Soldier)	1774-1780
Jose Ignacio Lugo (Child)	1774-1780
Jose Antonio Lugo (Soldier)	1780-1790
Antonio Maria Lugo (Soldier)	1790-1800
Miguel Lugo (Soldier)	1790-1800
Salvador Lugo (Soldier)	1790-1800
Jose Antonio Lugo (Child)	1790-1800
Juan Maria Lugo (Child)	1790-1800
Pablo Jose Lugo (Child)	1790-1800
Ramon Lorenzo Lugo (Child)	1790-1800
Juan Lugo (Servant)	1790-1800
Jose Cat. Lugo (Volunteer)	1790-1800

Whitehead (1978:191 and 207-212) states:

> Before leaving Los Angeles, and prudently stationing Castro at San Gabriel with twenty men to "preserve order," Alvarado undoubtedly visited his Lugo relatives. The original California Lugo, Francisco, who arrived with Rivera in 1774, was his great grandfather; and Francisco's daughter Maria, younger sister of Antonio, betrothed from babyhood to Ignacio Vallejo, was his grandmother. Maria and Ignacio Vallejo's children included Mariano Guadalupe Vallejo, the powerful northern California military and colonizing leader; and Maria Josefa Vallejo, Alvarado's mother. All of Antonio Maria Lugo's children were his cousin; and by marriage into the Lugo family the

Carrillo, Cota, and Torres families were also related to him. Alvarado's mother later married Ramon Estrada, *alcalde* at Monterey, but far closer to Alvarado was Antonio Maria Lugo, both wealthy and influential. These two corresponded with and visited each other all their lives …

In 1839 Antonio Maria Lugo, aged sixty-four and ten years a widower, had about ten living children ranging from age thirty-seven down to fourteen. He has taught the boys to be rancheros from boyhood, usually beginning when they were about fifteen years old. Many of his daughters had married into prominent families and were no longer at homes, but his sons all started out on his San Antonio Rancho. One of his daughters, Dona Maria Rita Merced, has married Jose Perez and was living on a section of the ranch. The three oldest sons, Jose Maria, Felipe, and Jose del Carmen were now married, had children, and were living at different locations on the San Antonio Rancho. Vicente was seventeen and not married but was living and working on the rancho, which was well sprinkled with Lugos. Only one son, Mariano, age fourteen, was living with Antonio in Los Angeles.

Antonio has long desired to increase his landholdings, not only because of his large family, but to provide doer the needs of the enormous number of cattle which he now had on the San Antonio Rancho. He, like many of the successful ranchers of Los Angeles, had had his eye on the San Bernardino valley, where the San Gabriel Mission has started a mission rancho in 1810 and had later built an Asistencia for the Indians there. Since the desecularization decree by Governor Jose Figueroa in 1834, both the rancho and the Asistencia had been abandoned and left to the Indians. Many petitions had been submitted to the governor for this land, or part of tit, but for some reason, they had all been rejected … approved late in 1839 … the Lugo family made preparations to begin using and colonizing this vast territory, part of it formerly the property of the San Gabriel Mission . The original San Bernardino Rancho, which was a concession to the San Gabriel Mission in 1820 by the Spanish regime, was only a tract of land about two miles long near the west side of the present city of Redlands. The concession by Alvarado to the Lugos under the Mexican regime was thirty-five miles wide from east to west and about sixteen miles from the San Bernardino Mountains to the southern property line. It contained over a quarter million acres. Soon after approval was granted, Antonio Maria Lugo and his sons went out to the valley to look it over. The concession had given them permission to occupy and colonize both the San Bernardino and Yucaipa Valleys. The Yucaipa Valley was east of the San Bernardino Valley and communicated

> with it … There were no houses there for their use at first, so they lived in camps and slept under the stars, returning to their homes and families near Los Angeles at frequent intervals, leaving their vaqueros in charge. In 1840 with the help of Jose Bermudes they built an adobe house in the part of the San Bernardino Valley called Agua Caliente, because of its hot springs, on ground now occupied by the San Bernardino Courthouse between 3rd and 4th Streets and Arrowhead Avenue.

The Lugos continued to occupy and run the Rancho San Bernardino until and shortly after the acquisition of California by the United States. During the late 1840s, the Mormon Church in Utah was actively establishment settlements throughout the Southwest (Utah, Nevada, northern Arizona, and California) in an attempt to connect the inland (interior) settlements with the California coast and establish a strong presence in the newly acquired territories, essentially following the "Old Spanish Trail."

Following exploratory expeditions in to California in 1849, the purchase of the Rancho San Bernardino was proposed (Lyman 1996:55). Amasa Lyman and Charles Rich lead the endeavor, providing the initial funding for the purchase and relying on the local congregation to provide the subsequent payments.

The rancho purchase was completed in 1851 and the Mormons too possession of the rancho, establishing the "… first predominantly Anglo-American community in Southern California." The Lyman family moved into the Lugo Adobe and the Rich family moved into the abandoned Asistencia. Additional data presented by Lyman (1996:60-61) reads:

> In late November San Bernardino was beginning to look like a town, with a hundred houses nearing completion … colony members decided to build a fort large enough for the entire population. Some families congregated at the designated fort site that night, and most would live in those close confines for more than two years … [fearing Indian attacks] … The Mormon fort was the largest ever erected in southern California."

The Mormon Fort was established in the area of present-day 3rd Street and "C" Street. Oriented on a southwest to northeast axis (25° +/-), the boundaries extended south of 3rd Street, up to present-day 4th Street, and both east and west of "C" Street (present-day Arrowhead). The Lytle Creek Ditch crossed the Fort on a northwest to southeast axis (see Lyman 1996).

The Mormon colony at San Bernardino eventually extended well outside the boundaries of the Fort, with new houses and fields established in areas surrounding the Fort. In 1857, however, many of the settlers opted to return to Utah, for various reasons. Most importantly, being "called back" to Salt Lake City. Despite the "call," approximately one third of the settlers opted to stay in San Bernardino and continue with the establishment of a community – even though ties to the Church would be severed and the debt for the purchase of the Rancho was not yet paid. Lyman and Rich, still holding the debt, arranged for the rancho to be mapped and those opting to stay in San Bernardino were provided with deeds to their respective properties. The subdivision of the Rancho allowed Lyman and Rich to sell properties to non-Mormon settlers and continue to make payments on the remaining debt for the purchase of the rancho.

As mapped in 1857, the rancho lands were subdivided into 88 "blocks." These blocks represent the growth of the community between the original purchase in 1851 and 1857. The core area of the Mormon community was surrounded by Blocks 1-20 (east, west, and south sides). Additional blocks were sequentially numbered to the west and south of the original blocks and continued to ripple out from the core. All of the blocks were divided into smaller lots of various sizes. The larger lots were to the peripheries and only subdivided much later, when property developments supported the shift from agricultural lands to residential or commercial properties.

Shortly after this map was completed, the Rancho San Bernardino lands were actually sold (also in 1857) by Ebenezer Hanks, on behalf of Lyman, Rich, and Hanks. The new owners were William A. Conn (San Francisco), George L. Tucker (Sacramento), Richard G. Allen (Sacramento), and Bethel Coopwood (El Monte) – assuming title to 25,000 acres. Despite the sale of 25,000 acres, individuals who owned their own properties prior to the sale maintained ownership of their individual properties.

Population estimates in the late 1850s and 1860s ranged from 1,500 to 3,000, depending on the actual number of Mormons v. non-Mormons. Following the Civil War, settlers (mostly from Texas) began arriving in the area and San Bernardino's population began to rise again, but not with the strong agricultural discipline indicative of the Mormon settlers.

Francis Marion Lyman, son of Amasa Lyman, returned to California in the 1890s and settled, again, in the San Bernardino area. The future subdivisions of the San Bernardino Rancho were based, primarily, on the 1857 subdivision map, but also subdivisions post-dating the 1880s. Many of the individual lots were sold prior to 1900, but not necessarily improved. The current project area is within historic Rancho blocks – east of the core area (1 to 5) and continuing east (41-44, 50-52), give-or-take (Figure 4).

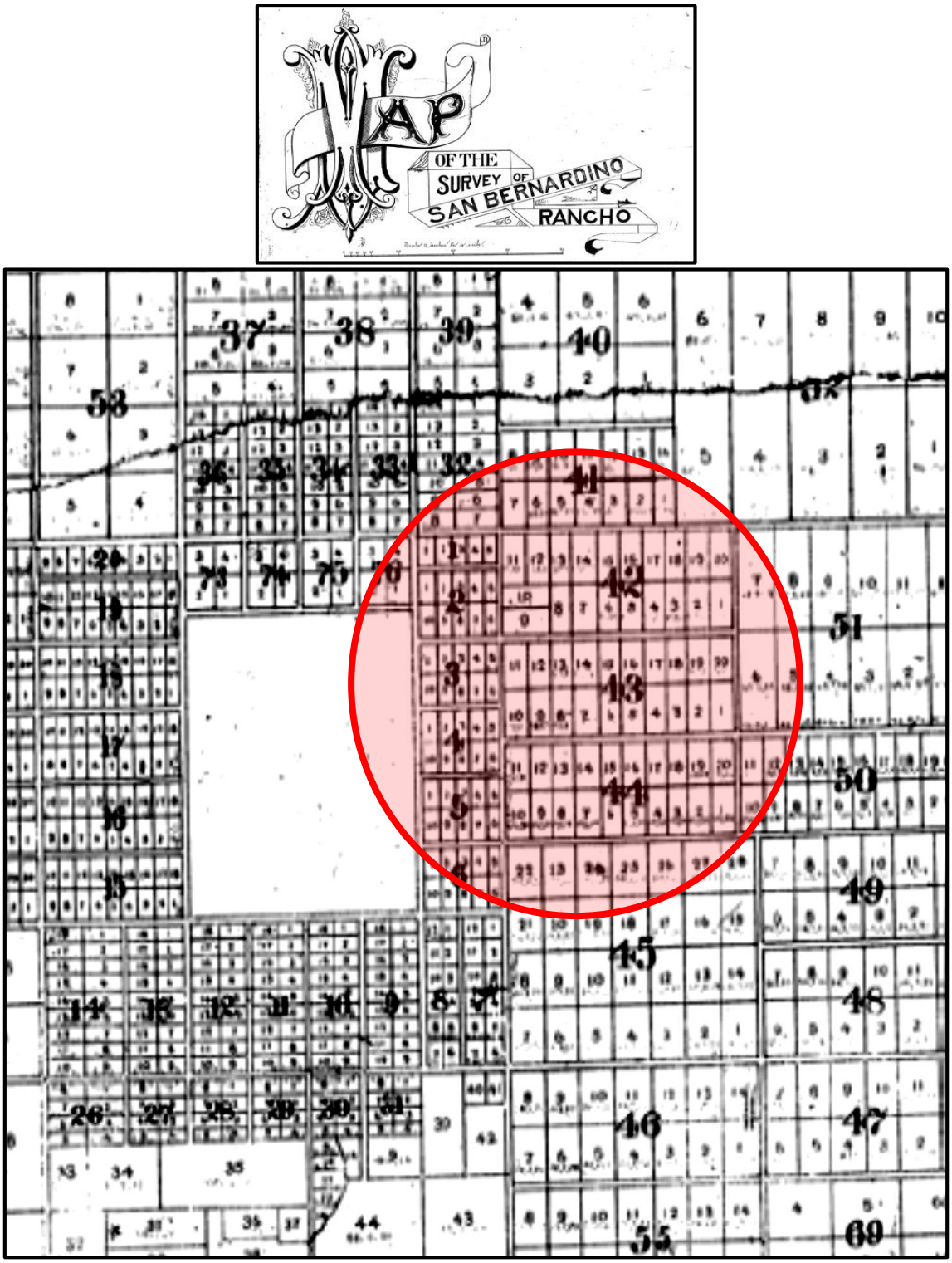

Figure 4. A Portion of the Rancho San Bernardino and the General Area of the Current SP Project Area.

Much of the land was used for agricultural purposes with only sporadic residential development prior to the 1880s. Aerial photographs confirmed the majority of land east of Waterman Avenue were still open agricultural land well into the 1940s. Lands to the west of Waterman Avenue were developed as residential properties (with some commercial and other uses) after ca. 1887. The number of subdivisions identified within (or associated with) the SP project area include:

Rancho San Bernardino Subdivision (1857)
Amended Map of Base Line Addition (1857)
The Cooley Tract – (1887)
Cypress Tract – Horner & Bandholt's Subdivision (1887)
Fairbanks Addition to San Bernardino (1887)
W.J. Wilsey's Base Line Addition (1887)
Wozencraft Place (1887)
Dunn-Black Subdivision (1908)
Bungalow Addition (1909)
Bungalow Addition No. 2 (1909)
Amended Baldridge Subdivision (1909)
Jackson Subdivision (1916)
Sturges Subdivision (1915)
Prado Verde Tract (1920)
Grant Subdivision (1922)
Daimwood Subdivision (1923)
Propst Subdivision - (1923)
Walnut Park 1925)
Poling Subdivision (1925)
Tract No. 1964 – Base Line Gardens (1925)
Tract No. 2074 – Base Line Gardens No. 2 (1925)
Tract No. 2078 – Beam Subdivision (1925)
Tract No. 1959 - Highland Avenue Tract No. 3 (1925)
Tract No. 2030 – Fifth Street Place Subdivision (1925)
Tract No. 2121 – Base Line Gardens No. 3 (1926)
Tract No. 2105 – Feavel Subdivision No. 2 (1926)
Tract No. 1918 - Goforth Tract (1927)
Tract No. 2297 – High School Addition (1928)
Tract 2307 – Van Loon Subdivision (1928)
Tract No. 2376 – Highland-Waterman Subdivision (1928)
Tract No. 2207 – Base Line Tract (1929)

Tract No. 2275 – Fifth Street Place Unit No. 2 (1930)
Tract No. 2416 - Grant Subdivision No. 2 (1932)
Tract No. 2503 (1935)
Tract No. 2624 (1940)

Tract No. 2862 (1946)
Tract No. 2969 (1946)
Tract No. 3123 (1948)
Tract No. 3198 – Windsor Square (1948)
Tract No. 3183 – Windsor Square Unit No. 2 (1950)
Tract No. 3599 (1951)
Tract No. 3895 (1952)
Record of Survey, Lot 2, Block 3, RSB (1956)

Record of Survey (1963)
Tract No. 8914 for Condominium Purposes (1974)
Parcel Map No. 3197 (1976)
Parcel Map 3442 (1977)
Parcel Map No. 4586 (1978)
Parcel Map No. 7140 (1981)
Parcel Map No. 8219 (1983)
Tract No. 12359 (1983)
Parcel Map No. 8993 (1984)
Parcel Map No. 9122 (1985)
Parcel Map No. 13963 (1993)
Parcel Map No. 15956 (2003)
Tract No. 17704 (2007)

As listed, and with some exceptions, maps prior to ca. 1932 were referenced primarily by name (often the owner's name). Only four maps were issued for this project area between 1930 and 1940 – the Depression years, and expected.

Post-WWII Tract maps were primarily referenced by number (with not name assignments), and the date from 1925 and the associated Parcel Maps post-date 1975. As such, those areas associated with Parcel Maps are essentially areas associated with modern improvements (post 1965) were primarily referenced as Parcel Maps.

Rancho San Bernardino Subdivision (1857)

Map of the Survey of San Bernardino Rancho. Consisting of 88 blocks with numerous subdivision with the blocks. The southern and western boundaries of the map equate to the historic grant boundaries (mainly Barton Road to the south and the current I-215 alignment to the west). The northern boundary is present-day Highland Avenue and the eastern boundary extends well to the east, to present-day Alabama Street.

Amended Map of Base Line Addition (1857)

Lot 1, Block 5, Rancho San Bernardino, City of San Bernardino, San Bernardino County. Bounded by A Street (Sierra Way; west), Fourth Street (south), Fifth Street (north), and either side of Baldridge Avenue (north/south).

The Cooley Tract (1887)

Subdivision of Lots 11, 12 & part 5 & 10, Block 44 of Rancho San Bernardino. Bounded by 4th Street (south), 6th Street (north), Central Street (west, and Cooley Street (east). Internal streets include Monterey Street, 5th Street, and Ward Street – identified as Blocks A, B, C, and D – each comprised of 20 residential lots.

Cypress Tract – Horner & Bandholt's Subdivision (1887)

Cypress Tract – Horner and Bandholt's Subdivision of Lots 3, 4, and 5 of Block 5 of the Rancho San Bernardino, San Bernardino County, California. Bounded by Myrtle Avenue (west), Fourth Street (south), County Avenue (Waterman Avenue; east), Fifth Street (north). Bisected by Monterey Avenue (east/west) and Inter Ocean Avenue (north/south).

Fairbanks Addition to San Bernardino (1887)

Fairbank's Addition to San Bernardino, being a subdivision of Lot 2, Block 1 of the Rancho. Bounded by Base Line Street (north), Lugo Street (west), Sepulveda Street (east), and Eleventh Street (south).

W.J. Wilsey's Base Line Addition (1887)

W.J. Wilsey's Base Line Addition to the City of San Bernardino, being a portion of

Lot 3 of Block 1, of the San Bernardino Rancho. Bounded by Base Line (north), 11th Street (south), Sepulveda Street (west), and Wall Street (east).

Wozencraft Place (1887)

Being a Subdivision of Lots 6, 7, 8, 9, and 10, Block 5, San Bernardino Rancho. Bounded by A Street (Sierra Way, wet), Waterman Avenue (east), Third Street (south) and Fourth Street (north. Bisected by Cross Street (north/south) and Court Street (east/west).

Dunn-Black Subdivision (1908)

Lot 6 and a portion of Lot 7, Block 32, Rancho San Bernardino, City of San Bernardino, San Bernardino County, California. Bounded by Base Line Street (south), Santa Ana Street (north), Waterman Avenue (east), and east of Sepulveda Avenue. Subdivided into Blocks A, B, and C. A "General School" lot is identified on the northwestern corner of Waterman Avenue and Base Line Street.

Bungalow Addition (1909)

A subdivision of Lots 6 and 7 of Block 2, Rancho San Bernardino, San Bernardino County, California. Bounded by Ninth Street (south), Tenth Street (north), Waterman Avenue (east), and Dixon Street (west). Bisected by Temple Street (east/west).

Bungalow Addition No. 2 (1909)

A subdivision of Lot 3, Block 2, Rancho San Bernardino, San Bernardino County, California. Bounded by Tenth Street (south), Eleventh Street (north), and Dixon Street (east). Bisected by Olive Street (east/west).

Amended Baldridge Subdivision (1909)

Amended Baldridge Subdivision – Lot 1, Block 5, Rancho San Bernardino, City of San Bernardino, California. Bounded by Fourth Street (south), Fifth Street (north), east of A Street (Sierra Way). Bisected by Baldridge Avenue (north/south).

Jackson Subdivision (1916)

Being a subdivision of Lots 1, 2, 3, 18, 19, and 20, Block 43, Rancho San Bernar-

dino as per map filed in Book 7 of Maps, page 2, records of San Bernardino County. Bounded by Ninth Street (north), Sixth Street (south), and Tippecanoe Street (east).

Sturges Subdivision (1915)

Map of Sturges Subdivision at San Bernardino, California. Bounded by Tenth Street (south), Eleventh Street (north), A Street (Sierra Way; west), and the Bungalow Subdivision No. 2 to the east).

Prado Verde Tract (1920)

Being a subdivision of Lot No. 8, Block No. 41, Rancho San Bernardino as per Map Book 1 at Page 3, records of San Bernardino County, California. Bounded by Waterman Avenue (west) and south of Gilbert Street. An Alley defines the eastern boundary of the tract.

Grant Subdivision (1922)

Being a subdivision of the south 300 feet of Lot 5, Block 32, Rancho San Bernardino, San Bernardino, California. Bounded by Thirteenth Street (south), Waterman Avenue (east), and bisected (north/south) by Belle Street and Wall Street.

Daimwood Subdivision (1923)

A subdivision of Lot 5 and all of Lot 4, Block 1, R.S.B., lying east of Wall Street. Bounded by Eleventh Street (south, Base Line Street (north, Call Street (west), and Waterman Avenue (east). Area is bisected by Orange Street (east/west).

Propst Subdivision - (1923)

Being a portion of Lot 1, Block 39, Rancho San Bernardino, San Bernardino County, California. Bounded by 21st Street (couth), south of Highland Avenue (north), Waterman Avenue (east, and west of Belle Street (west). Fourteen residential lots.

Walnut Park 1925)

Being a subdivision f Lots 8, 9, and 10, Lot 2, Rancho San Bernardino. Bounded

by Ninth Street (south), Tenth Street (north), A Street (Sierra Way; west), and Dixon Street (east).

Poling Subdivision (1925)

Being a subdivision of Lots 4 and 5, Block 2 of the 5 acre survey of the Rancho San Bernardino. Bounded by Dixon Street (west), Waterman Avenue (east), Tenth Street (south), and Eleventh Street (north). Bisected by Olive Street (east/west).

Tract No. 2074 – Base Line Gardens No. 2 (1925)

Being a subdivision of a portion of Lot No. 5, Block No. 52, Rancho San Bernardino, San Bernardino County, California. Bounded by Base Line (south); Pacific Street (north) and either side of Tippecanoe Street.

Tract No. 1964 – Base Line Gardens (1925)

Being a subdivision of a portion of Lot No. 5, Block No. 52, Rancho San Bernardino, San Bernardino County, Calif. Bounded by Baseline (south), Pacific Street (north), west of Barton Street (west), and east of Perris Hill Road (east). Current project area involves four lots fronting Baseline Road.

Tract No. 1959 – Highland Avenue Tract No. 3 (1925)

Being a subdivision of Lots 7 to 25 inclusive, Feavel Subdivision also south 50 ft of easterly 154.94 ft, Lot 9, Block 39, Rancho San Bernardino. Bounded by 19th Street (south), 21st Street (north), Belle Street (east) and “A” Street (Sierra Way; west) – abuts SP project area.

Tract No. 2078 – Beam Subdivision (1925)

Being a subdivision of a portion of Lots 12 and 13, Block 43, Rancho San Bernardino. Bounded by 9th Street (north) and both east and west of Preston Street. Seventeen parcels accessed from both 9th Street and Preston Street.

Tract No. 2030 – Fifth Street Place Subdivision (1925)

Being a subdivision of Lot 10 & a portion of 9, Blk. 4. Rancho San Bernardino. Bounded by Fifth Street (south), Sixth Street (north), A Street (Sierra Way; west), and Cottage Avenue (east).

Tract No. 2121 – Base Line Gardens No. 3 (1926)

Being a subdivision of Lost 4 and 5, Block 52, Rancho San Bernardino, San Bernardino County, California. Bounded by Base Line (south), Pacific Street (north) and either side of Garden Drive.

Tract No. 2105 – Feavel Subdivision No. 2 (1926)

Being a re-subdivision of Lots 1, 2, 3, 4, 5 & 6 of Feavel's Subdivision as recorded in Book 10 of Maps, page 10, City of San Bernardino, San Bernardino County, California. Bounded by 19th Street (south), 21st Street (north, Waterman Avenue (east), and Wall Street (west).

Tract No. 1918 - Goforth Tract (1927)

Being a subdivision of Lots 7 to 25, inclusive, Feavel Tract Subdivision also south 50 ft. of easterly 194.94 ft. Lot 8, Block 39, R.S.B. Bounded by 19th Street (south), 21st Street (north, Belle Street (east), and A Street (Sierra Way, wet).

Tract No. 2297 – High School Addition (1928)

Being a subdivision of a portion of Lot 3, Block 40, Rancho San Bernardino. Bounded by Pacific Street (south0, Waterman Avenue (west), and both north and south of 17th Street. Parcels fronting Waterman Avenue are within SP project area.

Tract No. 2307 – Van Loon Subdivision (1928)

Being a subdivision of Lot 17, Block 42 and portions of Lots 1-2-13 & 14, Block 41, Rancho San Bernardino, San Bernardino County, California. Bounded by Bobbett Drive (west), east of Cedar Street, north and south of Baseline.

Tract No. 2376 – Highland-Waterman Subdivision (1928)

Being a subdivision of the west 140 feet of Lot 4, Block 40, Rancho San Bernardino. Bounded by 18th Street (south), Highland Avenue (north), Waterman Avenue (west), and 140 feet east of Waterman Avenue (east). Twenty-eight parcels interrupted by 19th Street and 21st Street.

Tract No. 2207 – Base Line Tract (1929)

Being a subdivision of a part of Lot 5, Block 41, San Bernardino Rancho. Bounded by Base Line (south) and west of Crest View Avenue (east).

Tract No. 2275 – Fifth Street Place Unit No. 2 (1930)

Being a subdivision of Lots 13 and 14, Tr No. 2030, and a portion of Lot 9, Block 4, Rancho San Bernardino, San Bernardino County, California. Bounded by Fifth Street (south), Cottage Avenue (west), and Sixth Street (north).

Tract No. 2416 - Grant Subdivision No. 2 (1932)

Being a subdivision of a portion of the east 161.50 ft. of Lot 4, and a portion of the east 161.50 ft. of Lot 5, all in Block 32, R.S.B. as recorded in Map Bk. 7, Pg. 2, records of San Bernardino County, California. Bounded by Waterman Avenue (east) and due north of the Grant Subdivision (M.B. 21/36)

Tract No. 2503 (1935)

Being a subdivision of a portion of Lots 9 & 10, Block 44, Rancho San Bernardino. Located on the southeastern corner of Waterman Avenue and 4th Street. Divided into seventeen lots.

Tract No. 2624 (1940)

Being a subdivision of a portion of Lots 1 and 14, Block 41, Rancho San Bernardino. Bounded by Base Line Street (south), Gilbert Street (north), and west of East Twin Creek Storm Drain; either side of Canyon Road.

Tract No. 2862 (1946)

Being a subdivision of a portion of Lot 2, Block 32, Rancho San Bernardino, recorded in Map Book 7, page 2, records of San Bernardino County, California. Bounded by 15th Street (north, Belle Street (east), west side of Wall Avenue (west), and an alley on the south.

Tract No. 2969 (1946)

Being a subdivision of a portion of Lot 1, Block 32, Rancho San Bernardino, recorded in Map Book 7, page 2, records of San Bernardino County, California.

Bounded by 15th Street (south, Belle Street (east), 16th Street (north), and west of Wall Avenue.

Tract No. 3123 (1948)

Being a subdivision of a portion of Lots 2 & 3, Block 41, Rancho San Bernardino. Bounded by Base Line Street (south), west of Cedar Drive (west) and Cedar Street (east). An alley defined the northern boundary.

Tract No. 3198 – Windsor Square (1948)

Being a subdivision of a portion of Lots 2, 3, 12, and 13, Block 41, Rancho San Bernardino, as recorded in Book 7 of Maps, page 2, records of San Bernardino County, California. Bounded by Base Line Street (south), Windsor Drive (west), and Cedar Street (east). Roxbury Drive bisects the tract.

Tract No. 3183 – Windsor Square Unit No. 2 (1950)

Being a subdivision of a portion of Lots 3 & 12, Block 41, Rancho San Bernardino as Recorded in Book 7 of Maps, Page 2, records of San Bernardino County, California. Bounded by Base Line Street (south) and west of Windsor Drive. Oakhurst Drive bisects the tract.

Tract No. 3599 (1951)

Being a subdivision of all of Lot 14, Tract 2920 as per map recorded in Book 39, page 65 of maps, and portions of Lots 5,6,7,9, & 10, Block 41, San Bernardino Rancho, as per map recorded in Book 7, page 2 of maps, records of San Bernardino County, California. Bounded by Baseline Road (south), south of Gilbert Street (north), Waterman Avenue west), and west of Crest View Avenue (east).

Tract No. 3895 (1955)

Being a subdivision of a portion of Lot 3, Block 39, Rancho San Bernardino as recorded in Book 7 of Maps, page 2, records of San Bernardino County, City of San Bernardino, California. Bounded by east of Sepulveda Street (west), west of Waterman Avenue (east), and both north and south of 18th Street. Seventeen parcels (for residential development).

Record of Survey, Lot 2, Block 3, RSB (1956)

Record of Survey of Lot 2, Block 3, Rancho San Bernardino, as shown on a plat recorded in Book 7, page 2, records of San Bernardino County, California. Bounded by Ninth Street (north), Sierra Way (west), bisected by Lugo Street (north/south) and includes a portion of the city Cemetery. Subdivision lots are located southeast of Ninth Street and Lugo Street.

Record of Survey (1963)

Record of Survey of portions of Lots 3 & 4, Block 39 of the Rancho San Bernardino, as per plat recorded in Book 7 of Maps, page 2; and Lot 34, Tract No. 2589, as per plat recorded in Book 42 of Maps, page 68, records of San Bernardino County, California. Bounded by Sixteenth Street (south, Nineteenth Street (north, Waterman Avenue (east) and Sepulveda Avenue (west). Area includes Tract No. 2859, Tract No. 3895, and Tract No. 2134.

Tract No. 8914 for Condominium Purposes (1974)

Being a subdivision of Lots 6, 7, 16, and 17 of Tract No. 2105, per plat recorded in Book 30 of Maps, page 59, records of San Bernardino County, State of California. Bounded by Belle Street (west), north of 129th Street, south of 21st Street, and wests of Waterman Avenue.

Parcel Map No. 3197 (1976)

Being a portion of Lot 10, Block 43, Rancho San Bernardino, in the City of San Bernardino, County of San Bernardino, State of California, as per Map recorded in Book 7 of Maps, page 2 of Maps, records of San Bernardino County. Bounded by 6th Street (south), Waterman Avenue (west) – northeastern corner of Waterman Avenue at 6th Street – two small parcels on the corner.

Parcel Map 3442 (1977)

In the City of San Bernardino, County of San Bernardino, State of California and being a division of a portion of Lot 16, Block 43, of Rancho San Bernardino, as per plat recorded in Book 7 of Maps, page 2, records of San Bernardino County, California. Irregularly shaped, small property; bounded to the north by Ninth Street; south by the Twin Creek Drainage, and between Valencia Avenue and Bobbett Drive.

Parcel Map No. 4586 (1978)

In the City of San Bernardino, being a division of a portion of Lot 1, Block 39, Rancho San Bernardino, M.B. 7/2 and Lot 4 of Propst Subdivision, M.B. 24/69, Records of San Bernardino County, California. Bounded by north of 21st Street (south), south of Highland Avenue (north), west of Waterman Avenue (east) and east of Belle Street (west).

Parcel Map No. 7140 (1981)

Being a subdivision of Portions of Blocks A, B, C, and D, Wozencraft Place, as per Plat recorded in Book 5 of Maps, Page 47, Records of the County Recorder of San Bernardino County, State of California. Bounded by Sierra Way (west), Waterman Avenue (east), Third Street (south), and Fourth Street (north). Bisected by Allen Street (Cross Street; north/south) and Court Street (east/west).

Parcel Map No. 8219 (1983)

A portion of Lots 7 & 8, Rancho San Bernardino, in the County of San Bernardino, State of California, as per plat recorded in Book 7 of Maps, page 2, records of said County. Bounded by 3rd Street (south), Flood Control Channel (west), 4th Street (north), and Palm Lane (east).

Tract No. 12359 (1983)

Being a subdivision of a portion of Lot 1, Block 39, Rancho San Bernardino, as shown by Map on file in Book 7 of Maps, page 2, also parcel 1 of P.M. 4586, as per plat recorded in Book 49, page 79, records of San Bernardino County.

Parcel Map No. 8993 (1984)

In the City of San Bernardino, County of San Bernardino, State of California, being a portion of Lot 9, in Block 42 of Rancho San Bernardino, as per plat recorded in Book 7, page 2, Records of San Bernardino County. Bounded by Ninth Street Waterman Avenue (west). Set to northeast of intersection – not on R-O-W.

Parcel Map No. 9122 (1985)

In the City of San Bernardino, that portion of Parcel 4, and Parcel 5, of Parcel Map No. 7140, in the City of San Bernardino, County of San Bernardino, State of Cali-

fornia, as per plat recorded in Book 69 of Parcel Maps, Page 1 and 2, Records of sail County and State. Bounded by Court Street (north), Third Street (south), Sierra Way (west).

Parcel Map No. 13963 (1993).

In the City of San Bernardino, California, being a portion of Lot 3, Block 41 of Rancho San Bernardino, M.B. 7/2 in the County of San Bernardino, State of California. Bounded by Alley (north), north of Base Line Street (south), and west of Windsor Drive.

Parcel Map No. 15956 (2003)

Being a subdivision of a portion of Lot 5, Block 41, Rancho San Bernardino in the City of San Bernardino, County of San Bernardino, State of California, as per plat recorded in Book 7 of Maps, page 2, records of San Bernardino County. Small subdivision of two lots north of Base Line Avenue and west of Crest View Avenue (east of Pepper Tree Lane).

Tract No. 17704 (2007)

Being a subdivision of Parcel 3 of Parcel Map 9122, as recorded in Parcel Map Book 96, page 3 & 4, records of San Bernardino County, State of California, located on Section 10, Township 1 South, Range 4 West, S.B.B.M. Bounded by Sierra Way (west), Third Street (south), Court Street (north), and Allen Street (east).

Early developments within the area are supported by the Sanborn Fire Insurance Maps of post-1906 (with some updates to 1959). The mapping emphasized the improvements west of Waterman Avenue, illustrating residential streets and residential blocks (and the cemeteries). As the city expands to the east, the developments become less dense. Saint Bernardine's Hospital is depicted in 1938, but much smaller than the current complex.

A review of aerial photographs confirmed the eastern side of Waterman Avenue was dominated by agricultural properties (orchards) and only a few residences were identified along Waterman Avenue (east side). Only a few dozen residential properties were seen along the east side of Waterman Avenue, between Highland Avenue and 3rd Street.

The west side of Waterman Avenue (to Sierra Way) showed considerable improvements pre-dating 1938. The beginnings of Seccombe Park can be seen, as well as the alignment of the PE railroad. Pioneer Memorial Cemetery and the Home of Eternity Cemetery of Congregation Emanuel Cemetery are evident. There is no significant evidence of commercial properties prior to WWII, suggesting all (or most) of the existing commercial structures are 1940s or later. The densely populated residential blocks date primarily to the 1910s through ca. 1940.

Overall, evidence appears to indicate the project area was primarily agricultural until after 1887. The earlier residential improvements were to the west of Waterman Avenue and the eastern side was still predominantly agricultural until well into the 1950s. The majority of pre-1940 residences area to the west of Waterman Avenue and the later residential developments – east of Waterman – are predominantly post-WWII and many post-date the 1950s.

Commercial developments began it impact the area after WWII and when Waterman Avenue, Baseline Road, Highland Avenue, etc. became major roadways during the post-WWII years (and the introduction of the Southern California car-culture of the 1950s. Many of the early commercial improvements were automobile-related (e.g. service stations, auto repair facilities, tire shops, etc.).

Restaurants (eventually fast food businesses) followed. In the vicinity of St. Bernardine's Hospital, medical support facilities (e.g. doctor offices, insurance offices, off-site medical treatment centers, rest homes, etc. appear on or near Waterman Avenue, south of Highland Avenue. Schools were established, churches were opened, and at least one mortuary was established. The Warm Creek Channel was formally channeled and other flood control facilities were established to prevent property damage (e.g. East Twin Creek).

The current project area is now completely built-out and exhibits a mixture of early residential, late historic and modern residential improvements, late historic commercial developments, and a considerably amount of modern improvements nearer Highland Avenue and St. Bernardine's Hospital. The residential neighborhoods range from well-maintained private residences, multi-family rental properties (including courtyards and apartments), and other less-well-maintained neighborhoods and areas with vacant lots.

METHODOLOGY

To adequately and accurately address the research needs for this undertaking, McKenna et al. completed the following tasks were completed:

1. Archaeological Records Check: An archaeological records check was completed at the California State University, Fullerton, South Central Coastal Information Center (CSUF-SCCIC; Appendix B). The CSUF-SCCIC is the local repository for archaeological and/or cultural studies completed within Los Angeles, Orange, Ventura, and San Bernardino Counties. All pertinent data was researched, including previous studies for a one mile radius surrounding the project area boundaries and the identification of recorded resources within one mile. In addition, McKenna et al. researched current listings (federal, state, and local) for evaluated resources and reviewed historic maps.

2. Native American Consultation: In December, 2015, McKenna et al. contacted the Native American Heritage Commission in Sacramento and inquired into the identification of sacred or religious properties within the project area and/or general vicinity. In addition, McKenna et al. asked for and received a listing of local Native American representatives wishing to be contacted when projects are initiated within their traditional territories. Letters with maps identifying the project area were mailed to these individuals in December, 2015, requesting input regarding the project area. Copies of letters and responses are presented in Appendix C of this report and concerns have been incorporated into this document.

3. Paleontological Overview: McKenna et al. completed a paleontological overview by requesting data from the Natural History Museum of Los Angeles County (Appendix D). Results of this overview and more detailed data are presented later in this report.

4. Historic Background Research: Historic background research was completed by Jeanette A. McKenna, Principal Investigator, McKenna et al. This level of research involved review of the previous research, compilation of historic maps for the area, a review of the historic Sanborn Fire Insurance Maps, data from the County Assessor's Office (APN Maps, etc.), and supporting maps and data pertaining to subdivisions from the County Surveyor's Office. In addition, McKenna et al. conducted research at the County Archives and reviewed local histories. The Bureau of Land Management, General Land Office records were reviewed and previously completed cultural resources report were perused for historic property data. This level of research also included a review of historic aerial photographs and data available through the McKenna et al. in-house library.

5. Reconnaissance Field Survey: The reconnaissance field survey was conducted by Jeanette A. McKenna, M.A., R.P.A., and Principal Investigator for McKenna et al., and Ashley Betters (B.A.), research assistant. The field survey was completed over numerous days, including the initial survey on November 11 and 12, 2015, and the follow-up survey on April 8 and 9, 2016.

As required for compliance with CEQA guidelines and the data requirements of the Office of Historic Preservation (OHP), a reconnaissance field survey was conducted to adequately identify, describe, and report any cultural resources within the project area. The survey was completed by driving the individual streets within the SP project area and completing a pedestrian survey in areas where vacant lots or open lands were identified. The field studies were supplemented by field notes (on file, McKenna et al.) and a photographic record (Appendix E).

6. Analysis and Technical Report**:** The extent of the analysis and the data requirements for the technical report are dependent upon the nature of the project, the requirements set forth by the Lead Agency, and based on the defined project. In this case, the project area is a densely developed, urban area with little open areas. Much of the analysis relied on research data complementing the field conditions. This technical report, also completed in a manner requested by San Bernardino County and the Office of Historic Preservation.

PREVIOUS RESEARCH

As previously noted, the research into previous studies are identified resources was completed at the CSUF-SCCIC. This research involved a review of data extending one mile beyond the project area boundaries. Table 2 presents a listing of the 117 studies completed within one mile of the project area and further identifies those specifically within the SP project area boundaries (30 – highlighted).

Table 2. Cultural Resources Investigations Completed within One Mile of the Project Area.

Report	Citation	Description	Resources
1060273	Leonard 1975	Santa Ana River	Yes
1060274	Rosenthal 1979	Santa Ana River Bike Trail	Yes
1060275	Tobey et al. 1977	SB County Flood Control	Yes
1060412	Simpson et al. 1976	SB County Library Project	
1060413	Simpson & Burgess 1976	SB City Fire Station	
1060447	Scott 1976	Santa Ana River Basin	
1060492	Simpson et al. 1977	Bloomington Wastewater	Yes
1060791	Hearn 1979	Will Street/Warm Creek	
1060847	Simpson & Haenszel 1979	Seccombe Lake Park	Yes
1060864	SB Co. Museum Assoc. 1979	3rd and Lena Traffic Signal	
1061163	Smith et al. 1981	SB Central City Complex	
1061274	Schaefer Construction 1982	California Hotel, SB	
1061371	Marsha Lee Planning 1983	Martin Adobe	Yes

Table 2. Cultural Resources Investigations Completed within One Mile of the Project Area (cont'd).			
Report	Citation	Description	Resources
1061499	Foster & Greenwood 1985	Pacific Texas Pipeline	
1061562	Schulz 1986	Martin Adobe Restoration	Yes
1061572	Luberski 1986	Martin Adobe Research	Yes
1061729	Schulz & Luberski 1987	Martin Adobe Architecture	Yes
1061821	Peak & Associates 1988	AT&T Cell Tower	
1061837	Goldberg & Arnold 1988	Prado Basin- Regional	Yes
1061957	Brock 1989	Baseline & Belle (Rally's)	
1062091	Swanson 1990	101 N. E Street	
1062112	Tobey & Hallaran 1990	Seccombe Burials	Yes
1062113	Hatheway 1990	Platt Building	
1062208	Marmor et al. 1990	Seccombe Burials	Yes
1062216	Car & Alexandrowicz 1990	SB Credit Union	
1062224	Alexandrowicz & Carr 1991	Wells Fargo Building	
1062232	Peak & Associates 1990	AT&T Fiber Optic Cable	
1062237	Macko 1990	371-375 11th Street	
1062403	Hatheway 1991	364 N. Arrowhead Avenue	
1062404	Hatheway 1991	Pacific Electric Station #24	
1062415	Wlodarski 1991	I-215/I-10/SR 30, SB	
1062425	Hatheway & Duffield-Stoll 1991	SW Corner 6th and D Street	
1062436	Marmor et al. 1991	Seccombe Burials	Yes
1062473	Hatheway et al. 1991	SW Corner 6th and D Street	Yes
1062633	Alexandrowicz et al. 1992	Empire Bay Development	
1062693	Alexandrowicz 1992	602 West Street	
1062707	Anonymous 1992	The Creek Site	Yes
1062858	Alexandrowicz et al. 1993	Central Police Station	Yes
1062871	Alexandrowicz et al. 1993	Block 29, SB	
1062872	Alexandrowicz & Knell 1994	NW Corner 4th and E Street	Yes
1062873	Alexanrdowicz et al. 1994	SE Corner 5th and E Street	Yes
1062886	Love & Huang 1994	NW Corner 4th and E Street	
1062943	Tearnen 1994	514-524 N. Arrowhead Avenue	Yes
1062962	Alexandrowicz et al. 1994	Lots 3 & 4, Block 29	Yes
1062963	Haenszel 1992	Mormons in San Bernardino	
1062964	Hatheway 1994	Valley Auto Supply	Yes
1063224	Rosenthal 1996	LA Cellular Tower Site	
1063286	Love & Tang 1998	Mayor's Demolition Initiative	
1063452	Love & Tang 1998	Mayor's Demolition Initiative	
1063709	Duke & Marvin 2001	AT&T Wireless Tower Site	Yes
1063714	Finkel 2001	SB Police Firing Range	

Table 2. Cultural Resources Investigations Completed within One Mile of the Project Area (cont'd).			
Report	Citation	Description	Resources
1063906	Billat 2002	4th and Mountain Cell Tower	
1063930	Love & Tang 1998	226 W. 11th Street	
1063933	Lapin 2000	Pacific Bell Cell Tower	
1063934	Love & Tang 2000	Lakes & Streams Project	
1063935	Love & Tang 1999	1317 W. Kingman Street	Yes
1063936	Love & Tang 2000	535-545 N. E Street	Yes
1063937	Hatheway 1998	Baseline Auto Services	Yes
1063938	Wlodarski 2001	772-776 4th Street	Yes
1063941	Donaldson & Miller 2000	Santa Fe Station Rehab	
1063942	McKenna 1999	SB MWD Muscoy Well Sites	
1063944	McLean & Smith 1997	Pacific Bell Cell Tower	
1063951	Mason 1998	Pacific Bell Cell Tower	
1063952	Duke 2000	Pacific Bell Cell Tower	
1064326	Budinger 2002	Verizon Cell Tower	
1064328	Budinger 2002	Verizon Cell Tower	
1064330	Demcak & Van Wormer 2002	4th and E Street Monitoring	Yes
1064332	White 2000	AT&T Cell Tower	
1064337	Tang & Hogan 2003	North Lake/Central City South	Yes
1064338	McLean 1999	PBMS Cell Tower	
1064339	Donaldson 2001	Santa Fe Depot	Yes
1064340	Donaldson 2001	Santa Fe Depot	Yes
1064341	Alexandrowicz 2002	401-405 N. La Cadena Drive	Yes
1064347	Wlodarski 2000	602-666 W. 6th Street	Yes
1064349	Budinger 2002	Verizon Cell Tower	Yes
1064357	McKenna 1999	1355 N. Garner Avenue	Yes
1064380	Dice & Tanaguchi 2004	3104 Base Line Road	
1064635	McKenna 2004	SBCSD Project Area	
1064638	Budinger 2005	655 North D Street	
1064657	Billat 2005	E Street Cell Tower	
1064658	Hatheway 1993	Platt Building Photography	
1064728	Tanaguchi 2004	Cingular Cell Tower	
1065258	Bonner & Aislin-Kay 2006	Cingular Cell Tower	
1065263	Billat 2006	Cell Tower Site	
1065538	Tibbett 2005	337 E. Gilbert Street	
1065540	Wlodarski 2005	T-Mobile Cell Tower	
1065594	Green 1986	Historic Structures in SB	
1065595	Watts 2006	The Sun Cell Tower Site	
1065617	Tang & Hogan 2007	226 W. 11th Street	

Table 2. Cultural Resources Investigations Completed within One Mile of the Project Area (cont'd).			
Report	Citation	Description	Resources
1065622	Billat 2007	The Moon Cell Tower Site	
1065624	Swope 2003	247 W. 3rd Street (CADOT)	
1066194	Encarnacion 2005	East Valley Water District	
1066290	McKenna 2009	4th & Waterman Monitoring	
1066291	Smith et al 2008	sbX E Street Corridor	
1066439	McKenna & Lindgren 2009	127 W. 8th Street	
1066442	McKenna & Lindgren 2009	783 N. Mountain View Avenue	
1066446	Chasteen 2008	sbX E Street Corridor	
1066743	Sander 2010	Edison Pole Replacement	
1066744	Brunzell 2010	Colton Soil Safe Project	
1066753	Bonner & Williams 2009	AT&T Cell Tower Site	
1066836	Wlodarski 2010	T-Mobile Cell Tower Site	Yes
1066939	McKenna 2010	407 E. 9th Street	
1066940	Smith & Hallett 1999	11 Acres in San Bernardino	
1066992	Tang et al. 2011	EVWD – Baseline Gardens	
1066994	Sanka 2011	SB Merger, Area B	
1067011	White & White 1995	SB Multi-Purpose Stadium	
1067121	Baker & Maniery 2007	US Army Reserve 63rd Reg.	
1067372	Glover & Gust 2011	Waterman Gardens	
1067373	Daly 2011	Waterman Gardens	
1067528	Hogan et al. 2012	Cleanwater Factory Project	
1067553	Supernowicz 2013	AT&T Cell Tower Site	
1067555	McKenna 2014	Valencia Gardens	
1067620	Perez 2013	110 S. D Street	
1067645	Perez 2013	970 S. Reece Street	
1067700	Costello et al. 2010	3rd Street Data Recovery	
1067786	Wills et al. 2014	T-Mobile Cell Tower Site	
1067787	Bonner & Crawford 2014	T-Mobile Cell Tower Site	

Although a total of 30 projects were completed within the project area, it is noted than many individual projects involved the same property or very small areas (e.g. for cell towers).

8 Studies - Seccombe Park studies (Burials and the Martin Adobe)
7 Studies - Individual Property Studies
6 Studies - Cell Tower Investigations
5 Studies - Block Studies

2 Studies - Linear Surveys
1 Studies - Monitoring Programs
1 Studies - Overview (Mormons in San Bernardino)

Overall, these studies address a relatively small portion of the SP project area. Noticeably absent from these studies are investigations of the two cemeteries along Sierra Way, the site of St. Bernardine's Hospital at Highland Avenue and Waterman Avenue, and the various historic roadways (Highland Avenue, Baseline Road, Sierra Way, Waterman Avenue, etc.). Similarly, the many smaller neighborhoods have not been addressed, although some individual properties have been investigated.

Areas that have been addressed include Seccombe Lake Park (numerous studies), Waterman Gardens, and some areas along Waterman Avenue associated with the Pick-A-Part complex.

Most of the studies completed within one mile of the SP project area are to the west and within the historic core of the City. Many fewer studies have been completed east of Waterman Avenue. At this time, less than twenty percent (20%) of the 710 +/- acre SP project area has been formally investigated for cultural resources.

Despite the limited coverage within and around the SP project area, a minimum of 39 resources have been identified, ten (10) of which have been identified within the SP project area (highlighted in Table 3). These include:

36-004130 Home of Eternity Cemetery of Congregation Emanuel

The Home of Eternity Cemetery of Congregation Emanuel is located on Sierra Way, due north of Pioneer Memorial Cemetery. In 1975, Meighan approved this resource for recognition as a Point of Historical Interest (SBR-44). The resource was described as "… the oldest Jewish burial ground in continuous use in Southern California." Established in 1861, this land was deeded for the cemetery by Marcus Katz, a prominent member of the Jewish community. This resource is also listed in the California Department of Parks and Recreation Historic Resources Inventory as CA-SBR-4130H. The Jewish Congregation Emanuel was located on E Street, San Bernardino, and, the record notes the original cemetery was one-half its current size, when established. As needs increased, the cemetery boundaries were altered, accordingly. The Cemetery is located at 8th Street and Sierra Way.

Table 3. Cultural Resources Identified within One Mile of the Project Area.			
Primary No.	Other	Citation	Description
	CPHI-112	Henninger 1986	Cox-Bradley Adobe
36-002794	CA-SBR-2794	Smith 1961	Old Victory Village
36-004130	CA-SBR-4130H	Meighan 1975	Home of Eternity Cemetery of Congregation Emanuel
36-004288	CPHI-90	Makeda et al. 2008; Teal 1980; Gooch 1979	Anderson Building
36-005554	CA-SBR-5554H CPHI-SBR-111	Schultz and Hildebrand 1986	Martin Adobe
36-006796	CA-SBR-6796	Marmor and Crownover 1990; Gordon 1989a and b; MacDuff 1989; Gutierrez 1989; Tanner 1974; Haenszel (n.d.)	Unmarked Historic Cemetery; in Seccombe Park
36-006847	CA-SBR-7694HDonovan and Harton 1943	DeCarlo and Mengers 2014; Tibbet 2010; Harper 2008; Robinson 2000; Horne and Inoway 1998; Tang 1997; Smith 1995; McKenna (n.d.); Romani et al. 1990;	BNSF RR alignment
36-007138	CA-SBR-7138H	Swanson 1992	386-398 C Street; and 17 and 20 Grafton
36-007694	CA-SBR-7694H	Cameau 2013; Granger and Crosner 2013	Transmission Line
36-009993	CA-SBR-9993H	Tang 2000	Argonaut Building
36-010399	CA-SBR-10399H	Costello and Goldberg 2000; Metz 1980; Thompson 1978	S.B. Chinatown
36-010400	CA-SBR-10400H	Costello and Goldberg 2000	247 W. Third Street
36-010820	CA-SBR-10820H; PSBR-43-H	Campbell and Swope 2002; Harper 2008	Harlem Motor Road; SB & Redlands Railroad; SB, Arrowhead & Waterman Railroad
36-012384		Crawford 2004	883 North D Street
36-012514		Crawford 2004	6547 Monte Vista Drive
36-012916		PAR Environmental 2006	US Army Reserve Center
36-012986		Tang 1998	226 W. 11th Street
36-013922		Brock 1989	Carlson's Service Bldg.

Table 3. Cultural Resources Identified within One Mile of the Project Area (cont'd.).			
Primary No.	Other	Citation	Description
36-013923		Wright and Stoddard 1990	371 W. 11th Street
36-013924		Wright and Stoddard 1990	375 W. 11th Street
36-015497	CPHI-12	Kaiser 1973; Abeyta 1972; Haenszel 1979	Baseline Road
36-017670	CHL-44	Savage 1959	Mormon Stockade
36-017733	NHRP-1632	Abeyta 1997; Chattel 1997	S.B. County Court House
36-017760		Starzak 1990	876 N. H Street
36-017798		McKenna 2009; Urbas and Tearnen 1996	783 N. Mountain View Ave.
36-020171		McKenna 1999	1584 W. Virginia
36-020504		Carmack 2004	640 N. F Street
36-020673	CA-SBR-13310H	McKenna 2009	Historic Refuse Deposit
36-020803		McKenna 2009	127 W. 8th Street
36-020805		Makeda et al. 2008	134 S. E Street
36-020806		Makeda et al. 2008	300 N. E Street
36-020807		Makeda et al. 2008	396 N. E Street
36-020825		Chasteen 2009	988 N. E Street
36-023399		Daly 2011	Waterman Gardens
36-026988	CA-SBR-17007H	McKenna 2014	Keller-Graham Ranch
36-026798		Moruzzi 2011	155 S. G Street
36-027089		Schindel 2014	Isolated Historic Bottle
36-027101		Loren-Webb and Ruzicka 2012	820-850 N. E Street
36-027694		Crawford 2014	172 W. 3rd Street

36-005554 Martin Adobe

The Martin Adobe was originally located with the boundaries of today's Seccombe Lake Park, but has since been demolished. As reported by Shulz and Hildebrand in 1986, the adobe was located on the northeast corner of 5th Street and Sierra Way (historically, A Street) and attributed to Moses Martin, an early Mormon settler. The adobe dated to ca. 1856-57. The adobe was enlarged after the Martin ownership, but the original structure remained encased within the larger structure. The Martin Adobe was recognized as a California Point of Historical Interest in 1987 (SBR-111) and described as:

" …one of the oldest buildings in the city of San Bernardino. Built in the late 1850's, it was one of only two homes left from San Bernardino's original Mormon settlement. The first documented evidence dates from 1860, when Moses Martin filed a declaration of homestead on the property. Martin lived in the Adobe until his death in 1900." During a restoration project in ca. 1986, the building collapsed and was later removed from the site. No evidence of the Adobe remains and the area has since been redeveloped as part of Seccombe Lake Park.

36-006796 Unmarked Historic Cemetery

During the development of Seccombe Lake Park, a number of unmarked burials were uncovered. The eleven (11) individuals were found south of 7th Street and west of Waterman Avenue and within the area now associated with the baseball field. These historic period burials were associated with wooden coffins and some personal items. Also identified in the area was early 20th century refuse (1920-1950). The use of the area for refuse dumping and burning disturbed the burials, and later grading did additional damage. Analysis and interpretation of the remains indicated these burials represented a "potter's field" adjacent to the formal Pioneer Memorial Cemetery. Others have suggested this concentration of burials are pre-Pioneer Memorial Cemetery interments and represent the earliest formal non-Native American burials in the area. In any case, the remains were recovered and reburied off-site (in the Pioneer Memorial Cemetery).

36-010820 Railroad Alignment

This railroad alignment has been referred to by various names, including the San Bernardino & Redlands Railroad, the San Bernardino, Arrowhead, & Waterman Railroad, The Harlem Motor Road, and the Old Kite Route. A record prepared by Campbell and Swope (2002) addressed a segment of this resource at 3rd Street and Mountain View Avenue, just west of the SP project area boundaries. They state "… was owned and built by the San Bernardino & Redlands Railroad Company, formerly known as the East San Bernardino Railroad, which was established in 1888 by R.W. Button ... This line was probably better known, however, for its use as part of the Harlem Motor Road. In 1891 the San Bernardino, Arrowhead & Waterman Railroad Company leased the line to complete the company's route to the Harlem Hot Springs. In June of 1901, Southern Pacific, who had been leasing the San Bernardino to Redlands line, bought out the entirety of the track owned

by the San Bernardino and Redlands Company … the rail was upgraded top the standard 4'8" gauge. By January 1904, Southern Pacific no longer used the line and station and maps from this times also indicated that a more direct route was used, putting the line out of use." The alignment once crossed the area of Seccombe Lake Park and down Sierra Way.

36-012916 U.S. Army Reserve Center

The U.S. Army Reserve Center is located on the northwestern corner of 3rd Street and Waterman Avenue. Recorded by PAR Environmental Services, Inc. in 2006, this facility was constructed in 1951 with some indications of additional construction in 1972. The facility was designed to provide a location for reserve training following WWII and an area for the maintenance of vehicles that may be needed by the reservists. The complex reflects "simple construction" and PAR Environmental Services, Inc. concluded the complex was not historically significant.

36-013922 Lee Carlson's Service Building

Lee Carlson's Service Building was recorded by Brock in 1989 and described as being commercial located at 270 Baseline Street. Prior to the Carlson ownership, the property was tentatively associated with the location of the E.J. Lyons residence. In 1989, the building was used as a lawnmower repair shop. This structure was also described as a heavily-altered building. The property has since been redeveloped as Rally's Hamburgers, a modern fast-food establishment.

36-015497 Baseline Road

The "Base Line Road" was documented by Haenszel in 1979. Prior to her documentation, in 1972-73, Kaiser (SHPO) approved the recognition of this roadway as California Point of Historical Interest CPHI-SBR-12. Base Line Road was obviously named for the Base Line running between Township 1 North and Township 1 South. The base line was established in 1853 when the U.S. Surveyor, Col. Henry Washington, established the San Bernardino Base and Meridian coordinates. The road alignment was established on this base line, providing access between San Bernardino Valley and San Gabriel Valley. As summarized by Haenszel, "Base Line Road" runs through San Bernardino in the area of 12th Street. Over these many years, this alignment has been referred to as: Base Line Street, Base Line Avenue,

Base Line Road, Base Line, and/or Baseline. Baseline Road was not paved until after 1944.

36-020673 Historic Refuse

During an archaeological monitoring program at the southwestern corner of 4th Street and Waterman Avenue, McKenna et al. (2009) reported the presence of a historic refuse concentration within the Warm Creek Channel, just north of the U.S. Army Reserve Center. Analysis of this concentration yielded a variety of dates of manufacturing for the artifacts, resulting in a conclusion that the remains reflected at least two periods of deposition – pre-1930 and post-1940. Two military-issued gun shells were also recovered. All identified artifacts were recovered and the site area was deemed clear of any significant remains.

36-023399 Waterman Gardens

Waterman Gardens was addressed by Daly in 2001 and described as being located on the south side of Baseline Road, east of Waterman Avenue. The southern boundary was identified as E. Olive Street and the eastern boundary as La Junta Street. This complex was constructed in 1943 under the Federal Housing Act of 1937 and designed to provide low-income housing supporting WWII-period war-effort workers. The grant for construction was prepared by the Housing Authority of San Bernardino County. The complex has been occupied since its establishment, still providing low-income housing. Daly concluded this complex maintains its architectural integrity and is eligible for listing in the National Register of Historic Places (under Criterion A) and, similarly, would qualify for listing in the California Register of Historical Resources.

36-026988 Keller-Graham Ranch

The Keller-Graham Ranch was recorded by McKenna in 2014 and described as being located on the northwestern corner of 9th Street and Valencia Avenue. This property, consisting of approximately 6 acres, represents the original 6 acres identified as the eastern half of Lot 7, Block 42. Keller owned the property between 1900 and 1903. Subsequent owners included H.H. (1904-1905), Lucy J. DeCrow (1906-1908), and William T. Graham (to 1945). After 1945, the property was held by the U.S. Federal Housing Authority in trust for future low-income housing development. At

the time of recording, the property was vacant. All evidence of early agricultural uses and/or structures had been removed. The 1901 USGS San Bernardino Quadrangle (reprinted in 1946) does illustrate structures in the vicinity of this property.

As noted earlier, historic maps and aerial photographs showed the western side of Waterman Avenue was developed prior to the eastern side. The eastern side was predominantly agricultural lands well into the 1940s, although there was some evidence of residential developments along Waterman Avenue and commercial developments along Baseline Road. St. Bernardine's Hospital was established at Highland Avenue and Waterman Avenue prior to 1938 and the early cemeteries on Sierra Way predate 1870.

Historic residential developments dominate the areas between 3rd Street and Baseline Road (west of Waterman Avenue) and both sides of Waterman Avenue, north of Baseline Road, are dominated by medical offices and facilities associated with the hospital complex.

Highland Avenue is also dominated with hospital-related facilities and light commercial properties. A small residential neighborhood is west of these improvements – on Belle Street.

The areas south of Baseline Road and east of Waterman Avenue illustrate later residential developments (1950s+), but also a considerable amount of light and heavy industrial properties. There are more rental properties in this area (e.g. trailer courts and MFR properties), along with school properties. The Warm Creek drainage bounds the SP project area.

The paleontological overview of the project area identified the general area as consisting of surficial deposits of coarse gravels and sands derived from the Lytle Creek and Warm Creek drainages. Other deposits consists of younger Quaternary Alluvial deposits derived from the nearby San Gabriel Mountains and fluvial deposits from East Twin Creek and Warm Creek. There are also deposits associated with the Santa Ana River flood zone. Overall, these deposits are not consistent with fossil bearing deposits. Deeper deposits, however, can be identified as older Quaternary alluvial deposits and associated with fossil specimens.

Studies completed by Leighton & Associates (1988) suggest the younger alluvial deposits may be hundreds of feet deep. Based on these findings, the potential for identifying fossil specimens within the project area is considered low. However, it was recommended (McLeod 2015) that "substantial" excavations be monitored by a qualified paleontologic monitor.

RESULTS OF THE INVESTIGATIONS

Recent investigations into the cultural resources and cultural sensitivity of the Waterman & Baseline Neighborhood Transportation S.P. was initiated by McKenna et al. in December, 2015, and completed in May, 2016. The research included a review of previously completed cultural resources studies within and around the project area, historic research into the various land uses within the project area, Native American consultation, a paleontological overview, field reconnaissance survey for documenting current conditions, and an analysis of the cultural resources sensitivities for the individually defined land use districts.

Native American Consultation

McKenna et al. contacted the Native American Heritage Commission in December, 2015, and received a reply on December 21, 2015. This response stated the Native American Heritage Commission has no record of any sacred or religious Native American resources within or near the project area.

McKenna et al. contacted the twelve individuals identified by the Commission as wanting notification and/or consultation when projects are proposed within their traditional tribal territories. In this case, the contact persons/groups included representative of the Cahuilla, Serrano, Lusieno, and Gabrielino. Letter were sent to fourteen individuals, including: McKenna et al. received two responses: Anthony Morales (Gabrielino) and Daniel McCarthy (Serrano)

Mr. Morales phoned McKenna et al. and the project was discussed. Mr. Morales had no specific information on the project area, but emphasized the project area was within the traditional territory of the Gabrielino and wished to be kept informed, should any evidence of Native American resources be identified.

Mr. McCarthy, representing the San Manuel Band of Mission Indians, responded via email. He, too, noted the tribe had no specific data to provide, but also claimed the project area to be within the traditional territory of the Serrano. He requested he be kept informed and involved with additional consultation regarding any language used in the preparation of the Specific Plan documents.

Overall, although the project area was associated with Native American occupations and/or presence during prehistoric and historic periods, no physical evidence was found as a result of this investigation. The only reported evidence of prehistoric use in the area was within Seccombe Lake Park and in the form of Late Prehistoric grinding tools (metates and mortars) and some chipped stone artifacts. This area would/should be considered sensitive for additional materials.

Paleontological Resources

The project area is located within an area generally comprised of younger Quaternary alluvial deposits and Holocene top soils. As such, the potential for the identification of paleontological (fossil) specimens is considered to be quite low. Deep excavation, however, may impact older Quaternary deposits that have been associated with fossil finds. Therefore, should substantial excavations be undertaken in association with future developments, a paleontological monitoring program should be required. In this case, and in accordance with the standard protocols of the San Bernardino County Museum Earth Science Department, McKenna et al. is recommending any excavations exceeding ten feet below the current surface be subjected to a paleontological monitoring program. The project should be preceded by the preparation of a PRIMP (Paleontological Resources Impact Mitigation Plan) and all standard monitoring techniques and reporting protocols followed. Any recovered resources must be analyzed, reported, and prepared for curation at the San Bernardino County Museum, Redlands.

Historic Resources

The project area is within the boundaries of the historic Rancho San Bernardino and the lands purchased from the Lugo family by Mormon settlers in ca. 1850-1851. Although outside the confines of the "fort," the project area is relatively close to the fortified city core area and associated with some of the early families of the City of San Bernardino. Shortly after its founding, the San Bernardino community became the center of public facilities and, in 1853, the County seat. Farms surrounded the original City core and houses were established on some early subdivisions. The City cemetery (now Pioneer Memorial Cemetery) was founded, as was the first Jewish cemetery. Early roadways were established, including "Base Line Road" and what would eventually become Waterman Avenue. Side street developed as the community grew and became more densely populated.

Subdivisions dating to the 1880s represented some of the earliest residential properties not specifically dedicated to agricultural enterprises. In this case, the early single-family residential lots were primarily west of Waterman Avenue, while agricultural properties continued to dominate those areas to the east of Waterman Avenue. This pattern continued well into the 1940s.

AS Waterman Avenue, Highland Avenue, and Baseline Road became more active, commercial developments were added to the area. The frontage of Waterman Avenue and Baseline Road converted to more commercial uses in the 1940s and 1950s, while the intersection of Highland Avenue and Waterman Avenue were dominated by the presence of St. Bernardine's Hospital and the larger, Mountain View Cemetery. Commercial improvements were also established in the 1940s-1950s on Highland Avenue, west of

Waterman Avenue. Other residential subdivisions were established west of Waterman Avenue and south of Highland Avenue, but outside the boundaries of the current study area.

As noted earlier, only about 20% of the Specific Plan project area has been formally investigated for the presence of cultural resources. Nonetheless, research has confirmed the majority of the project area is sensitive for the presence of historic resources, primarily in the form of standing structures. In assessing the potential for the presence of historic period cultural resources, the six Land Use Districts were used as a baseline (Figure 5).

District 1: Uptown Professional District

The Uptown Professional District is located on either side of Waterman Avenue, between 13th Street and Highland Avenue. This area is associated with the presence of St. Bernardine's Hospital and the many supporting facilities located along Waterman Avenue. Overall, this area is dominated by modern or late historic buildings housing medical offices and other medical support facilities (e.g. administration offices).

Most of the structures would be characterized on standard office complexes with minimal architectural or design elements. However, there is a small number of early residences that have been adapted for re-use as medical offices (e.g. dental) and retain much of their original exterior designs.

St. Bernardine's Hospital still exhibits its original core hospital (pre-1938) within the larger and more modern complex (Figure 6). The exact date of the establishment of St. Bernardine's Hospital has not been confirmed. However, it does retain much of the original architectural features and as a large and relatively early medical facility in the area, would likely qualify for local recognition. His resource has, to date, not been formally evaluated. Similarly, the various properties fronting Waterman Avenue have not been evaluated, suggesting most were developed prior to 1976 and the CEQA requirements for evaluation. Waterman Avenue and Highland Avenue are historic roadways. However, neither has been recorded as such. Hogan et al. conducted a pipeline survey along Waterman Avenue, but did not record the roadway as a resource. Sanka addressed Highland Avenue, west of Waterman, but did not record the roadway as a resource. Neither study reported resources along the alignments within the current study area. These resources should be considered features within the larger "City of San Bernardino."

Subdivisions within Uptown Professional District include the Grant Subdivision (1922), the Propst Subdivision (1924), the Highland Avenue Tract No. 3 (1959), Tract No. 2105 – Feavel Subdivision No. 2 (1926), Tract No. 2969 (1946), Tract No. 3895 (1952), Record of Survey (1952), Tract 8914 (1974), Tract 4586 (1978), and Tract 12359 (1983). As

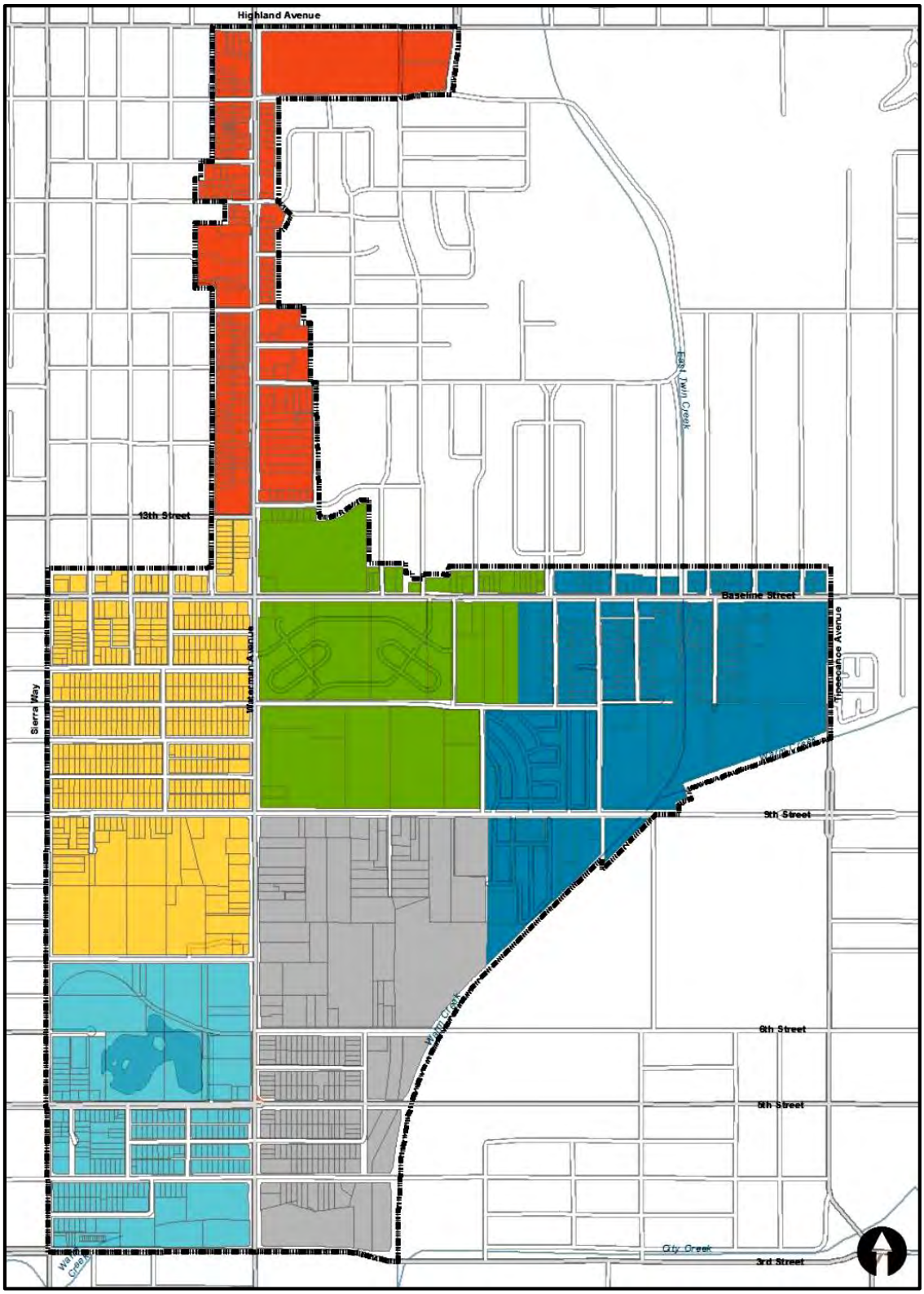

Figure 5. Proposed Land Use Districts.

Figure 6. West/Southwest Elevation of St. Bernardine's Hospital (SW).

noted, subdivisions in this area began as early as 1922 and continued well into the 1980s. The lack of research within this District indicates any property-specific project proposed for the District be subjected to a CEQA cultural resources investigation and evaluation.

District 2: Westside Residential District

The side Residential District is bounded by Waterman Avenue (east), 7th Street (south), Sierra Way (west), and just north of Baseline Road (north). This area includes the Pioneer Memorial Cemetery, Home of Eternity Cemetery of Congregation Emanuel, commercial developments along Baseline Road and Waterman Avenue, and residential properties between 8th Street and Baseline Road. Research showed minimal evidence of previous studies in this area. Sierra Way and Baseline Road were within the pipeline survey area conducted by Hogan et al. Baseline Road was addressed in ca. 1972-1973

as California Point of Historical Interest (CPHI-12) and Primary No. 36-015497. Sierra Way was no recorded. Love and Tang (2000) conducted linear surveys along Waterman Avenue and 9th Street, but recorded no resources.

The Home of Eternity Cemetery of Congregation Emanuel is identified as a California Point of Historical Interest (SBR-44) and subsequently recorded as CA-SBR-4130H, but there has been no formal record prepared (Figure 7). The designation was based on map data, not field work or detailed research.

Figure 7. Pioneer Memorial Cemetery from Sierra Way (E).

The Pioneer Memorial Cemetery is the earliest formal cemetery in San Bernardino. Nonetheless, the Cemetery has not been formally recorded or assessed. Likewise, the residential community between the cemeteries and Baseline Road have not been investigated for historic resources, although the area was developed prior to WWII.

Subdivisions within the Westside Residential District include: Amended Map of Base Line Addition to the City of San Bernardino (1887), Fairbanks Addition to San Bernardino (1887), W.J. Wilsey's Base Line Addition to the City of San Bernardino (1887), Dunn-Black Subdivision (1903), Map of the Bungalow Addition – a Subdivision of Lots 6 and 7 of Block 2 – Rancho San Bernardino, San Bernardino County (1909), Map of the Bungalow Addition No. 2 – a Subdivision of Lot 2 of Block 2 - Rancho San Bernardino (1909), Map of the Sturges Subdivision (1915), Daimwood Subdivision (1923), Map of Walnut Park (1921). Poling Subdivision (1926), Tract 1918 (Goforth Tract – 1927), Tract 2862 (1946), Tract 2969 (1946), Tract 3895 (1955) Record of Survey (1956), Record of Survey (1963), Tract 8914 (1974), and Tract 4586 (1978).

The frontages along Baseline Road and Waterman Avenue are dominated by the presence of commercial structures (and businesses) with periodic residential structures – some of which have been altered for use as commercial buildings.

As indicated by the subdivision maps, this particular area of San Bernardino has very early subdivisions (1887), with some additional subdivision dating as late as 1978. The later subdivisions include condominium developments. Most of the residences in this area are single-family properties that exhibit additional developments resulting in multi-family properties. There are many bungalows dating to the 1900s-1930s, some courtyards (Figure 8), more modern (1960s+) apartment complexes, and a few vacant lots.

None of the properties within this District have been formally evaluated, including the Pioneer Memorial Cemetery. Any proposed projects within this district should include a cultural resources evaluation.

District 3: Midtown Core District

District 3 is the Midtown Core District and bounded by Waterman Avenue (west), north of Baseline Road (north), 9th Street (south), and Bobbett Street (east +/-). This area include many commercial properties along Waterman Avenue and Baseline Road, as well as the large Waterman Gardens complex and the Lyman School. With the exception of Waterman Gardens, there are fewer residences in this area. Those present, however, are early – dating to the 1910s-20s (+/-).

Unlike Districts 1 and 2, the majority of District 3 has been surveyed for cultural resources. Specifically, the Waterman Gardens complex, an area west of the trailer park, and portions of roadways extending north of Baseline Road.

Waterman Gardens was evaluated by Daly (2011) and Glover and Gust (2011). Recorded as Primary No. 36-025399, Waterman Gardens was identified as a 1943 housing

complex for low-income families. It was declared eligible for the National Register of Historic Resources under Criterion A. As such, any project related to Waterman Gardens would require a review by the Office of Historic Preservation.

Figure 8. Courtyard Complex at 122-124 Olive (S).

The Keller-Graham ranch was recorded by McKenna in 2014 and determine to lack integrity and to be ineligible for recognition as a historical resource. The trailer court is no an eligible resource (although not formally evaluated) and the Lyman School is a modern addition to the area.

In assessing this District, McKenna et al. has concluded the area of Baseline Road is sensitive for 1940s (+) commercial developments that require evaluations, as project come forward) and the area east of Waterman Gardens requires survey and evaluation. Otherwise, the area has been covered.

District 4: Eastside Residential District

The Eastside District is east of the Midtown Core District and include an area east of Valencia Avenue, south of 9th Street. The eastern boundary is Tippecanoe Avenue and the Warm Creek Channel.

The area south of 9th Street is dominated by the presence of a 1970s+ trailer park and some open field areas and/or modern commercial properties. To the north of 9th Street, the East Side Residential District is dominated by a trailer park, a large school bus yard, and a low income residential community. There are also pre- and post-WWII commercial developments along Baseline Road – some of which are vacant and in poor condition (Figure 9). The residential component of this District is concentrated in the eastern portions of the area and includes a small Catholic Church that supports the low-income residential community to the east.

Figure 9. Baseline Iron Works, 1021 Baseline Road (NW).

Subdivisions in this area include: the Jackson Subdivision (1914), Tract No. 1964 (Base Line Gardens - 1926), Tract No. 2074 (Base Line Gardens No. 2 – 1925), Tract 2078 (Beam Subdivision – 1925), Tract No. 2121 (Base Line Gardens No. 3 – 1926), Tract No. 2307 (Van Loon Subdivision – 1928), Tract No. 2207 (Base Line Tract – 1926), Tract No. 2624 (1940), and Tract No. 15956 (2002). As indicated, the first subdivisions in this area date back to 1914 and have continued through 2002. The majority pre-dated WWII, indicating the improvements in the area are all historic (by age).

Research should that, with the exception of a small area along Baseline Road, this area has not been investigated for significant historic resources. The survey of the area showed the residential components to be fairly early (mainly 1920s and 1930s) with both single and multi-family properties. There a small cottages, some modest sized residences, and courtyards (Figure 10)

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Figure 10. A Portion of the Courtyard Complex at 1100 Bobbett (W).

East Twin Creek Channel bisects this District and Warm Creek bounds the area. Neither of these water systems have been evaluated or recorded. Overall, the entire Eastside Residential District requires evaluation and recordation. It is likely this neighborhood would qualify as an "ethnic resource" and was also qualify as a cultural district. Only the full evaluation would confirm or negate this potential. Any projects proposed within the Eastside Residential District should be addressed via a CEQA cultural resources investigation.

District 5: Gateway Lake District

The Gateway District is located in the southwestern portion of the SP project area and bounded by Waterman Avenue (east), Sierra Way (west), 3rd Street (south) and 7th Street (north). The northern half of this District, with the exception of a few lots on Waterman Avenue, is dominated by the presence of Seccombe Lake Park. This park was planned for years, but only completed in the late 1980s to reflect its current state.

Prior to the development of the park, this area was associated with the Martin Adobe and associated ranch/agricultural land. The Martin Adobe (36-005554) was recorded in 1986, during park development. It was one of the two oldest residences in San Bernardino and, unfortunately, was damaged during park development and subsequently demolished. Also associated with Seccombe Lake Park is 36-006796, an unmarked "cemetery" consisting of 11 graves identified in the northeastern quarter of the park. These graves were identified as historic (non-Native) and likely represented to first City cemetery – pre-dating Pioneer Memorial Cemetery. These graves were removed and reinterred at Pioneer Memorial Cemetery.

Old Victory Village, also within Seccombe Lake Park, is a small area of Native American artifacts tentatively dated to the Late Prehistoric period. Other resources within the District include a concentration of historic refuse at 4th Street and Waterman, the Harlem Motor Road/San Bernardino and Redlands Railroad alignment, and the U.S. Army Reserve Center (3rd Street and Waterman Avenue). The remainder of the District – south of 3rd Street – is dominated by residential properties.

Subdivisions associated with the Gateway Lake District include: The Cypress Tract (Horner and Bandholt's Subdivision - 1887), Wozencraft Place (1887), Amended Baldridge Subdivision (1909), Tract No. 2030 (Fifth Street Place Subdivision – 1925), Parcel Map No. 7140 (1981), Parcel Map No. 8219 (1984), Parcel Map No. 9122 (1985), and Tract No. 17704 (2006). As listed, the earliest subdivisions in this area date to 1887, but continue well into the 21st Century with modern developments. With the exception of the studies done with Seccombe Lake Park, only the U.S. Army Reserve Center has been investigated and recorded. This Center (Figure 11) was determined to be ineligible for

listing in the National Register of Historic Places and/or the California Register of Historical Resources.

This is the only area addressed by the historic Sanborn Fire Insurance Maps, which indicate the area was infilled with single family residences between 1900 and the 1930s – with many of the structures predating 1906.

Figure 11. U.S. Army Reserve Center at 3rd Street and Waterman Avenue (NE).

This District also includes a modern Fire Station, a large, modern Office Complex, and some sporadic modern redeveloped residential lots. It is dominated by smaller cottages and bungalows, courtyards (Figure 12), and a few vacant lots.

Overall, this area of the SP project area exhibits some of the earliest single family residential properties east of the original City core. The area has not been formally evaluated

for significant cultural resources, but would likely qualify as a small cultural district with local significance. Any proposed projects within the District, with the exception of the Reserve Center and modern commercial/industrial properties, should be subjected to a CEQA level evaluation and documentation.

Figure 12. Courtyard at 254 Kingman Street (N).

District 6: Employment Mixed Use District

The Employment Mixed Use District is bounded by Waterman Avenue (west), 3rd Street (south), 9th Street (north), and Valencia Avenue (east). At the time of the current study, the majority of this area was dominated by commercial/industrial uses – most specifically the various properties comprising the auto parts salvage yards. Other industrial or commercial properties include a waste management complex, and auto service businesses. Small, single family residential properties are sporadically located within these industrial

and commercial properties. South of 6th Street, there are residential blocks with some areas of open space along the Warm Creek Channel.

Subdivision identified within this District include: The Cooley Tract (1887), The Prado Verde Tract (1920), Tract No. 2503 (1935), Parcel Map No. 3442 (1977), and Parcel Map No. 8219 (1983). The lack of subdivisions in this area are partially based on the use of this area as agricultural lands well into the 1940s and the subsequent establishment of post-WWII large industrial/commercial uses (e.g. car part salvaging). The small residential area north of 3rd Street and south of 5th Street consist of very small, early residences consistent with late 1800s and early 1900s improvements (e.g. the Cooley Tract; Figure 13). Some lots remains vacant or have become vacant.

Figure 13. Residence at 24186 Monterey (N).

Overall, the area identified as the Employment Mixed Use District has not been previously surveyed or inventoried for cultural resources. As such, there are no identified resources

within the area, save this summary. This area will require evaluations and/or inventorying as property-specific projects are initiated. It is possible the area will qualify as a locally significant district, but this preliminary conclusion must be verified through a formal investigation.

Summary

The Specific Plan project area has been sampled via cultural resources investigations, but only about 20% of the overall project area has been addressed and/or inventories. There are major data gaps for this area, including, but not limited to the need for the following:

- Research and inventory of historic roadways;
- Research and inventory of public facilities (cemeteries, public buildings, parks, and public parking spaces;
- property-specific investigations of pre-1965 building (both residential and other); and
- Research and documentation of the St. Bernardine's Hospital;

Identified resources determined to be significant or potentially significant must be protected until or unless the resource(s) is determined to be insignificant. Areas requiring protection, regardless, include the noted cemeteries, the sensitive areas within Seccombe Lake Park, St. Bernardine's Hospital, and the early residential neighborhoods. Each individually proposed project within the Specific Plan area that does not involve an existing modern development will require, at minimum, a CEQA level of research and reporting.

CONCLUSIONS AND RECOMMENDATIONS

Based on the data presented above, McKenna et al. has concluded the Waterman & Baseline Neighborhood Transformation Specific Plan project area is not sensitive for paleontological or prehistoric archaeological resources. However, since there is always a potential for unidentified buried resources, McKenna et al. proposes the following recommendations:

1. All excavations exceeding a relative depth of ten feet below the current surface be monitored for paleontological resources. This monitoring should include the preparation of a PRIMP document and adherence to all standard protocols of the San Bernardino County Museum Earth Science Department. All recovered specimens should be curated at the Museum in Redlands.

2. If, at any time, evidence of Native American resources is uncovered, consultation with local representative of the Serrano and Gabrielino should be initiated and, depending on the location and nature of the find, a determination as to the need for an archaeological monitoring program will be revisited. If am archaeological monitoring program is justified, the archaeological consultant will work with the Native American representatives to insure adequate coverage and protection of the identified resource(s).

The greater majority of the Specific Plan project area is densely developed with residential properties, commercial properties and industrial properties. There are also areas of open space – mainly along Warm Creek. Very few of these properties have been addressed for significant and those that have been investigated and recorded were determined significant on the federal, state, or local level. Others were declared insignificant. Very few of the residential properties have been addressed. Based on the lack of investigations, McKenna et al. makes the following recommendations with respect to future project:

3. Each project within the Specific Plan project area must be assessed individually and subjected to property-specific research and recording. This level of investigation should include any historic roadway associated with or adjacent to the project area and should include the necessary research to determine the specific date of construction, property description, ownership history, and assessment of significance in accordance with federal or state criteria, as applicable.

4. If any property-specific study results in a conclusion that a property is historically significant, the documentation must include recommendations to lessen or avoid adverse impacts. If a resource is determined to be significant (or already determined to be significant), impacts to the resource and the recommendation pertaining to the resource(s) must be reviewed by the Office of Historic Preservation and a concurrence reached with respect to the mitigation plans.

5. If, at any time, evidence of additional human remains is found, the County Coroner will be notified immediately and permitted to examine the remains *in situ*. If the remains are determined to be of Native American origin, the Coroner will notify the Native American Heritage Commission and the Most Likely Descendant (MLD) will be named. In consultation between the MLD, City, Archaeological Consultant, and project proponent, the disposition of the remains will be determined.

If the remains are determined to be historic (non-Native), the Archaeological consultant, City, and project proponent will determine the disposition of the remains. If the remains are of forensic origin, the Coroner will oversee the disposition of the remains.

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CERTIFICATION

I hereby certified that the statements furnished above and in the attached exhibits present the data and information required for this report, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

Date: May 23, 2016 Signed: Jeanette A. McKenna

Jeanette A. McKenna, Principal Investigator

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2000 Cultural Resources Assessment for AT&T Wireless Site #C963 (9th & Waterman), City of San Bernardino, San Bernardino County, California. On file, California State University, Fullerton, South Central Coastal Information Center, Fullerton, California.

White, Raymond C.
1963 "Luiseno Social Organization." *University of California Publications in American Archaeology and Ethnology* 48 (2): 91-194.

White, Robert S. and Laurie S. White
1995 An Archaeological Assessment of a 35 +/- Acre San Bernardino Multi-Purpose Stadium Site, City of San Bernardino, San Bernardino County, California. On file, California State University, Fullerton, South Central Coastal Information Center, Fullerton, California.

White-Soto, Stephanie
1987 Minutes of the Board of Supervisors of San Bernardino County, California: Historical Points of Interest. March 23, 1987. On file, California State University, Fullerton, South Central Coastal Information Center, Fullerton, California.

Whitehead, Roy Elmer
1978 Lugo: A Chronicle of Early California. San Bernardino County Museum Association, Redlands, California.

Wilke, Philip J. and Stephen Hammond
1973 La Loma-Mira Loma Transmission Line: Expected Impact on Archaeological Values. On file, California State University, Fullerton, South Central Coastal Information Center, Fullerton, California.

Wills, Carrie D., Sarah A. Williams, and Kathleen A. Crawford
2014 Cultural Resources Records Search and Site Visit Results for T-Mobile West, LLC Candidate ES04362A (CA362 San Bernardino Court), 172 West 3rd Street, San Bernardino, San Bernardino County, California. On file, California State University, Fullerton, South Central Coastal Information Center, Fullerton, California.

Wlodarski, Robert J.
1991 Final Report: An Archaeological Survey Report Documenting the Widening and Associated Improvements on Interstate 215 (I-215) from Interstate 10 (I-10) North to State Route 30 (SR-30), City of San Bernardino, San Bernardino County, California. On file, California State University, Fullerton, South Central Coastal Information Center, Fullerton, California.

2000 A Phase I +/- Archaeological Study for Telecu Senior Housing, San Bernardino, Inc., 602-666 W. 6th Street, San Bernardino County, California. On file, California State University, Fullerton, South Central Coastal Information Center, Fullerton, California.

2001 A Phase I Archaeological Study for Telecu Housing-San Bernardino II, Inc., 772-776 4th Street, City of San Bernardino, California. On file, California State University, Fullerton, South Central Coastal Information Center, Fullerton, California.

2005 Records Search Results for T-Mobile Site SB-517-01 (Sierra ATTW COHAB. On file, California State University, Fullerton, South Central Coastal Information Center, Fullerton, California.

2010 Cultural Resources Record Search and Archaeological Survey Results for the Proposed Royal Street Communications, California, LLCX, Site LA5307A (T-Mobile Colo IE04494A) Located at 220 East Baseline Street, San Bernardino, San Bernardino County, California 92410. On file, California State University, Fullerton, South Central Coastal Information Center, Fullerton, California.

2010 Record Search and Field Reconnaissance Phase for the Proposed AT&T Wireless Telecommunications Site ES0267 (Foothill Plaza), 16910 Foothill Boulevard, Fontana, California 92336. On file, California State University, Fullerton, South Central Coastal Information Center, Fullerton, California.

2011 AT&T Wireless Telecommunications Site LA8020 (Fontana Relocation) Located at 14560 Washington Drive, Fontana, California 92335. On file, California State University, Fullerton, South Central Coastal Information Center, Fullerton, California.

Wright, J. and W. Stoddard

1990 Historic Resources Inventory: 36-013923. On file, California State University, Fullerton, South Central Coastal Information Center, Fullerton, California.

1990 Historic Resources Inventory: 36-013924. On file, California State University, Fullerton, South Central Coastal Information Center, Fullerton, California.

APPENDIX A:

Professional Qualifications

JEANETTE A. McKENNA

Owner and Principal Investigator
McKenna et al., Whittier CA

Ms. McKenna specializes in the discipline of Cultural Resource Management: prehistoric archaeology, historic archaeology, historic architecture, and history. She holds a Master's Degree in Anthropology/Archaeology and was recently awarded an Honorary Doctorate of Letters (HonDL) by the International Biographical Centre of Cambridge, England. She is a past member of the Board of Directors for the Society of Professional Archaeologists (SOPA 1993-97) and was certified by the Society to conduct both prehistoric and historic archaeological studies. Ms. McKenna is also recognized by the California Office of Historic Preservation as qualified to complete historic architectural studies. Ms. McKenna was on the Board of Directors for SOPA when the Society established the Registry of Professional Archaeologists (RPA) and has been a Registered Professional Archaeologist since 1998. Ms. McKenna has over 39 years of professional experience as an archaeologist/cultural resource manager and has participated on over 1700 projects of various sizes and complexities. The majority of her work has been conducted as a Field Director, Project Manager, and/or Principal Investigator throughout California and the Greater Southwest.

TECHNICAL CAPABILITIES

- Vast experience in the greater Southwest, Great Basin, and Southern California regions. Familiar with the full range of cultural resource investigations and has completed projects within the public and private sectors, including environmental management firms, planning and engineering firms, and State and federal agencies.
- Active in the discipline of Cultural Resource Management since 1976; over 39 years of professional experience in Southern California, Arizona, and Nevada.
- Particular interest in the desert regions of California and Arizona, with specializations in the Protohistoric and Historic Contact Periods.
- Considerable experience in dealing with prehistoric cultural remains and working directly with Native American groups in archaeological training programs (Arizona State University; the Southern California Indian Center, Garden Grove).

EDUCATION AND AFFILIATIONS

B.A., Anthropology, 1977, CSU Fullerton
M.A., Anthropology, 1982, CSU Fullerton
HonDL, 2015, Int. Biog. Centre, Cambridge
Lambda Alpha Lambda Honors Society
Post Graduate Studies, Arizona St. Univ., 1982-85
Post Graduate Studies, UC Riverside, 1991-92
Certification Program: CEQA, Land Use and Environmental Planning, UC Riverside, 1997-98
Society of Professional Archaeologists (SOPA) Certification: Field/ Prehistoric Archaeology and Historical Archaeology (1984 to Present)
Registry of Professional Archaeologists (RPA)
Board of Directors, Society of Professional Archaeologists 1993-1997 (American Society of Conservation Archaeologists Representative)
BLM California Permit (renewable)
BLM Arizona State Permit (renewable)
Riverside County Registration No. 161
Arizona State Antiquities Permit (renewable)
Curation, San Bernardino Co. Museum
Curation, Arizona State University

SELECTED PROJECT EXPERIENCE

- Historic Architectural Studies for Renovation and Restoration, the Greek Theatre, Los Angeles CA
- Evaluation of Cultural Resources: Burbank and West Hollywood Redevelopment Project Areas, Los Angeles County, CA
- Historic Property Survey for the City of Whittier, Los Angeles County, CA
- Archaeological Investigations and Resource Evaluations for the Proposed Cajon Pipeline, San Bernardino and Los Angeles Counties, CA
- Archaeological Class I Investigations, Proposed Mojave Pipeline, San Bernardino County, CA
- Cultural Resources Investigations (Phases I, II, III, and Mitigation Monitoring) for the RIX/SARI Projects, Santa Ana Watershed Project Authority (SAWPA), San Bernardino and Riverside Counties, CA
- Phase I, II, and III Archaeological Investigations for the County Sanitation Districts of Los Angeles County, Puente Hills Landfill Solid Waste Management Facility Expansion Project, Whittier, CA
- Archaeological Mitigation Program, Phoenix Indian School Track Site Project. Arizona State University Office of Cultural Resource Management and the Bureau of Indian Affairs, Phoenix, AZ
- Archaeological and Testing Program for the Hidden Valley Golf Course and Van Buren Golf Course Properties, Riverside County, CA
- Cultural Resources Overview Studies for the Annexation of Unincorporated County Lands to the City of Ontario, CA
- Historic Property Survey Reports: Warner Bros. Main Lot Ranch Lot Properties, Burbank, CA
- Historic Archaeological Investigations for L.A. County Sheriff's Facility, Lancaster, CA.

APPENDIX B:

Archaeological Records Search

Report List

Waterman Gardens

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
SB-00273	NADB-R - 1060273; Voided - 75-12.2A	1975	LEONARD III, N. NELSON	SANTA ANA RIVER PROJECT, DESCRIPTION AND EVALUATION OF CULTURAL RESOURCES AND APPENDICES: FIELD DATA	ARCHAEOLOGICAL RESEARCH UNIT, UCR	36-000314, 36-001543, 36-001571, 36-001572, 36-001575, 36-001576, 36-001577, 36-001578, 36-001579, 36-001580, 36-002317, 36-002623
SB-00274	NADB-R - 1060274; Voided - 75-12.2B	1979	ROSENTHAL, E. JANE	A CULTURAL RESOURCE SURVEY OF THE PROPOSED SANTA ANA RIVER HIKING/BIKING TRAIL IN THE PRADO FLOOD CONTROL BASIN	CALIFORNIA STATE UNIVERSITY AT LONG BEACH	36-001543
SB-00275	NADB-R - 1060275; Voided - 75-12.2C	1977	TOBEY, RONALD C., TERRY D. SUSS, and LARRY BURGESS	HISTORICAL RESOURCE SURVEY, PRADO FLOOD CONTROL BASIN, SAN BERNARDINO AND RIVERSIDE COUNTIES, CALIFORNIA	DEPARTMENT OF HISTORY, UCR	36-001571, 36-002317
SB-00412	NADB-R - 1060412; Voided - 76-10.21	1976	SIMPSON, RUTH D., LARRY E. BURGESS, and ARDA HAENSZEL	ARCHAEOLOGICAL - HISTORICAL RESOURCES ASSESSMENT OF SAN BERNARDINO CITY LIBRARY PROJECT	SAN BERNARDINO COUNTY MUSEUM ASSOCIATION	
SB-00413	NADB-R - 1060413; Voided - 76-10.22	1976	SIMPSON, RUTH D. and LARRY E. BURGESS	ARCHAEOLOGICAL - HISTORICAL RESOURCES ASSESSMENT OF SAN BERNARDINO CITY CENTRAL FIRE STATION	SAN BERNARDINO COUNTY MUSEUM ASSOCIATION	
SB-00447	NADB-R - 1060447; Voided - 76-11.16	1976	SCOTT, M. B.	DEVELOPMENT OF WATER FACILITIES IN THE SANTA ANA RIVER BASIN, CALIFORNIA, 1810-1968		
SB-00492	NADB-R - 1060492; Voided - 77-5.2	1977	SIMPSON, RUTH D., LAVERNA ARNOLD BROWN, and JOSEPH HEARN	ARCHAEOLOGICAL - HISTORICAL RESOURCES ASSESSMENT OF PROPOSED BLOOMINGTON WASTEWATER FACILITIES PLAN	SAN BERNARDINO COUNTY MUSEUM ASSOCIATION	36-000144, 36-000714, 36-000715, 36-000793, 36-000794, 36-000795, 36-000796, 36-001458, 36-001572, 36-001573, 36-001574, 36-001575, 36-001576, 36-001577, 36-001578, 36-001579, 36-001580, 36-001581, 36-001582
SB-00791	NADB-R - 1060791; Voided - 79-5.4	1979	HEARN, JOSEPH E.	CULTURAL RESOURCES ASSESSMENT OF MILL STREET AT WARM CREEK	SAN BERNARDINO COUNTY MUSEUM ASSOCIATION	
SB-00847	NADB-R - 1060847; Voided - 79-10.4	1979	SIMPSON, RUTH D. and ARDA M. HAENSZEL	CULTURAL RESOURCES ASSESSMENT: SECCOMBE LAKE PARK, SAN BERNARDINO, CALIFORNIA	SAN BERNARDINO COUNTY MUSEUM ASSOCIATION	36-005554
SB-00864	NADB-R - 1060864; Voided - 79-11.7	1979	SAN BERNARDINO COUNTY MUSEUM ASSOCIATION	CULTURAL RESOURCES ASSESSMENT: TRAFFIC SIGNAL PROJECT, THIRD STREET AT LENA ROAD	SAN BERNARDINO COUNTY MUSEUM ASSOCIATION	

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Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
SB-01094	NADB-R - 1061094; Voided - 81-2.8	1981	SMITH, GERALD A.	CULTURAL RESOURCES ASSESSMENT: TWENTYNINE PALMS AREA	SAN BERNARDINO COUNTY MUSEUM ASSOCIATION	
SB-01163	NADB-R - 1061163; Voided - 81-7.7	1981	SMITH, GERALD A., ARDA HAENSZEL, and MICHAEL K. LERCH	CULTURAL RESOURCES REPORT FOR SUPERMARKET COMPLEX IN THE CENTRAL CITY AREA OF SAN BERNARDINO	SAN BERNARDINO COUNTY MUSEUM ASSOCIATION	
SB-01274	NADB-R - 1061274; Voided - 82-5.6	1982	SCHAEFER CONSTRUCTION COMPANY	THE HISTORIC RESEARCH OF THE CALIFORNIA HOTEL, DOWNTOWN SAN BERNARDINO, CALIFORNIA	SCHAEFER CONSTRUCTION COMPANY	
SB-01371	NADB-R - 1061371; Voided - 83-3.6	1983	PLANNING, MARSHA LEE	MARTIN ADOBE: HISTORICAL RESEARCH, SECCOMBE STATE PARK - SAN BERNARDINO, CA.	HARRIS ARCHITECTS	36-005554
SB-01499	NADB-R - 1061499; Voided - 85-7.4A-B	1985	FOSTER, JOHN M. and ROBERTA S. GREENWOOD	CULTURAL RESOURCES OVERVIEW: CALIFORNIA PORTION, PROPOSED PACIFIC TEXAS PIPELINE PROJECT	GREENWOOD AND ASSOCIATES	
SB-01562	NADB-R - 1061562; Voided - 86-4.3	1986	SCHULZ, PETER D.	MARTIN ADOBE, SECCOMBE LAKE OF S.U.R.A.: PRELIMINARY SUMMARY OF FIELD WORK RESULTS AND RESTORATION RECOMMENDATIONS		36-005554
SB-01572	NADB-R - 1061572; Voided - 86-6.5	1986	LUBERSKI, ALEXANDRA	MARTIN ADOBE SITE - SAN BERNARDINO - SECCOMBE LAKE STATE RECREATION AREA, SUPPLEMENTAL RESEARCH		36-005554
SB-01729	NADB-R - 1061729; Voided - 87-9.8	1987	SCHULZ, PETER D. and ALEXANDRA H. LUBERSKI	HISTORY AND STRUCTURAL EVOLUTION OF THE MARTIN ADOBE, SAN BERNARDINO, CALIFORNIA		36-005554
SB-01821	NADB-R - 1061821; Voided - 88-7.12	1988	PEAK & ASSOCIATES, INC.	CULTURAL RESOURCE SURVEY AND CLEARANCE FOR AN AT&T FIBEROPTIC COMMUNICATION CABLE RE-ROUTE FROM SAN BERNARDINO NORTHWEST TO SAN BERNARDINO NATIONAL FOREST BOUNDARY	PEAK & ASSOCIATES, INC.	
SB-01837	NADB-R - 1061837; Voided - 88-11.5	1988	GOLDBERG, SUSAN K. and JEANNE E. ARNOLD	PREHISTORIC SITES IN THE PRADO BASIN, CALIFORNIA: REGIONAL CONTEXT AND SIGNIFICANCE EVALUATION	INFOTEC	36-001543, 36-001570, 36-001571, 36-002259, 36-002260, 36-002845, 36-004032, 36-005096, 36-005241, 36-005242, 36-005243, 36-005244, 36-005245

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Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
SB-01957	NADB-R - 1061957; Voided - 89-11.3	1989	BROCK, JAMES	ARCHAEOLOGICAL EVALUATION FOR THE PROPOSED RALLY'S HAMBURGERS PROJECT, NORTHEAST CORNER OF BASELINE AND BELLE STREETS, CITY OF SAN BERNARDINO	ARCHAEOLOGICAL ADVISORY GROUP	
SB-02091	NADB-R - 1062091; Voided - 90-4.4	1990	SWANSON, MARK T.	CULTURAL RESOURCES SURVEY OF CUP 90-11, A 0.81-ACRE TRACT, 101 NORTH "E" STREET, SAN BERNARDINO, SAN BERNARDINO COUNTY, CALIFORNIA	RESEARCH ASSOCIATES	
SB-02112	NADB-R - 1062112; Voided - 90-6.7	1990	TOBEY, RONALD C. and KEVIN B. HALLARAN	THE SECCOMBE LAKE PARK BURIALS: A PIONEER CEMETERY IN SAN BERNARDINO, CALIFORNIA		
SB-02113	NADB-R - 1062113; Voided - 90-6.8	1990	HATHEWAY, ROGER G.	DETERMINATION OF ELIGIBILITY REPORT FOR THE PLATT BUILDING	HATHEWAY & ASSOCIATES	
SB-02208	NADB-R - 1062208; Voided - 90-11.8	1990	MARMOR, JASON, SCOTT CROWNOVER, and WILLIAM BREECE	THE LOCATION AND PRELIMINARY DESCRIPTION OF ELEVEN HISTORIC BURIALS LOCATED IN SECCOMBE LAKE PARK, SAN BERNARDINO, CALIFORNIA	LSA ASSOCIATES	36-006796
SB-02216	NADB-R - 1062216; Voided - 90-12.7	1990	CARR, PETER E. and J. STEPHEN ALEXANDROWICZ	A CULTURAL RESOURCE ASSESSMENT OF THE SAN BERNARDINO COUNTY CENTRAL CREDIT UNION AND SAN BERNARDINO PUBLIC EMPLOYEE ASSOCIATION PROJECT, CITY OF SAN BERNARDINO, COUNTY OF SAN BERNARDINO, CALIFORNIA	CHAMBERS GROUP	
SB-02224	NADB-R - 1062224; Voided - 91-1.3	1991	ALEXANDROWICZ, J. STEPHEN and PETER E. CARR	ARCHIVAL RESEARCH: URBAN ARCHAEOLOGICAL INVESTIGATIONS FOR THE PROPOSED WELLS FARGO OFFICE BUILDING PARKING STRUCTURE PROJECT, CITY OF SAN BERNARDINO, COUNTY OF SAN BERNARDINO, CALIFORNIA	CHAMBERS GROUP	
SB-02232	NADB-R - 1062232; Voided - 90-1.17	1990	PEAK & ASSOCIATES	PART 1 – CULTURAL RESOURCES ASSESSMENT OF THE SAN BERNARDINO COUNTY AND RIVERSIDE COUNTY SECTIONS OF AT&T'S PROPOSED SAN BERNARDINO TO SAN DIEGO FIBER OPTIC CABLE	PEAK & ASSOCIATES	

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Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
SB-02237	NADB-R - 1062237; Voided - 90-10.7	1990	MACKO, MICHAEL E.	FINAL REPORT: HISTORIC RESOURCES EVALUATION FOR CUP 90-23 (371-375 ELEVENTH STREET), CITY OF SAN BERNARDINO, SAN BERNARDINO COUNTY, CALIFORNIA	MACKO ARCHAEOLOGICAL CONSULTING AND AEGIS	
SB-02403	NADB-R - 1062403; Voided - 91-4.4	1991	HATHEWAY, ROGER G.	DETERMINATION OF ELIGIBILITY REPORT FOR A COMMERCIAL PROPERTY LOCATED AT 364 NORTH ARROWHEAD AVENUE, SAN BERNARDINO, CALIFORNIA	HATHEWAY & ASSOCIATES	
SB-02404	NADB-R - 1062404; Voided - 91-4.5	1991	HATHEWAY, ROGER G.	DETERMINATION OF ELIGIBILITY REPORT FOR THE PACIFIC ELECTRIC SUB-STATION #24, SAN BERNARDINO, CALIFORNIA	HATHEWAY & ASSOCIATES	
SB-02415	NADB-R - 1062415; Voided - 91-5.4	1991	WLODARSKI, ROBERT J.	FINAL REPORT: AN ARCHAEOLOGICAL SURVEY REPORT DOCUMENTING THE WIDENING AND ASSOCIATED IMPROVEMENTS ON INTERSTATE 215 (I-215) FROM INTERSTATE 10 (I-10)NORTH TO STATE ROUTE 30 (SR-30), CITY OF SAN BERNARDINO, SAN BERNARDINO COUNTY, CALIFORNIA	HEART	
SB-02425	NADB-R - 1062425; Voided - 91-6.2	1991	HATHEWAY, ROGER G. and ANNE Q. DUFFIELD-STOLL	DETERMINATION OF ELIGIBILITY REPORT AND AN ARCHAEOLOGICAL SURVEY FOR A PROPOSED COMMERCIAL DEVELOPMENT LOCATED AT THE SOUTHWEST CORNER OF 6TH AND "D" STREETS, CITY OF SAN BERNARDINO, CA	HATHEWAY & ASSOCIATES	
SB-02436	NADB-R - 1062436; Voided - 91-7.3	1991	MARMOR, JASON, PHILLIP L. WALKER, and CARL LIPO	PHASE II ARCHAEOLOGICAL INVESTIGATION AND REMOVAL OF HUMAN BURIALS FROM AN HISTORIC CEMETERY IN SECCOMBE LAKE PARK, SAN BERNARDINO, CALIFORNIA	LSA ASSOCIATES	36-006796
SB-02473	NADB-R - 1062473; Voided - 91-11.3	1991	HATHEWAY, ROGER G., ANNE Q. DUFFIELD, and JOHN ROMANI	ARCHAEOLOGICAL TEST EXCAVATION FOR A PROPOSED COMMERCIAL DEVELOPMENT LOCATED AT THE SOUTHWEST CORNER OF 6TH AND "D" STREETS, CITY OF SAN BERNARDINO, CALIFORNIA	HATHEWAY & ASSOCIATES	36-007059

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Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
SB-02633	NADB-R - 1062633; Voided - 92-4.3	1992	ALEXANDROWICZ, J.STEPHEN, ANNE DUFFIELD-STOLL, and SUSAN R. ALEXANDROWICZ	A CULTURAL RESOURCES INVESTIGATION FOR THE PROPOSED EMPIRE BAY DEVELOPMENT, BLOCK 43, CITY OF SAN BERNARDINO, CALIFORNIA	ARCHAEOLOGICAL CONSULTING SERVICES	
SB-02693	NADB-R - 1062693; Voided - 92-11.3	1992	ALEXANDROWICZ, J. STEPHEN	MMRP-LETTER REGARDING ARCHITECTURAL DOCUMENTATION OF THE MEDITERRANEAN STYLE GARAGE AT 602 WEST STREET, CITY OF SAN BERNARDINO	ARCHAEOLOGICAL CONSULTING SERVICES	
SB-02707	NADB-R - 1062707	1992	ANONYMOUS	THE CREEK SITE (CA-SBR-2204)	DEPARTMENT OF ANTHROPOLOGY, FULLERTON COLLEGE	36-002204
SB-02810	NADB-R - 1062810	1993	BROCK, JAMES	CULTURAL RESOURCES ASSESSMENT OF THE GALBREATH PROPERTY, 1126 LOG LANE, BIG BEAR CITY, CA	ARCHAEOLOGICAL ADVISORY GROUP	
SB-02858	NADB-R - 1062858	1993	ALEXANDROWICZ, J. STEPHEN, SUSAN R. ALEXANDROWICZ, and CARY COTTERMAN	HISTORIC PRESERVATION INVESTIGATIONS FOR THE CENTRAL POLICE FACILITY, BLOCK 52, CITY OF SAN BERNARDINO, CA: THE ARCHIVAL RESEARCH PROGRAM	ARCHAEOLOGICAL CONSULTING SERVICES	36-007816, 36-007817, 36-007818, 36-007819, 36-007820, 36-007821, 36-007822, 36-007823, 36-007824, 36-007825, 36-007826, 36-007827, 36-007828
SB-02871	NADB-R - 1062871	1993	ALEXANDROWICZ, J. STEPHEN, SUSAN R. ALEXANDROWICZ, and ANNE DUFFIELD-STOLL	HISTORIC PRESERVATION INVESTIGATIONS OF BLOCK 29, CITY OF SAN BERNARDINO, COUNTY OF SAN BERNARDINO, CA: THE ARCHIVAL RESEARCH PROGRAM	ARCHAEOLOGICAL CONSULTING SERVICES	
SB-02872	NADB-R - 1062872	1994	ALEXANDROWICZ, J. STEPHEN and EDWARD KNELL	HISTORICAL ARCHAEOLOGICAL MONITORING AT THE NORTHWEST CORNER OF 4TH AND E STREETS, CITY OF SAN BERNARDINO, COUNTY OF SAN BERNARDINO, CA	ARCHAEOLOGICAL CONSULTING SERVICES	36-007841
SB-02873	NADB-R - 1062873	1994	ALEXANDROWICZ, J.S., EDWARD KNELL, SUSAN R. ALEXANDROWICZ, and ARTHRU KUHNER	HISTORICAL ARCHAEOLOGICAL MONITORING AT THE SOUTHEAST CORNER OF 5TH AND E STREETS, CITY OF SAN BERNARDINO, COUNTY OF SAN BERNARDINO, CA	ARCHAEOLOGICAL CONSULTING SERVICES	36-007842
SB-02886	NADB-R - 1062886	1994	LOVE, BRUCE and HONGWEI HUANG	HISTORICAL RECORDS SEARCH AND FIELD SURVEY NORTH-WEST CORNER OF 4TH AND E STREET SAN BERNARDINO, CALIFORNIA	CRM TECH	

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Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
SB-02943	NADB-R - 1062943	1994	TEARNEN, JANET	HISTORICAL ASSESSMENT: 514 & 524 N. ARROWHEAD AVE., SAN BERNARDINO, CA.	MAIN STREET CONSULTANTS	36-008061, 36-008062
SB-02962	NADB-R - 1062962	1994	ALEXANDROWICZ, J. STEPHEN, SUSAN R. ALEXANDROWICZ, EDWARD KNELL, and ARTHUR KUHNER	HISTORIC PRESERVATION INVESTIGATIONS AT LOTS 3 & 4, BLOCK 29, CITY OF SAN BERNARDINO, COUNTY OF SAN BERNARDINO, CA: THE MONITORING PROGRAM	ARCHAEOLOGICAL CONSULTING SERVICES	36-007975
SB-02963	NADB-R - 1062963	1992	HAENSZEL, ARDA	MORMONS IN SAN BERNARDINO	SAN BERNARDINO COUNTY MUSEUM ASSOCIATION QUARTERLY 39 (3):3-39	
SB-02964	NADB-R - 1062964	1994	HATHEWAY, ROGER	DETERMINATION OF ELIGIBILITY REPORT FOR VALLEY AUTO SUPPLY, 441 W. 5TH ST., SAN BERNARDINO, CA	HATHEWAY & ASSOCIATES	36-013925
SB-03224	NADB-R - 1063224	1996	ROSENTHAL, JANE	L.A. CELLULAR SITE 782.4	PETRA RESOURCES, INC.	
SB-03286	NADB-R - 1063286	1998	LOVE, BRUCE and BAI TOM TANG	HISTORIC SIGNIFICANCE EVALUATION OF BUILDINGS SCHEDULED FOR DEMOLITION DURING PHASE I OF MAYOR'S DEMOLITION INITIATIVE, CITY OF SAN BERNARDINO, CA. 16PP	CRM TECH	
SB-03433	NADB-R - 1063433	1997	DEBARROS, PHILIP	RESULTS OF ARCHAEOLOGICAL TEST EXCAVATIONS AND A REQUEST FOR DETERMINATION OF ELIGIBILITY FOR NINE SITES IN CROWDER CANYON. 3 VOL, 1058PP	RANCHO LAS FLORES, LTD	36-000113, 36-000114, 36-003769, 36-003771, 36-003772, 36-003773, 36-003774, 36-003803
SB-03452	NADB-R - 1063452	1998	LOVE, BRUCE and BAI "TOM" TANG	HISTORIC SIGNIFICANCE EVALUATION OF SEVEN GROUPS OF BUILDINGS TO BE DEMOLISHED DURING MAYOR'S DEMOLITION INITIATIVE, CITY OF SAN BERNARDINO,CA. 14PP	CRM TECH	
SB-03709	NADB-R - 1063709	2001	DUKE, CURT and JUDITH MARVIN	CULTURAL RESOURCE ASSESSMENT OF AT&T WIRELESS SERVICES FACILITY #D135, SAN BERNARDINO COUNTY, CA. 10PP	LSA	36-020147
SB-03714	NADB-R - 1063714	2001	FICKEL, WILLIAM	JOINT TASK FORCE-6 PROPOSED FACILITIES IMPROVEMENTS AT THE EXISTING SAN BERNARDINO POLICE FORCE FIRING RANGE, SAN BERNARDINO COUNTY, CA. 14PP	CORPS OF ENGINEERS	

Report List

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Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
SB-03906	NADB-R - 1063906	2002	BILLAT, LORNA	4TH AND MOUNTAIN, CA-6698B, ONTARIO, SAN BERNARDINO COUNTY, CA. 5PP	EARTHTOUCH, LLC	
SB-03910	NADB-R - 1063910	2001	BUYSSE, JOHNNA L. and BRIAN F. SMITH	A CULTURAL RESOURCES IMPACT SURVEY FOR THE HIGH DESERT WATER RECHARGE SITE 6, YUCCA VALLEY, CA. 9PP	BRIAN F. SMITH & ASSOCIATES	
SB-03930	NADB-R - 1063930	1998	LOVE, BRUCE and BAI TANG	HISTORIC BUILDING EVALUATION OF 226 W. 11TH ST, CITY OF SAN BERNARDINO, SAN BERNARDINO COUNTY, CA. 14PP	CRM TECH	
SB-03933	NADB-R - 1063933	2000	LAPIN, PHILIPPE	CULTURAL RESOURCE ASSESSMENT FOR PACIFIC BELL MOBILE SERVICES FACILITY CM 362-12, COUNTY OF SAN BERNARDINO, CA. 4PP	LSA	
SB-03934	NADB-R - 1063934	2000	LOVE, BRUCE and BAI TANG	SUMMARY OF HISTORICAL RESOURCES SURVEY: LAKES & STREAMS PROJECT (VISION 20/20), CITY OF SAN BERNARDINO, SAN BERNARDINO COUNTY, CA. 33PP	CRM TECH	
SB-03935	NADB-R - 1063935	1999	LOVE, BRUCE and BAI TANG	HISTORIC BUILDING EVALUATION: 1317 W. KINGMAN ST. CITY OF SAN BERNARDINO, SAN BERNARDINO COUNTY, CA. 14PP	CRM TECH	36-020459
SB-03936	NADB-R - 1063936	2000	LOVE, BRUCE and BAI TANG	HISTORICAL RESOURCES EVALUATION REPORT: 535-545 N. E ST, IN THE DOWNTOWN AREA OF THE CITY OF SAN BERNARDINO, SAN BERNARDINO COUNTY, CA. 15PP	CRM TECH	36-009993
SB-03937	NADB-R - 1063937	1998	HATHEWAY, ROGER	BASELINE AUTO SERVICES HISTORIC RESOURCE REPORT & DETERMINATION OF ELIGIBILITY FOR FIVE PROPERTIES. 86PP	HATHEWAY & ASSOCIATES	
SB-03938	NADB-R - 1063938	2001	WLODARSKI, ROBERT J.	A PHASE I ARCHAEOLOGICAL STUDY FOR TELECU HOUSING- SAN BERNARDINO II, INC, 772-776 4TH ST, CITY OF SAN BERNARDINO, CA. 21PP	HEART	

Report List

Waterman Gardens

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
SB-03941	NADB-R - 1063941	2000	DONALDSON, MILFORD WAYNE AND GAIL MILLER	FINDING OF EFFECT FOR THE SAN BERNARDINO SANTA FE STATION REHABILITATION AND ADAPTIVE REUSE PROJECT (PHASE I), CITY OF SAN BERNARDINO, COUNTY OF SAN BERNARDINO, CA. 42PP	MYRA L. FRANK AND ASSOCIATES	36-017975
SB-03942	NADB-R - 1063942	1999	MCKENNA, JEANETTE A.	A PHASE I CULTURAL RESOURCE INVESTIGATION & HISTORIC ARCHITECTURAL REVIEW FOR PROPERTIES IDENTIFIED WITHIN THE PROPOSED CITY OF SAN BERNARDINO MUNICIPAL WATER DISTRICT MUSCOY WELL SITES, SAN BERNARDINO COUNTY, CA. 104PP	MCKENNA ET AL	36-020164, 36-020165, 36-020166, 36-020167, 36-020168, 36-020169, 36-020170, 36-020171
SB-03944	NADB-R - 1063944	1997	MCLEAN, DEBORAH AND BROOKS SMITH	CULTURAL RESOURCES SURVEY REPORT FOR PACIFIC BELL MOBILE SERVICES TELECOMMUNICATIONS FACILITY (CM 343-02) IN THE CITY OF SAN BERNARDINO, SAN BERNARDINO COUNTY, CA. 15PP	LSA	
SB-03951	NADB-R - 1063951	1998	MASON, ROGER	CULTURAL RESOURCES RECORDS SEARCH AND LITERATURE REVIEW FOR A PACIFIC BELL MOBILE SERVICES TELECOMMUNICATION FACILITY: CM 011-12 IN THE CITY OF SAN BERNARDINO, CA. 5PP	CHAMBERS GROUP	
SB-03952	NADB-R - 1063952	2000	DUKE, CURT	CULTURAL RESOURCE ASSESSMENT FOR MODIFICATIONS TO PACIFIC BELL MOBILE SERVICES FACILITY CM 011-12, COUNTY OF SAN BERNARDINO, CA 2PP	LSA	
SB-04326	NADB-R - 1064326	2002	BUDINGER, FRED E.	PROPOSED WIRELESS DEVICE MONOPOLE & EQUIPMENT CABINET, WATERMAN SITE N291, 560 WATERMAN AVE, SAN BERNARDINO, CA. 8PP	TETRA TECH	
SB-04328	NADB-R - 1064328	2002	BUDINGER, FRED E.	A SECTION 106 HISTORIC PRESERVATION REVIEW OF THE PROPOSED VERIZON WIRELESS HARRIS UNMANNED CELLULAR TELECOMMUNICATIONS SITE TO BE LOCATED AT 1228 N. H ST, CITY OF SAN BERNARDINO, SAN BERNARDINO COUNTY, CA. 38PP	TETRA TECH	

Report List

Waterman Gardens

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
SB-04330	NADB-R - 1064330	2002	DEMCAK, CAROL R. and STEPHEN VAN WORMER	REPORT OF ARCHAEOLOGICAL MONITORING OF SAN BERNARDINO ENTERTAINMENT CENTER (CA-SBR-7841/H), 4TH & E STREETS, CITY OF SAN BERNARDINO. 92PP	ARMC	36-007841
SB-04332	NADB-R - 1064332	2000	WHITE, LAURIE S.	CULTURAL RESOURCES ASSESSMENT FOR AT&T WIRELESS SITE #C963 (9TH & WATERMAN), CITY OF SAN BERNARDINO, SAN BERNARDINO COUNTY, CA. 6PP	ARCHAEOLOGICAL ASSOCIATES	
SB-04337	NADB-R - 1064337	2003	TANG, BAI and MICHAEL HOGAN	HISTORICAL RESOURCES SURVEY REPORT: NORTH LAKE & CENTRAL CITY SOUTH PROJECT, CITY OF SAN BERNARDINO, SAN BERNARDINO COUNTY, CA. 26PP	CRM TECH	36-006847
SB-04338	NADB-R - 1064338	1999	MCLEAN, DEBORAH	CULTURAL RESOURCES ASSESSMENT FOR PBMS TELECOMMUNICATIONS FACILITY CM 489-01, 11245 ANDERSON ST, CITY OF LOMA LINDA, COUNTY OF SAN BERNARDINO, CA. 3PP	LSA	
SB-04339	NADB-R - 1064339	2001	DONALDSON, MILFORD WAYNE	SAN BERNARDINNO SANTA FE DEPOT HISTORIC REHABILITATION. 43PP		36-017975
SB-04340	NADB-R - 1064340	2001	DONALDSON, MILFORD WAYNE	FINDING OF EFFECT FOR THE SAN BERNARDINO SANTA FE DEPOT HISTORIC REHABILITATION. 123PP		36-017975
SB-04341	NADB-R - 1064341	2002	ALEXANDROWICZ, JOHN STEPHEN	AN HISTORICAL RESOURCES INVESTIGATION AT 401-405 N. LA CADENA DR, CARNEGIE CENTER NEIGHBORHOOD, CITY OF COLTON, SAN BERNARDINO COUNTY, CA. 134 PP	ACS	36-020369
SB-04347	NADB-R - 1064347	2000	WLODARSKI, ROBERT	A PHASE I +/- ARCHAEOLOGICAL STUDY FOR TELECU SENIOR HOUSEING, SAN BERNARDINO, INC, 602-666 W. 6TH ST, SAN BERNARDINO, CA. 27PP	HEART	36-010881
SB-04349	NADB-R - 1064349	2002	BUDINGER, FRED E.	A CULTURAL RESOURCES CONSTRUCTION MONITORING REPORT IN SUPPORT OF THE SECTION 106 HISTORIC PRESERVATION REVIEW OF THE VERIZON WIRELESS WATERMAN SITE, 544 N. WATERMAN AVE, SAN BERNARDINO, SAN BERNARDINO COUNTY, CA. 38PP	TETRA TECH	

Report List

Waterman Gardens

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
SB-04357	NADB-R - 1064357	1999	MCKENNA, JEANETTE A.	HISTORIC DOCUMENTATION & ARCHITECTURAL DETAIL FOR THE JENKINS HOUSE, 1355 N. GARNER AVE, SAN BERNARDINO, CA. 27PP	MCKENNA ET AL	36-020164
SB-04380	NADB-R - 1064380	2004	DICE, MICHAEL AND CHRISTEEN TANAGUCHI	REVISED CULTURAL RECORDS SEARCH & SURVEY RESULTS (WITH ARCHITECTURAL SIGNIFICANCE EVALUATION)FOR THE VAN DAELE-FRITZ PROPERTY, 3104 BASE LINE RD, RANCHO CUCAMONGA, CA. 12PP	MICHAEL BRANDMAN ASSOCIATES	36-020144
SB-04635	NADB-R - 1064635	2004	McKenna, Jeanette A.	A Cultural Resources Investigation and Preliminary Architectural Evaluation for the Proposed San Bernardino City School District Project Area Located in the City of San Bernardino, San Bernardino County, California.		
SB-04638	NADB-R - 1064638	2005	BUDINGER, FRED	ARCHAEOLOGICAL SURVEY OF 1.5 ACRES (APN 0135-011-16) FOR THE COMMUNITY HEALTH SERVICES FACILITY TO BE LOCATED AT 655 NORTH D STREET, CITY OF SAN BERNARDINO, COUNTY OF SAN BERNARDINO, CALIFORNIA 92401		
SB-04657	NADB-R - 1064657	2005	Billat, Lorna	E-Street/CA-8815D.		
SB-04658	NADB-R - 1064658	1993	Hatheway, Roger G.	Platt Building Photographic Documentation.		
SB-04728	NADB-R - 1064728	2004	Tanaguchi, Christeen	Indirect APE Historic Architectural Assessment Results for Cingular Telecommunications Facility Candidate SB-367-02 (Elks Lodge SB) 2055 Elks Drive, San Bernardino, San Bernardino County, California.		
SB-04940	NADB-R - 1064940; NRCS -	2005	Mirro, Michael	Cultural Resources Survey of Approximately 70 Acres on the Heledade Project Area for the Natural Resources Conservation Service.	Applied Earthworks	36-004887
SB-05258	NADB-R - 1065258; OHP OTIS Report Nbr - FCC060606D	2006	Bonner, Wayne H. and Marnie Aislin-Kay	Cultural Resource Records Search and Site Visit Results for Cingular Telecommunications Facility Candidate ES-0042-03 (Trojan Motorsports), 453 South "I" Street, San Bernardino, San Bernardino County, California.	Michael Brandman Associates	

Report List

Waterman Gardens

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
SB-05263	NADB-R - 1065263; OHP OTIS Report Nbr - FCC060508B	2006	Billat, Scott	Nicole/CA-7237A	EarthTouch	
SB-05538	NADB-R - 1065538	2005	Tibbett, Casey	Identification and Evaluation of Historic Properties: Assessor's Parcel No. 0147-091-47, 337 E. Gilbert Street, City of San Bernardino, San Bernardino County, California.	CRM Tech	
SB-05540	NADB-R - 1065540	2005	WLODARSKI, ROBERT J.	RECORDS SEARCH RESULTS FOR T-MOBILE SITE SB-517-01 (SIERRA ATTW COHAB)		
SB-05594	NADB-R - 1065594	1986	Green, Melvyn	Historic Structures Report for the San Bernardino County Courthouse.		
SB-05595	NADB-R - 1065595	2006	Watts, Warren G.	Section 106 Review FCC Form 621, The Sun Site, San Bernardino County, CA.	Dynamic Environmental Associates, Inc	
SB-05617	NADB-R - 1065617	2007	Tang, Bai "Tom" and Michael Hogan	Historic Building Recordation: 226 W. 11th Street, City of San Bernardino, San Bernardino County, California.		
SB-05622	NADB-R - 1065622	2007	Billat, Lorna	The Moon/CA-5348F.		
SB-05624	NADB-R - 1065624	2003	Swope, Karen K.	Historical Resources Compliance Report for Demolition and Transfer of the Former Department of Transportation District 8 Office Complex, 247 W. Third Street, San Bernardino, San Bernardino County, California.		
SB-06194	NADB-R - 1066194	2005	Encarnacion, Deirdre	Historical/Archaeological Resources Survey Report: East Valley Water District's Perchlorate Treatment and Water Distribution Facilities in and near the Cities of San Bernardino and Highland, San Bernardino County, California.		
SB-06290	NADB-R - 1066290	2009	McKenna, Jeannette A.	Archaeological Monitoring at 4th and Waterman, San Bernardino, California.		
SB-06291	NADB-R - 1066291	2008	Smith, Francesca, Caprice D. Harper, William Makeda, and John Dietler	Cultural Resource Technical Report: sbX E Street Corridor BRT Project, Cities of Loma Linda and San Bernardino, San Bernardino County, California.		

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Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
SB-06439	NADB-R - 1066439	2009	McKenna, Jeanette A. and Kristina Lindgren	Architectural Drawings and Photographic Record: Mitigation of Adverse Impacts at 783 N. Mountain View Avenue and 127 W. 8th Street in the City of San Bernardino, California.		
SB-06442	NADB-R - 1066442			Architectural Drawings and Photographic Record: Mitigation of Adverse Impacts at 783 N. Mountain View Avenue, San Bernardino, California.		
SB-06446	NADB-R - 1066446	2008	Chasteen, Carrie	Determinations of Effect Report: sbX E Street Corridor Bus Rapid Transit (BRT) Project, Cities of Loma Linda and San Bernardino, San Bernardino County, California.		
SB-06743	NADB-R - 1066743	2010	Sander, Jay K.	Archaeological Survey Report for Southern California Edison's Pole Replacement Project: Loma Linda and San Bernardino, San Bernardino County, California.		
SB-06744	NADB-R - 1066744	2010	Brunzell, David	Cultural Resources Assessment: Colton Soil Safe Project, City of Colton, San Bernardino County, California.		
SB-06753	NADB-R - 1066753	2009	Bonner, Wayne H. and Sarah Williams	Cultural Resources Records Search Results for AT&T Mobility, LLC Candidate LSANCAC963 (USID #12413), 591 East 9th Street, San Bernardino, San Bernardino County, California.		
SB-06836	NADB-R - 1066836	2010	Wlodarski, Robert J.	Cultural Resources Record Search and Archaeological Survey Results for the Proposed Royal Street Communications, California, LLC, Site LA5307A (T-Mobile Colo IE04494A) Located at 220 East Baseline Street, San Bernardino, San Bernardino County, California, 92410.	HEART	36-023371
SB-06939	NADB-R - 1066939	2010	McKenna, Jeanette A.	A Phase I Cultural Resources Investigation: The Proposed Expansion of the Midnight and Pick-A-Part Auto Recycling Center, 407 E. 9th Street, San Bernardino, San Bernardino County, California.		
SB-06940	NADB-R - 1066940	1999	Smith, Brenda D. and Valerie Hallett	Phase I Archaeological survey of 11 Acre Property, San Bernardino City and County, California.		

Report List

Waterman Gardens

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
SB-06992	NADB-R - 1066992	2011	Tang, Bai "Tom", Deirdre Encarnacion, Harry Quinn, and Daniel Ballester	Identification and Evaluation of Historic Properties: East Valley Water District Baseline Gardens Water System Improvement Project In and Near the City of San Bernardino, San Bernardino County, California.		
SB-06994	NADB-R - 1066994	2011	Sanka, Jennifer	Cultural Resources Assessment: San Bernardino Redevelopment Project Area Merger —Area B Project, City of San Bernardino, San Bernardino County, California.		
SB-07011	NADB-R - 1067011	1995	White, Robert S. and Laurie S. White	An Archaeological Assessment of a 35 +/- Acre San Bernardino Multi-Purpose Stadium Site, City of San Bernardino, San Bernardino County, California.		
SB-07121	NADB-R - 1067121	2007	Baker, Cindy L. and Mary L. Maniery	Cultural Resources Inventory and Evaluation of U.S. Army Reserve 63rd Regional Readiness Command Facilities.		
SB-07372	NADB-R - 1067372	2011	Glover, Amy and Sherri Gust	Archaeological Literature Study for the Waterman Gardens Redevelopment Project, San Bernardino, County of San Bernardino, California.		
SB-07373	NADB-R - 1067373	2011	Daly, Pamela	Historical Resources Evaluation of Waterman Gardens Public Housing Complex, 245 Crestview Avenue, City of San Bernardino, San Bernardino County, California.		
SB-07528	NADB-R - 1067528	2012	Hogan, Michael, Bai "Tom" Tang, Terri Jacquemain, Daniel Ballester, and Nina Gallardo	Identification and Evaluation of Historic Properties: Cleanwater Factory Project, City of San Bernardino, San Bernardino County, California.		
SB-07553	NADB-R - 1067553	2013	Supernowicz, Dana E.	Architectural Evaluation Report of the Euclid and Pine Project, AT&T Mobility Site No. LA8109, 16653 Euclid Avenue, Chino, San Bernardino County, California.		
SB-07555	NADB-R - 1067555	2014	McKenna, Jeanette A.	A CEQA/NEPA Cultural Resources Investigation for the Valencia Gardens Residential Project in the City of San Bernardino, San Bernardino County, California.		

Report List

Waterman Gardens

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
SB-07620	NADB-R - 1067620	2013	Perez, Don	Cultural Resources Survey: CLV 5151, 110 South D Street, San Bernardino, San Bernardino County, California 92401.		
SB-07645	NADB-R - 1067645	2013	Perez, Don	Cultural Resources Survey: CLV 5028, 970 S. Reece Street, San Bernardino, San Bernardino County, California 92411.		
SB-07700	NADB-R - 1067700	2010	Costello, Julia G., Kevin Hallaran, and Keith Warren	The Luck of Third Street, Historical Data Recovery Report for the CalTrans District 8 San Bernardino Headquarters Demolition Project.		
SB-07786	NADB-R - 1067786	2014	Wills, Carrie D., Sarah A. Williams, and Kathleen A. Crawford	Cultural Resources Records Search and Site Visit Results for T-Mobile West, LLC Candidate ES04362A (CM362 San Bernardino Court), 172 West 3rd Street, San Bernardino, San Bernardino County, California.	EAS	
SB-07787	NADB-R - 1067787	2014	Bonner, Wayne H. and Kathleen A. Crawford	Direct APE Historic Architectural Assessment for T-Mobile West, LLC Candidate IE04362A (CM362 San Bernardino Court), 172 West 3rd Street, San Bernardino, San Bernardino County, California.	EAS	

APPENDIX C:

Native American Consultation

NATIVE AMERICAN HERITAGE COMMISSION
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
(916) 373-3710
(916) 373-5471 FAX

December 21, 2015

Jeanette McKenna
McKenna et al.

Sent by Email: Jeanette.mckennaetal@gmail.com
Number of Pages: 4

RE: Waterman Gardens Specific Plan, San Bernardino North and South USGS Quadrangles, San Bernardino County

Dear Ms. McKenna:

Attached is a consultation list of tribes with traditional lands or cultural places located within the boundaries of the above referenced project. Government Code §65352.3 requires local governments to consult with California Native American tribes identified by the Native American Heritage Commission (NAHC) for the purpose of protecting, and/or mitigating impacts to tribal cultural resources in creating or amending general plans, including specific plans. As of July 1, 2015, Public Resources Code Sections 21080.1, 21080.3.1 and 21080.3.2 require public agencies to consult with California Native American tribes identified by the NAHC for the purpose mitigating impacts to tribal cultural resources under the California Environmental Quality Act (CEQA). In accordance with Public Resources Code Section 21080.1(d):

> Within 14 days of determining that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency shall provide formal notification to the designated contact of, or a tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, which shall be accomplished by means of at least one written notification that includes a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation pursuant to this section.

The law does not preclude agencies from initiating consultation with the tribes that are culturally and traditionally affiliated with their jurisdictions. The NAHC believes that in fact that this is the best practice to ensure that tribes are consulted commensurate with the intent of the law.

In accordance with Public Resources Code Section 21080.1(d), formal notification must include a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation. The NAHC believes that agencies should also include with their notification letters information regarding any cultural resources assessment that has been completed on the APE, such as:

1. The results of any record search that may have been conducted at an Information Center of the California Historical Resources Information System (CHRIS), including, but not limited to:

   - A listing of any and all known cultural resources have already been recorded on or adjacent to the APE;
   - Copies of any and all cultural resource records and study reports that may have been provided by the Information Center as part of the records search response;
   - If the probability is low, moderate, or high that cultural resources are located in the APE.
   - Whether the records search indicates a low, moderate or high probability that unrecorded cultural resources are located in the potential APE; and

- If a survey is recommended by the Information Center to determine whether previously unrecorded cultural resources are present.

2. The results of any archaeological inventory survey that was conducted, including:

   - Any report that may contain site forms, site significance, and suggested mitigation measurers.

     All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for pubic disclosure in accordance with Government Code Section 6254.10.

3. The results of any Sacred Lands File (SLF) check conducted through Native American Heritage Commission. A SLF search was completed with negative results.

4. Any ethnographic studies conducted for any area including all or part of the potential APE; and

5. Any geotechnical reports regarding all or part of the potential APE.

Lead agencies should be aware that records maintained by the NAHC and CHRIS is not exhaustive, and a negative response to these searches does not preclude the existence of a cultural place. A tribe may be the only source of information regarding the existence of a tribal cultural resource.

This information will aid tribes in determining whether to request formal consultation. In the case that they do, having the information beforehand well help to facilitate the consultation process.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance we are able to assure that our consultation list contains current information.

If you have any questions, please contact me at my email address: rw_nahc@pacbell.net.

Sincerely,

C Gayle

Rob Wood
Associate Environmental Planner

Native American Heritage Commission
Tribal Consultation List
San Bernardino County
December 21, 2015

Ramona Band of Cahuilla Mission Indians
Joseph Hamilton, Chairman
P.O. Box 391670 — Cahuilla
Anza , CA 92539
admin@ramonatribe.com
(951) 763-4105

Gabrielino /Tongva Nation
Sandonne Goad, Chairperson
106 1/2 Judge John Aiso St., #231 — Gabrielino Tongva
Los Angeles , CA 90012
sgoad@gabrielino-tongva.com
(951) 807-0479

San Manuel Band of Mission Indians
Lynn Valbuena, Chairwoman
26569 Community Center — Serrano
Highland , CA 92346
(909) 864-8933

Agua Caliente Band of Cahuilla Indians
Jeff Grubbe, Chairperson
5401 Dinah Shore Drive — Cahuilla
Palm Springs , CA 92264
lavilesaguacliente.net
(760) 699-6800

Soboba Band of Mission Indians
Rosemary Morillo, Chairperson; Attn: Carrie Garcia
P.O. Box 487 — Luiseno
San Jacinto , CA 92581 — Cahuilla
carrieg@soboba-nsn.gov
(951) 654-2765

Morongo Band of Mission Indians
Robert Martin, Chairperson
12700 Pumarra Rroad — Cahuilla
Banning , CA 92220 — Serrano
(951) 849-8807
(951) 755-5200
(951) 922-8146 Fax

San Fernando Band of Mission Indians
John Valenzuela, Chairperson
P.O. Box 221838 — Fernandeño
Newhall , CA 91322 — Tataviam
tsen2u@hotmail.com — Serrano
Vanyume
(760) 885-0955 Cell — Kitanemuk

Pechanga Band of Mission Indians
Mark Macarro, Chairperson
P.O. Box 1477 — Luiseno
Temecula , CA 92593
mgoodhart@pechanga-nsn.
(951) 770-6100

Gabrieleno/Tongva San Gabriel Band of Mission Indians
Anthony Morales, Chairperson
P.O. Box 693 — Gabrielino Tongva
San Gabriel , CA 91778
GTTribalcouncil@aol.com
(626) 483-3564 Cell

Serrano Nation of Mission Indians
Goldie Walker, ChaiTrwoman
P.O. Box 343 — Serrano
Patton , CA 92369
(909) 528-9027
(909) 528-9032

This list is current only as of the date of this document.
Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is applicable only for consultation with Native American tribes under Government Code Sections 65352.3, 65362.4 et seq. and Public Resources Code Sections 21080.3.1 for the proposed Waterman Gardens Specific Plan, San Bernardino North and South USGS Quadrangles, San Bernardino County.

Native American Heritage Commission
Tribal Consultation List
San Bernardino County
December 21, 2015

Agua Caliente Band of Cahuilla Indians THPO
Patricia Garcia-Plotkin Tribal Historic Perservation Officer
5401 Dinah Shore Drive Cahuilla
Palm Springs , CA 92264
ACBCI-THPO@aguacliente.net
(760) 699-6907

Gabrieleno Band of Mission Indians - Kizh Nation
Andrew Salas, Chairperson
P.O. Box 393
Covina , CA 91723
gabrielenoindians@yahoo.com Gabrielino
(626) 926-4131

This list is current only as of the date of this document.
Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is applicable only for consultation with Native American tribes under Government Code Sections 65352.3, 65362.4 et seq. and Public Resources Code Sections 21080.3.1 for the proposed Waterman Gardens Specific Plan, San Bernardino North and South USGS Quadrangles, San Bernardino County.

McKenna et al.

History/Archaeology/Architectural History/Ethnography/Paleontology

Jeanette A. McKenna, MA, HonDL
Reg. Professional Archaeologist
Owner and Principal Investigator

December 3, 2015

Gabrielino/Tongva San Gabriel Band of Mission Indians
Attn: Anthony Morales, Chairperson
P.O. Box 693
San Gabriel, California 91778

Re: Waterman Gardens Specific Plan, San Bernardino, San Bernardino Co., CA.

Mr. Morales:

McKenna et al. is undertaking studies to prepare an overview study and data compilation for the Waterman Gardens Specific Plan project area in San Bernardino, CA. This project area involves the properties dominating Waterman Avenue between Highland Avenue (northern boundary) to 5th Street (southern boundary) and expanding west to Sierra Way and east to the Warm Creek drainage. These boundaries are illustrated on the USGS San Bernardino North and San Bernardino South Quadrangles and involve portions of Township 1 North, Range 4 West, Sections 34 and 35; and Township 1 South, Range 4 West, Sections 1, 2, and 3.

An archaeological records search was completed for the project area and surrounding properties. As a results the significant burials/cemetery identified within Secombe Park were identified as being within the project area boundaries. Please note, there are no specific project identified within the Specific Plan study area. The current research is designed to identify the sensitive areas to be avoided and make recommendations for future planning. Please review your records and inform me of any concerns, issues, or comments you may was addressed in the technical report. I certainly appreciate your participation in the identification and protection of our nonrenewable cultural resources.

Sincerely,

Jeanette A. McKenna

Jeanette A. McKenna, Principal
McKenna et al., Whittier CA

6008 Friends Avenue, Whittier, California 90601-3724 or 1941 E. Pegasus Drive, Tempe, Arizona 85283
(562) 696-3852 (CA Office and FAX) (480) 664-0682 (AZ Office and FAX)
Email = jeanette.mckennaetal@gmail.com

McKenna et al.

History/Archaeology/Architectural History/Ethnography/Paleontology

Jeanette A. McKenna, MA, HonDL
Reg. Professional Archaeologist
Owner and Principal Investigator

December 3, 2015

Gabrielino/Tongva Nation
Attn: Sandonne Goad, Chairperson
106 ½ Judge John Aiso Street
Los Angeles, California 90012

Re: Waterman Gardens Specific Plan, San Bernardino, San Bernardino Co., CA.

Ms. Goad:

McKenna et al. is undertaking studies to prepare an overview study and data compilation for the Waterman Gardens Specific Plan project area in San Bernardino, CA. This project area involves the properties dominating Waterman Avenue between Highland Avenue (northern boundary) to 5th Street (southern boundary) and expanding west to Sierra Way and east to the Warm Creek drainage. These boundaries are illustrated on the USGS San Bernardino North and San Bernardino South Quadrangles and involve portions of Township 1 North, Range 4 West, Sections 34 and 35; and Township 1 South, Range 4 West, Sections 1, 2, and 3.

An archaeological records search was completed for the project area and surrounding properties. As a results the significant burials/cemetery identified within Secombe Park were identified as being within the project area boundaries. Please note, there are no specific project identified within the Specific Plan study area. The current research is designed to identify the sensitive areas to be avoided and make recommendations for future planning. Please review your records and inform me of any concerns, issues, or comments you may was addressed in the technical report. I certainly appreciate your participation in the identification and protection of our nonrenewable cultural resources.

Sincerely,

Jeanette A. McKenna

Jeanette A. McKenna, Principal
McKenna et al., Whittier CA

6008 Friends Avenue, Whittier, California 90601-3724 or 1941 E. Pegasus Drive, Tempe, Arizona 85283
(562) 696-3852 (CA Office and FAX) (480) 664-0682 (AZ Office and FAX)
Email = jeanette.mckennaetal@gmail.com

McKenna et al.

History/Archaeology/Architectural History/Ethnography/Paleontology

Jeanette A. McKenna, MA, HonDL
Reg. Professional Archaeologist
Owner and Principal Investigator

December 3, 2015

Gabrielino/Tongva Indians of California Tribal Council
Attn: Robert Dorame, Tribal Chair/Cultural Resources
P.O. Box 490
Bellflower, California 90707

Re: Waterman Gardens Specific Plan, San Bernardino, San Bernardino Co., CA.

Mr. Dorame:

McKenna et al. is undertaking studies to prepare an overview study and data compilation for the Waterman Gardens Specific Plan project area in San Bernardino, CA. This project area involves the properties dominating Waterman Avenue between Highland Avenue (northern boundary) to 5th Street (southern boundary) and expanding west to Sierra Way and east to the Warm Creek drainage. These boundaries are illustrated on the USGS San Bernardino North and San Bernardino South Quadrangles and involve portions of Township 1 North, Range 4 West, Sections 34 and 35; and Township 1 South, Range 4 West, Sections 1, 2, and 3.

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Sincerely,

Jeanette A. McKenna

Jeanette A. McKenna, Principal
McKenna et al., Whittier CA

6008 Friends Avenue, Whittier, California 90601-3724 or 1941 E. Pegasus Drive, Tempe, Arizona 85283
(562) 696-3852 (CA Office and FAX) (480) 664-0682 (AZ Office and FAX)
Email = jeanette.mckennaetal@gmail.com

McKenna et al.

History/Archaeology/Architectural History/Ethnography/Paleontology

Jeanette A. McKenna, MA, HonDL
Reg. Professional Archaeologist
Owner and Principal Investigator

December 3, 2015

Gabrielino/Tongva Tribe
Attn: Bernie Acuna, Co-Chairperson
1999 Avenue of the Stars, Suite 1100
Los Angeles, California 90067

Re: Waterman Gardens Specific Plan, San Bernardino, San Bernardino Co., CA.

Mr. Acuna:

McKenna et al. is undertaking studies to prepare an overview study and data compilation for the Waterman Gardens Specific Plan project area in San Bernardino, CA. This project area involves the properties dominating Waterman Avenue between Highland Avenue (northern boundary) to 5th Street (southern boundary) and expanding west to Sierra Way and east to the Warm Creek drainage. These boundaries are illustrated on the USGS San Bernardino North and San Bernardino South Quadrangles and involve portions of Township 1 North, Range 4 West, Sections 34 and 35; and Township 1 South, Range 4 West, Sections 1, 2, and 3.

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December 3, 2015

Gabrielino/Tongva Tribe
Attn: Linda Candelaria, Co-Chairperson
1999 Avenue of the Stars, Suite 1100
Los Angeles, California 90067

Re: Waterman Gardens Specific Plan, San Bernardino, San Bernardino Co., CA.

Ms. Candelaria:

McKenna et al. is undertaking studies to prepare an overview study and data compilation for the Waterman Gardens Specific Plan project area in San Bernardino, CA. This project area involves the properties dominating Waterman Avenue between Highland Avenue (northern boundary) to 5th Street (southern boundary) and expanding west to Sierra Way and east to the Warm Creek drainage. These boundaries are illustrated on the USGS San Bernardino North and San Bernardino South Quadrangles and involve portions of Township 1 North, Range 4 West, Sections 34 and 35; and Township 1 South, Range 4 West, Sections 1, 2, and 3.

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Jeanette A. McKenna, MA, HonDL
Reg. Professional Archaeologist
Owner and Principal Investigator

December 3, 2015

Gabrielino Band of Mission Indians – Kizi Nation
Attn: Andrew Salas, Chairperson
P.O. Box 393
Covina, California 91723

Re: Waterman Gardens Specific Plan, San Bernardino, San Bernardino Co., CA.

Mr. Salas::

McKenna et al. is undertaking studies to prepare an overview study and data compilation for the Waterman Gardens Specific Plan project area in San Bernardino, CA. This project area involves the properties dominating Waterman Avenue between Highland Avenue (northern boundary) to 5th Street (southern boundary) and expanding west to Sierra Way and east to the Warm Creek drainage. These boundaries are illustrated on the USGS San Bernardino North and San Bernardino South Quadrangles and involve portions of Township 1 North, Range 4 West, Sections 34 and 35; and Township 1 South, Range 4 West, Sections 1, 2, and 3.

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Jeanette A. McKenna, MA, HonDL
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Owner and Principal Investigator

December 3, 2015

Gabrielino/Tongva Tribe
Attn: Conrad Acuna
1999 Avenue of the Stars, Suite 1100
Los Angeles, California 90067

Re: Waterman Gardens Specific Plan, San Bernardino, San Bernardino Co., CA.

Mr. Acuna:

McKenna et al. is undertaking studies to prepare an overview study and data compilation for the Waterman Gardens Specific Plan project area in San Bernardino, CA. This project area involves the properties dominating Waterman Avenue between Highland Avenue (northern boundary) to 5th Street (southern boundary) and expanding west to Sierra Way and east to the Warm Creek drainage. These boundaries are illustrated on the USGS San Bernardino North and San Bernardino South Quadrangles and involve portions of Township 1 North, Range 4 West, Sections 34 and 35; and Township 1 South, Range 4 West, Sections 1, 2, and 3.

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Jeanette A. McKenna, MA, HonDL
Reg. Professional Archaeologist
Owner and Principal Investigator

December 3, 2015

Gabrielino/Tongva Nation
Attn: Sam Dunlap, Cultural Resources Director
P.O. Box 86908
Los Angeles, California 90086

Re: Waterman Gardens Specific Plan, San Bernardino, San Bernardino Co., CA.

Mr. Dunlap:

McKenna et al. is undertaking studies to prepare an overview study and data compilation for the Waterman Gardens Specific Plan project area in San Bernardino, CA. This project area involves the properties dominating Waterman Avenue between Highland Avenue (northern boundary) to 5th Street (southern boundary) and expanding west to Sierra Way and east to the Warm Creek drainage. These boundaries are illustrated on the USGS San Bernardino North and San Bernardino South Quadrangles and involve portions of Township 1 North, Range 4 West, Sections 34 and 35; and Township 1 South, Range 4 West, Sections 1, 2, and 3.

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Jeanette A. McKenna, MA, HonDL
Reg. Professional Archaeologist
Owner and Principal Investigator

December 3, 2015

Morongo Band of Mission Indians
Attn: Denisa Torres, Cultural Resources Manager
12700 Pumarra Road
Banning, California 92220

Re: Waterman Gardens Specific Plan, San Bernardino, San Bernardino Co., CA.

Ms. Torres:

McKenna et al. is undertaking studies to prepare an overview study and data compilation for the Waterman Gardens Specific Plan project area in San Bernardino, CA. This project area involves the properties dominating Waterman Avenue between Highland Avenue (northern boundary) to 5th Street (southern boundary) and expanding west to Sierra Way and east to the Warm Creek drainage. These boundaries are illustrated on the USGS San Bernardino North and San Bernardino South Quadrangles and involve portions of Township 1 North, Range 4 West, Sections 34 and 35; and Township 1 South, Range 4 West, Sections 1, 2, and 3.

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Jeanette A. McKenna, MA, HonDL
Reg. Professional Archaeologist
Owner and Principal Investigator

December 3, 2015

Morongo Band of Mission Indians
Attn: Robert Martin, Chairperson
12700 Pumarra Road
Banning, California 92220

Re: Waterman Gardens Specific Plan, San Bernardino, San Bernardino Co., CA.

Mr. Martin:

McKenna et al. is undertaking studies to prepare an overview study and data compilation for the Waterman Gardens Specific Plan project area in San Bernardino, CA. This project area involves the properties dominating Waterman Avenue between Highland Avenue (northern boundary) to 5th Street (southern boundary) and expanding west to Sierra Way and east to the Warm Creek drainage. These boundaries are illustrated on the USGS San Bernardino North and San Bernardino South Quadrangles and involve portions of Township 1 North, Range 4 West, Sections 34 and 35; and Township 1 South, Range 4 West, Sections 1, 2, and 3.

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Owner and Principal Investigator

December 3, 2015

Moronga Band of Mission Indians
Attn: Ernest H. Siva, Tribal Elder
9570 Mias Canyon Road
Banning, California 92220

Re: Waterman Gardens Specific Plan, San Bernardino, San Bernardino Co., CA.

Mr. Siva:

McKenna et al. is undertaking studies to prepare an overview study and data compilation for the Waterman Gardens Specific Plan project area in San Bernardino, CA. This project area involves the properties dominating Waterman Avenue between Highland Avenue (northern boundary) to 5th Street (southern boundary) and expanding west to Sierra Way and east to the Warm Creek drainage. These boundaries are illustrated on the USGS San Bernardino North and San Bernardino South Quadrangles and involve portions of Township 1 North, Range 4 West, Sections 34 and 35; and Township 1 South, Range 4 West, Sections 1, 2, and 3.

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Jeanette A. McKenna, MA, HonDL
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Owner and Principal Investigator

December 3, 2015

San Manuel Band of Mission Indians
Attn: Lynn Valbuena, Chairwoman
26569 Community Center Drive
Highland, California 92346

Re: Waterman Gardens Specific Plan, San Bernardino, San Bernardino Co., CA.

Ms. Valbuena:

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Jeanette A. McKenna, MA, HonDL
Reg. Professional Archaeologist
Owner and Principal Investigator

December 3, 2015

San Manuel Band of Mission Indians
Attn: Daniel McCarthy, Director, CRM Dept.
26569 Community Center Drive
Highland, California 92346

Re: Waterman Gardens Specific Plan, San Bernardino, San Bernardino Co., CA.

Mr. McCarthy:

McKenna et al. is undertaking studies to prepare an overview study and data compilation for the Waterman Gardens Specific Plan project area in San Bernardino, CA. This project area involves the properties dominating Waterman Avenue between Highland Avenue (northern boundary) to 5th Street (southern boundary) and expanding west to Sierra Way and east to the Warm Creek drainage. These boundaries are illustrated on the USGS San Bernardino North and San Bernardino South Quadrangles and involve portions of Township 1 North, Range 4 West, Sections 34 and 35; and Township 1 South, Range 4 West, Sections 1, 2, and 3.

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Email = jeanette.mckennaetal@gmail.com

Jeanette McKenna <jeanette.mckennaetal@gmail.com>

Waterman Gardens Specific Plan, San Bernardino scoping response

1 message

Daniel McCarthy <DMcCarthy@sanmanuel-nsn.gov> Tue, Dec 15, 2015 at 4:08 PM
To: "jeanette.mckennaetal@gmail.com" <jeanette.mckennaetal@gmail.com>

Hi Jeanette,

We received your scoping inquiry, dated December 3, 2015, for the above referenced project. Thank you for the opportunity to review and respond. The proposed Specific Plan is located within the Tribe's ancestral territory. The Tribe does not have specific information about significant tribal cultural resources within the project boundaries. We rely upon information obtained from the regional Information Centers. However, we are interested in consulting/commenting on proposed policy language and exhibit development for the specific plan that may impact tribal cultural resources.

Thank you,

Leslie Mouriquand MA, RPA

for

Daniel McCarthy, MS, RPA

Director

Cultural Resources Management Department

San Manuel Band of Mission Indians

26569 Community Center Drive

Highland, CA 92346

Office: 909 864-8933 x 3248

Cell: 909 838-4175

dmccarthy@sanmanuel-nsn.gov

THIS MESSAGE IS INTENDED ONLY FOR THE USE OF THE INDIVIDUAL OR ENTITY TO WHICH IT IS ADDRESSED AND MAY CONTAIN INFORMATION THAT IS PRIVILEGED, CONFIDENTIAL AND EXEMPT FROM DISCLOSURE UNDER APPLICABLE LAW. If the reader of this message is not the intended recipient or agent responsible for delivering the message to the intended recipient, you are hereby notified that any dissemination or copying of this communication is strictly prohibited. If you have received this electronic transmission in error, please delete it from your system without copying it and notify the sender by reply e-mail so that the email address record can be corrected. Thank You

McKenna et al.

History/Archaeology/Architectural History/Ethnography/Paleontology

Jeanette A. McKenna, MA, HonDL
Reg. Professional Archaeologist
Owner and Principal Investigator

December 3, 2015

Tongva Ancestral Territorial Tribal Nation
Attn: John Tommy Rosas
tattnlaw@gmail.com

Re: Waterman Gardens Specific Plan, San Bernardino, San Bernardino Co., CA.

Mr. Morales:

McKenna et al. is undertaking studies to prepare an overview study and data compilation for the Waterman Gardens Specific Plan project area in San Bernardino, CA. This project area involves the properties dominating Waterman Avenue between Highland Avenue (northern boundary) to 5th Street (southern boundary) and expanding west to Sierra Way and east to the Warm Creek drainage. These boundaries are illustrated on the USGS San Bernardino North and San Bernardino South Quadrangles and involve portions of Township 1 North, Range 4 West, Sections 34 and 35; and Township 1 South, Range 4 West, Sections 1, 2, and 3.

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Jeanette A. McKenna

Jeanette A. McKenna, Principal
McKenna et al., Whittier CA

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Email = jeanette.mckennaetal@gmail.com

APPENDIX D:

Paleontological Overview

Natural History Museum
of Los Angeles County
900 Exposition Boulevard
Los Angeles, CA 90007

tel 213.763.DINO
www.nhm.org

Vertebrate Paleontology Section
Telephone: (213) 763-3325
Fax: (213) 746-7431
e-mail: smcleod@nhm.org

18 December 2015

McKenna et al.
6008 Friends Avenue
Whittier, California 90601-3724

Attn: Jeanette A. McKenna

re: Paleontological resources for the proposed Waterman Gardens Specific Plan Project, Job # 1754, in the City of San Bernardino, San Bernardino County, project area

Dear Jeanette:

I have conducted a thorough search of our paleontology collection records for the locality and specimen data for the proposed Waterman Gardens Specific Plan Project, Job # 1754, in the City of San Bernardino, San Bernardino County, project area as outlined on the portions of the San Bernardino North and San Bernardino South USGS topographic quadrangle maps that you sent to me on 3 December 2015. We do not have any vertebrate fossil localities that lie directly within the proposed project area, but we do have localities farther afield from sedimentary deposits similar to those that may occur subsurface in the proposed project area.

In the immediate channels of the East Twin Creek and Warm Creek, along the southeastern border and in the very eastern portion of the proposed project area, the surface deposits consist of coarse gravels and sands that almost certainly will not contain any significant vertebrate fossils in the uppermost layers. Otherwise surface deposits in the proposed project area are composed of younger Quaternary Alluvium, derived as alluvial fan deposits from the San Gabriel Mountains to the north, with fluvial contributions from East Twin Creek and Warm Creek in the eastern portion and from the Santa Ana River just to the south. These deposits typically do not contain significant vertebrate fossils, at least in the uppermost layers, but they may be underlain at relatively shallow depth by older sedimentary deposits that do contain significant fossil vertebrate remains. Our closest fossil vertebrate locality from similar older

Quaternary deposits is LACM 7811, west-southwest of the proposed project area west of Mira Loma along Sumner Avenue, that produced a fossil specimen of whipsnake, *Masticophis*, at a depth of 9 to 11 feet below the surface. Further to the southwest between Corona and Norco our vertebrate fossil locality LACM 1207 produced a fossil specimen of deer, *Odocoileus*.

Shallow excavations in the younger Quaternary gravels exposed in the active East Twin Creek and Warm Creek channels in the proposed project area almost certainly will not uncover any significant vertebrate fossils. Shallow excavations in the younger Quaternary Alluvium exposed in most of the proposed project area are unlikely to encounter significant vertebrate fossils. Deeper excavations throughout the proposed project area that extend down into older Quaternary deposits, however, may well encounter significant remains of fossil vertebrates. Any substantial and deep excavations in the proposed project area, therefore, should be monitored closely to quickly and professionally recover any fossil remains while not impeding development. Also, sediment samples should be collected and processed to determine the small fossil potential in the proposed project area. Any fossils collected should be placed in an accredited scientific institution for the benefit of current and future generations.

This records search covers only the vertebrate paleontology records of the Natural History Museum of Los Angeles County. It is not intended to be a thorough paleontological survey of the proposed project area covering other institutional records, a literature survey, or any potential on-site survey.

Sincerely,

Samuel A. McLeod

Samuel A. McLeod, Ph.D.
Vertebrate Paleontology

enclosure: invoice

APPENDIX E:

Photographic Record

State of California
DEPARTMENT OF PARKS AND RECREATION

PHOTOGRAPHIC RECORD

Primary #

HRI #

Trinomial

 *Resource Name or # (assigned by recorder) Job 1754 – Waterman SP, San Bernardino

Camera Format: Digital Year 2016

Film Type and Speed: Lens Size: Negatives Kept At: McKenna et al., Whittier, CA

Month	Day	Time	Frame	Description	View	Acc. #
4	7	AM	1	Overview at 5th and Lugo (Seccombe Park)	N	54
4	7	AM	2	Overview of 5th Street from Lugo	W	55
4	7	AM	3	Overview of 5th Street from Lugo	E	56
4	7	AM	4	SW Corner of Pioneer Cemetery (7th @ Sierra)	E	57
4	7	AM	5	Overview of Pioneer Cemetery	NE	58
4	7	AM	6	Overview of Pioneer Cemetery	E	59
4	7	AM	7	Signage at Jewish Cemetery – Sierra Way	N	60
4	7	AM	8	Overview of Jewish Cemetery – Sierra Way	E	61
4	7	AM	9	Overview of Jewish Cemetery – Sierra Way	E	62
4	7	AM	10	Small Plaque at Jewish Cemetery	Detail	63
4	7	AM	11	Small Plaque at Jewish Cemetery	Detail	64
4	7	AM	12	Overview of Sierra Way at 9th Street	S	65
4	7	AM	13	Overview of Sierra Way at 9th Street	N	66
4	7	AM	14	Residence at 851 Sierra Way	SE	67
4	7	AM	15	Residence at 202 Temple Street	NE	68
4	7	AM	16	Southwest Corner of Wall Street & Temple Street	SSW	69
4	7	AM	17	Apartments at 901-911 Wall Street	E	70
4	7	AM	18	Residence at 248 Temple Street	N	71
4	7	AM	19	Empty Lot East of 252 Temple Street	N	72
4	7	AM	20	Pool and Spa Store – NW Temple and Waterman	N	73
4	7	AM	21	NE Corner of 10th and Sierra Way (recent demo)	N	74
4	7	AM	22	West of 124 10th Street (renovation)	N	75
4	7	AM	23	Residence at 216 10th Street	N	76
4	7	AM	24	Residence at 275 10th Street	SSE	77
4	7	AM	25	Residence at 276 10th Street	N	78
4	7	AM	26	Apartments at 221 Olive (SW Olive and Wall)	W	79
4	7	AM	27	Residence at 224 Olive	N	80
4	7	AM	28	Residence at 181 Olive	N	81
4	7	AM	29	Residence at 135 Olive	S	82
4	7	AM	30	MFR – 122-124 Olive	N	83
4	7	AM	31	Apartments at 142 11th Street	N	84
4	7	AM	32	Residence at 185 11th Street	S	85
4	7	AM	33	Courtyard at 250-260 11th Street	N	86
4	7	AM	34	Courtyard at 1134 Wall Street	W	87
4	7	AM	35	Residence at 248 Orange	N	88
4	7	AM	36	Residence at 260 Orange	N	89

State of California
DEPARTMENT OF PARKS AND RECREATION

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Film Type and Speed: Lens Size: Negatives Kept At: McKenna et al., Whittier, CA

Month	Day	Time	Frame	Description	View	Acc. #
4	7	AM	37	Abandoned Church on NW of Orange & Waterman	NNE	90
4	7	AM	38	Apartments at 1134 Sepulveda	NW	91
4	7	AM	39	Courtyard at 1131 Lugo	E	92
4	7	AM	40	Apartments at 1155-1157 Lugo	E	93
4	7	AM	41	Sierra Avenue from Baseline Road	S	94
4	7	AM	42	Sierra Avenue from Baseline Road	N	95
4	7	AM	43	Overview of Baseline Road from Sierra Way	W	96
4	7	AM	44	Overview of Baseline Road from Sierra Way	E	97
4	7	AM	45	NE Corner of Sierra Way and Baseline Road	N	98
4	7	AM	46	NW Corner of Sierra Way and Baseline Road	NW	99
4	7	AM	47	SW Corner of Sierra Way and Baseline Road	SW	100
4	7	AM	48	SE Corner of Sierra Way and Baseline Road	SE	101
4	7	AM	49	Commercial Property at 207 Baseline Road	SW	102
4	7	AM	50	Residence & Business at 212-214 Baselines Road	N	103
4	7	AM	51	Converted Residence East of 214 Baseline Road	NNE	104
4	7	AM	52	Commercial Business at 220 Baseline Road	N	105
4	7	PM	53	Overview of Waterman Avenue from 10th Street	S	106
4	7	PM	54	Overview of Waterman Avenue from 10th Street	N	107
4	7	PM	55	Strip Mall at 822 Waterman Avenue	NW	108
4	7	PM	56	Strip Mall at 784 Waterman Avenue	SW	109
4	7	PM	57	SW Corner of 7th and Waterman (Vacant)	S	110
4	7	PM	58	Baseball Field at Seccombe Park	SW	111
4	7	PM	59	US Army Reserve Complex – 3rd & Waterman	NE	112
4	7	PM	60	US Army Reserve Complex – 3rd & Waterman	NW	113
4	7	PM	61	Courtyard at SE Corner of Court and Sierra Way	SSW	114
4	7	PM	62	Courtyard at 115 Kingman Street	SE	115
4	7	PM	63	Residence at 132 Court Street	N	116
4	7	PM	64	Residence at 144 Court Street	N	117
4	7	PM	65	Residence at 156 Court Street	N	118
4	7	PM	66	Courtyard on Kingman Street	N	119
4	7	PM	67	Vacant Lot at 460 Sepulveda	W	120
4	7	PM	68	Duplex at 220 Kingman Street	N	121
4	7	PM	69	Courtyard at 254 Kingman Street	N	122
4	7	PM	70	Courtyard at 276 Kingman Street	N	123
4	7	PM	71	Empty Lot @ Waterman and 3rd	N	124
4	7	PM	72	Creek Crossing on 3rd Street	N	125

State of California
DEPARTMENT OF PARKS AND RECREATION

PHOTOGRAPHIC RECORD

Primary #

HRI #

Trinomial

 *Resource Name or # (assigned by recorder) Job 1754 – Waterman SP, San Bernardino

Camera Format: Digital Year 2016

Film Type and Speed: Lens Size: Negatives Kept At: McKenna et al., Whittier, CA

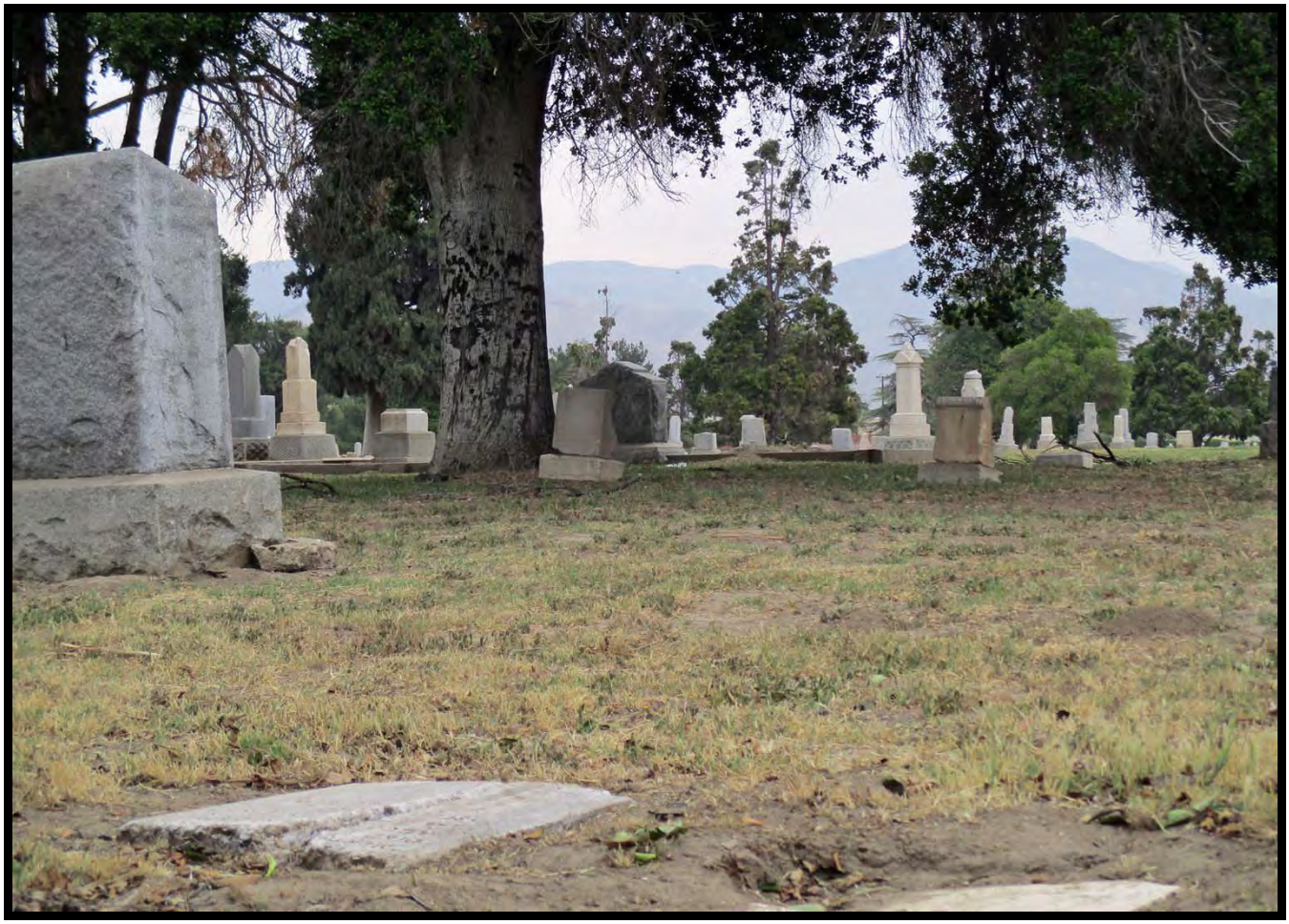
Month	Day	Time	Frame	Description	View	Acc. #
4	7	PM	73	Residence at 24186 Monterey	N	126
4	7	PM	74	Residence at 24237 Monterey	S	127
4	7	PM	75	Getsemami Church on Baseline Road	SSW	128
4	7	PM	76	Modern Commercial Development at 24215 Ward	S	129
4	7	PM	77	Residence at 404 6th Street	N	130
4	7	PM	78	Merrell's Auto @ 287 Waterman Avenue	SW	131
4	7	PM	79	Merrell's Auto @ 287 Waterman Avenue	SW	132
4	7	PM	80	Altered Residence East of 607 Preston	S	133
4	7	PM	81	Santiago Mountain View Estates – 721 Preston	SE	134
4	7	PM	82	Bus Yard at 844 9th Street	N	135
4	7	PM	83	Santiago Mobile Home Park – 780 9th Street	N	136
4	7	PM	84	Modern Condos on NE of Valencia and 9th Street	NW	137
4	7	PM	85	Catholic Church at Olive and Valencia	W	138
4	7	PM	86	Remains of Citrus Orchard at Olive and La Junta	NE	139
4	7	PM	87	Apartments at East End of Olive Street	N	140
4	7	PM	88	Apartments at 1180 Bobbett	W	141
4	7	PM	89	MFR at 1123 Bobbett	E	142
4	7	PM	90	Residence at 1100 Bobbett	W	143
4	7	PM	91	Residence at 1134 Bobbett	N	144
4	7	PM	92	Courtyard at 1159 Myrtle	SE	145
4	7	PM	93	Residence at 550 Baseline Road	NNW	146
4	7	PM	94	Commercial Building at 899 Baseline Road	ESE	147
4	7	PM	95	Commercial Building at 899 Baseline Road	WSW	148
4	7	PM	96	Old School Tires (NE Baseline and Tippecanoe)	NE	149
4	7	PM	97	E&L Auto Repair (NW Baseline and Tippecanoe)	NW	150
4	7	PM	98	Unified Baptist Church 1094 Baseline Road	N	151
4	7	PM	99	Baseline Iron Works – 1021 Baseline Road	NW	152
4	7	PM	100	Commercial Building on Baseline Road	W	153
4	7	PM	101	Overview of Hospital from Foothill Blvd.	S	154
4	7	PM	102	Hospital Frontage on Waterman Avenue	E	155
4	7	PM	103	1784 Waterman Avenue	SW	156
4	7	PM	104	1784 Waterman Avenue	SW	157
4	7	PM	105	Lemon Tree Courtyard at 1536-1546 16th Street	W	158

Overview at 5th and Lugo (Seccombe Lake Park; N)

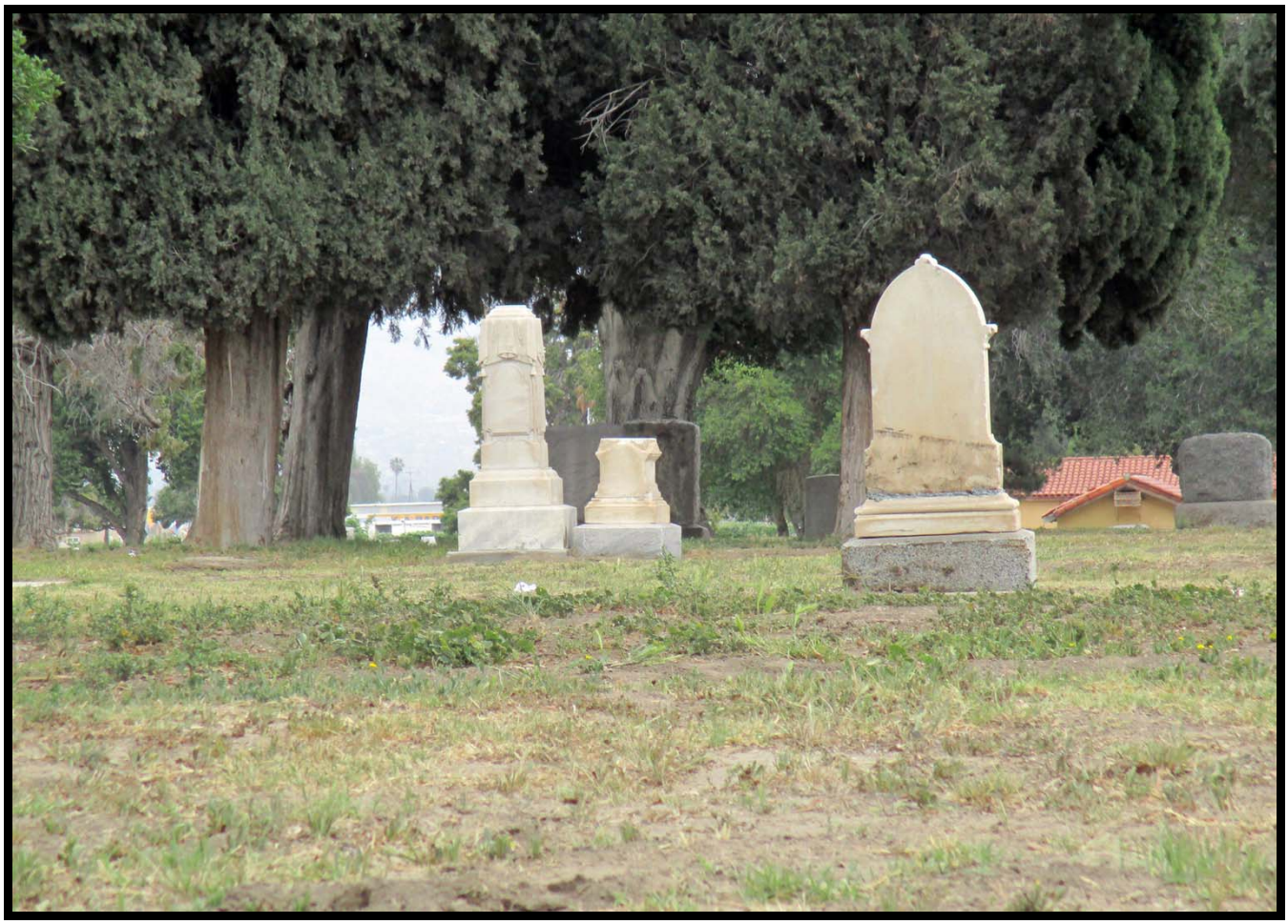
Overview of 5th Street from Lugo (W)

Overview of 5th Street from Lugo (E)

SW Corner of Pioneer Cemetery (7th @ Sierra way; (E)



Overview of Pioneer Cemetery (NE)



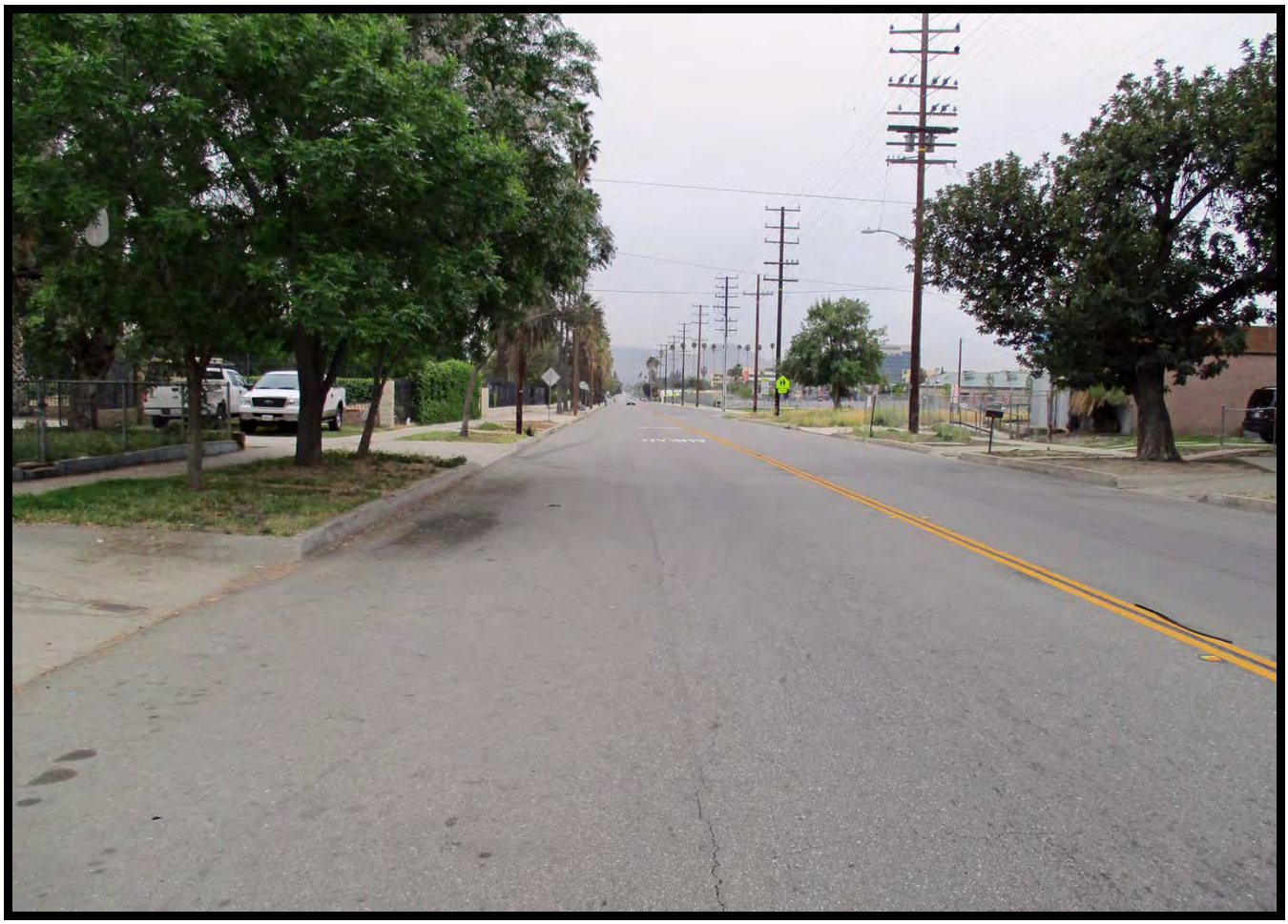
Overview of Pioneer Cemetery (E)

Signage at Jewish Cemetery – Sierra Way (N)

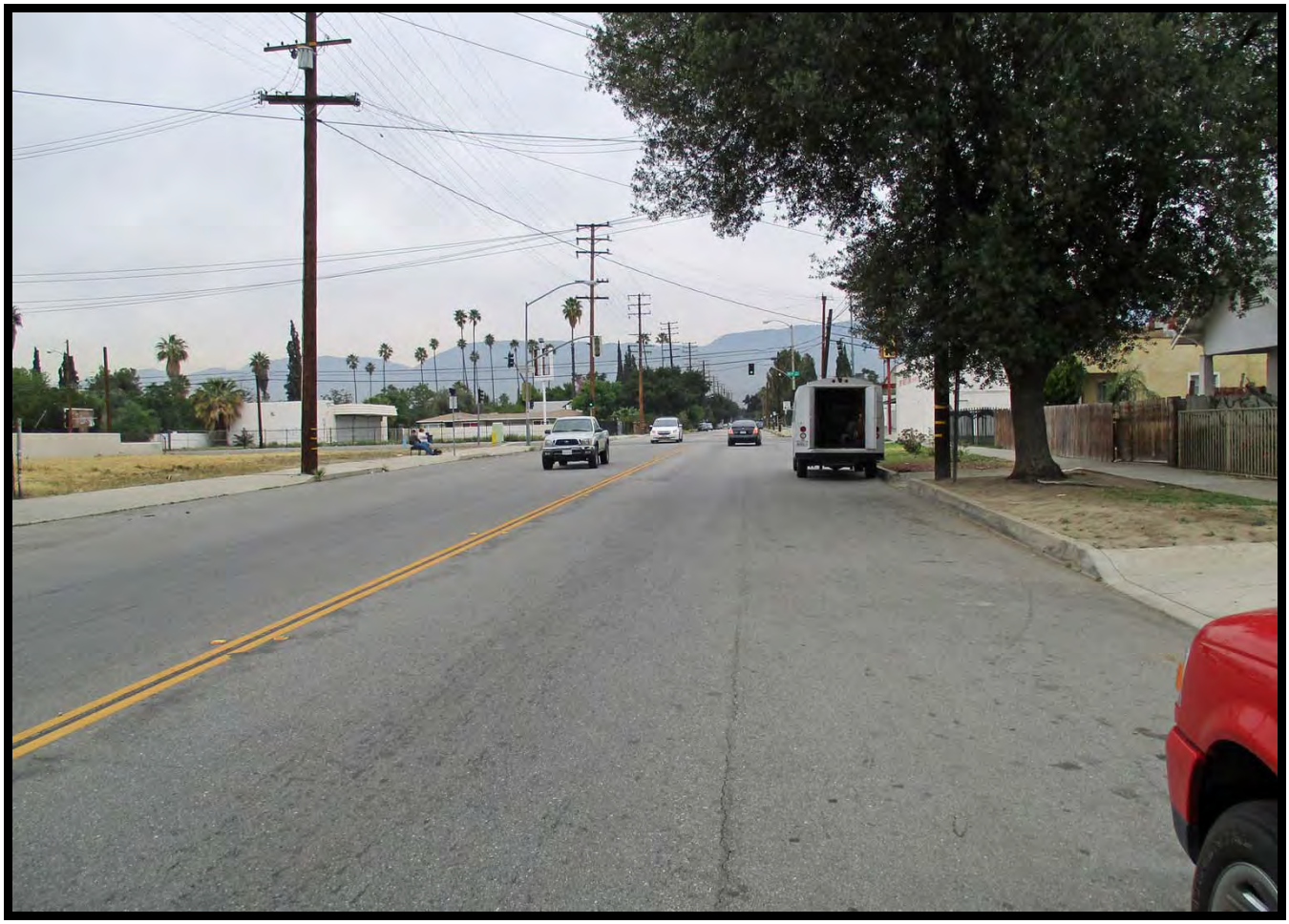
Overview of Jewish Cemetery – Sierra Way (E)

Small Plaque at Jewish Cemetery (E)

Overview of Jewish Cemetery – Sierra Way (E)



Overview of Sierra Way at 9th Street (N)



Overview of Sierra Way at 9th Street (S)

Residence at 851 Sierra Way (SE)

Residence at 202 Temple Street (NE)

Southwest Corner of Wall Street & Temple Street (S/SW)

Apartments at 901-911 Wall Street (E)

Residence at 248 Temple Street (N)

Empty Lot East of 252 Temple Street (N)

Pool and Spa Store – NW Temple and Waterman (NW)

NE Corner of 10th and Sierra (recent demo; (N)

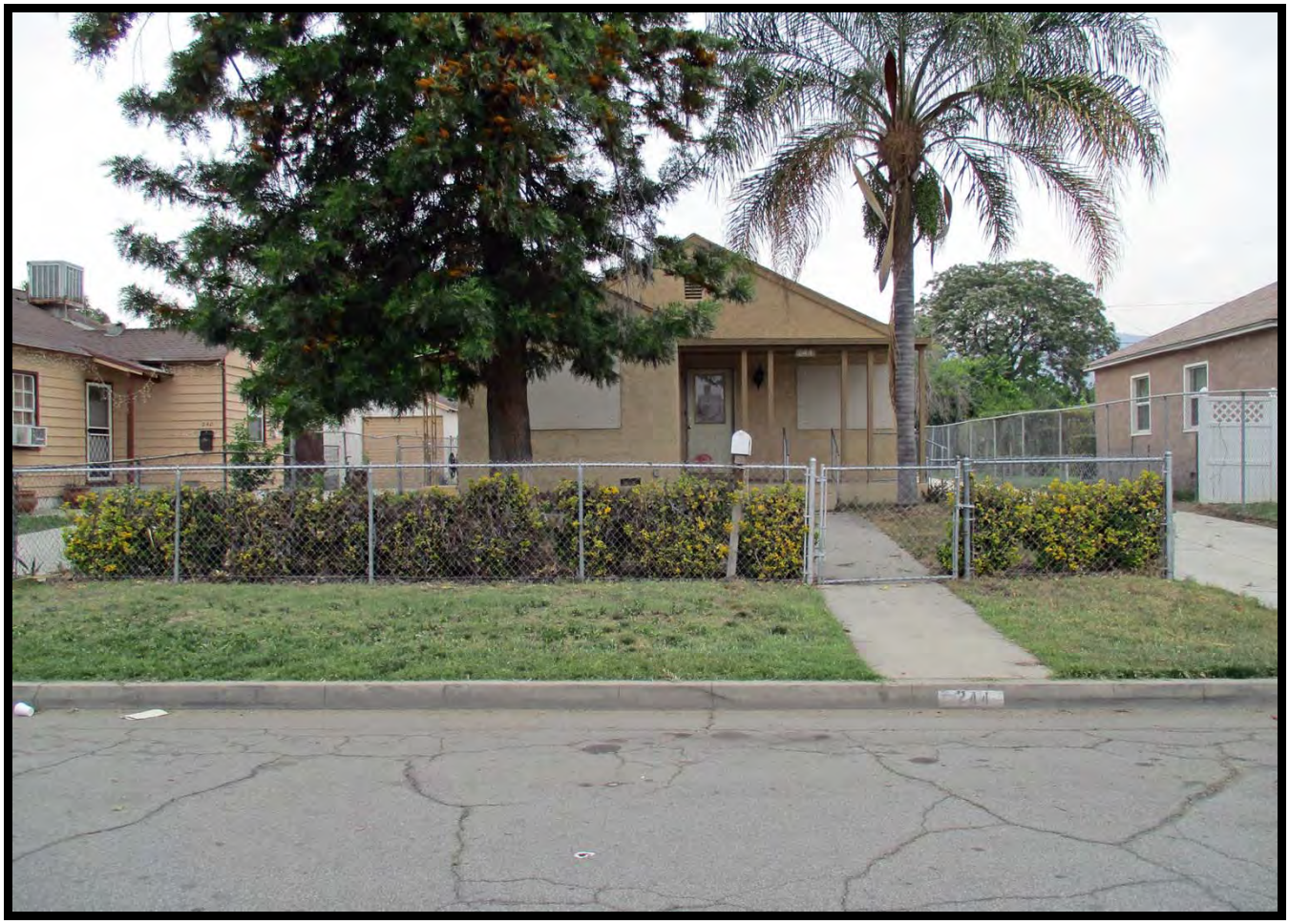
West of 124 10th Street (renovation; N)

Residence at 216 10th Street (N)

Residence at 275 10th Street (SSE)

Residence at 276 10th Street (N)

Apartments at 221 Olive (SW Olive and Wall; W)

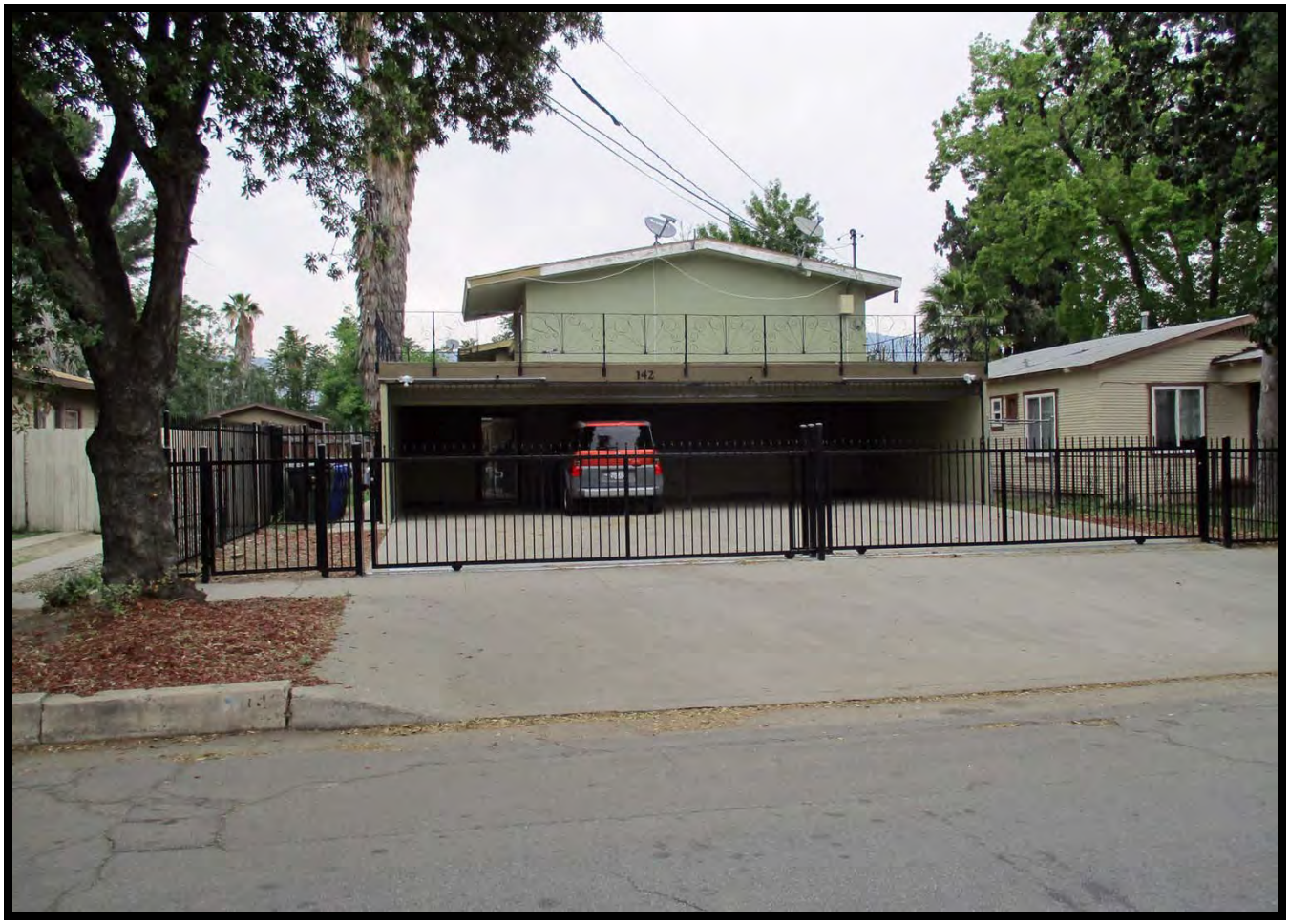


Residence at 224 Olive (N)

Residence at 181 Olive (N)

Residence at 135 Olive (S)

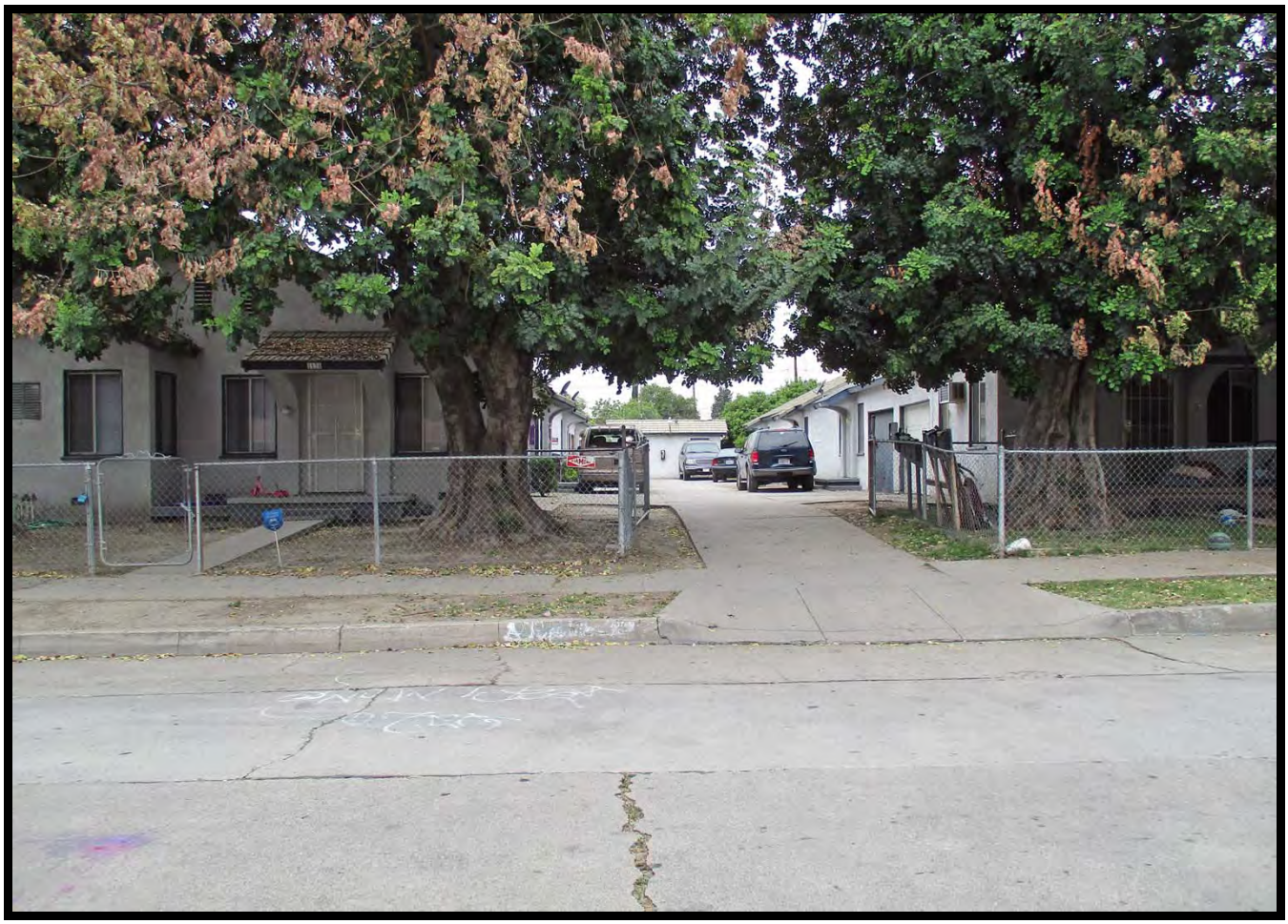
MFR – 122-124 Olive (5)



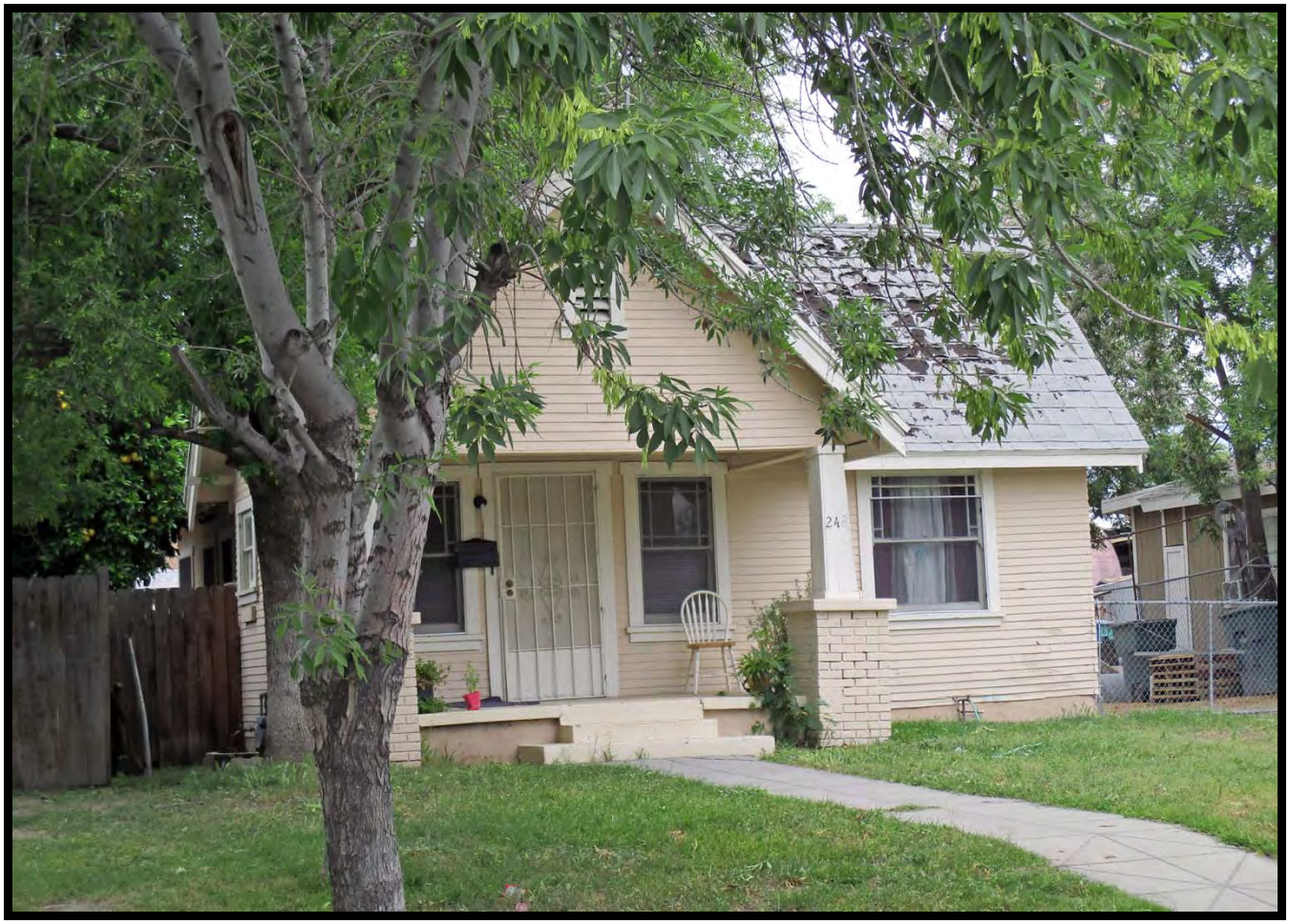
Apartments at 142 11th Street (N)

Residence at 185 11th Street (S)

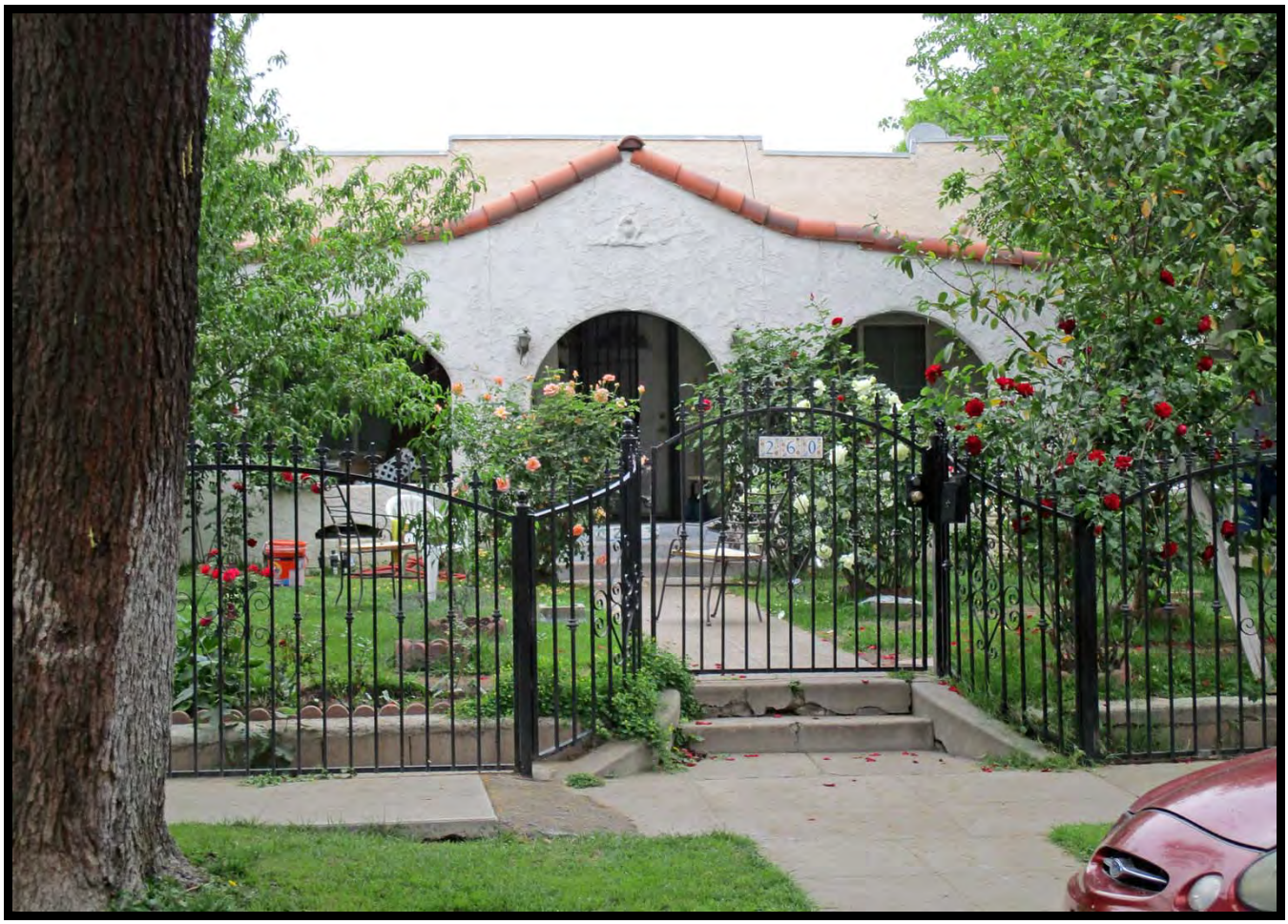
Courtyard at 250-260 11th Street (N)



Courtyard at 1134 Wall Street (W)



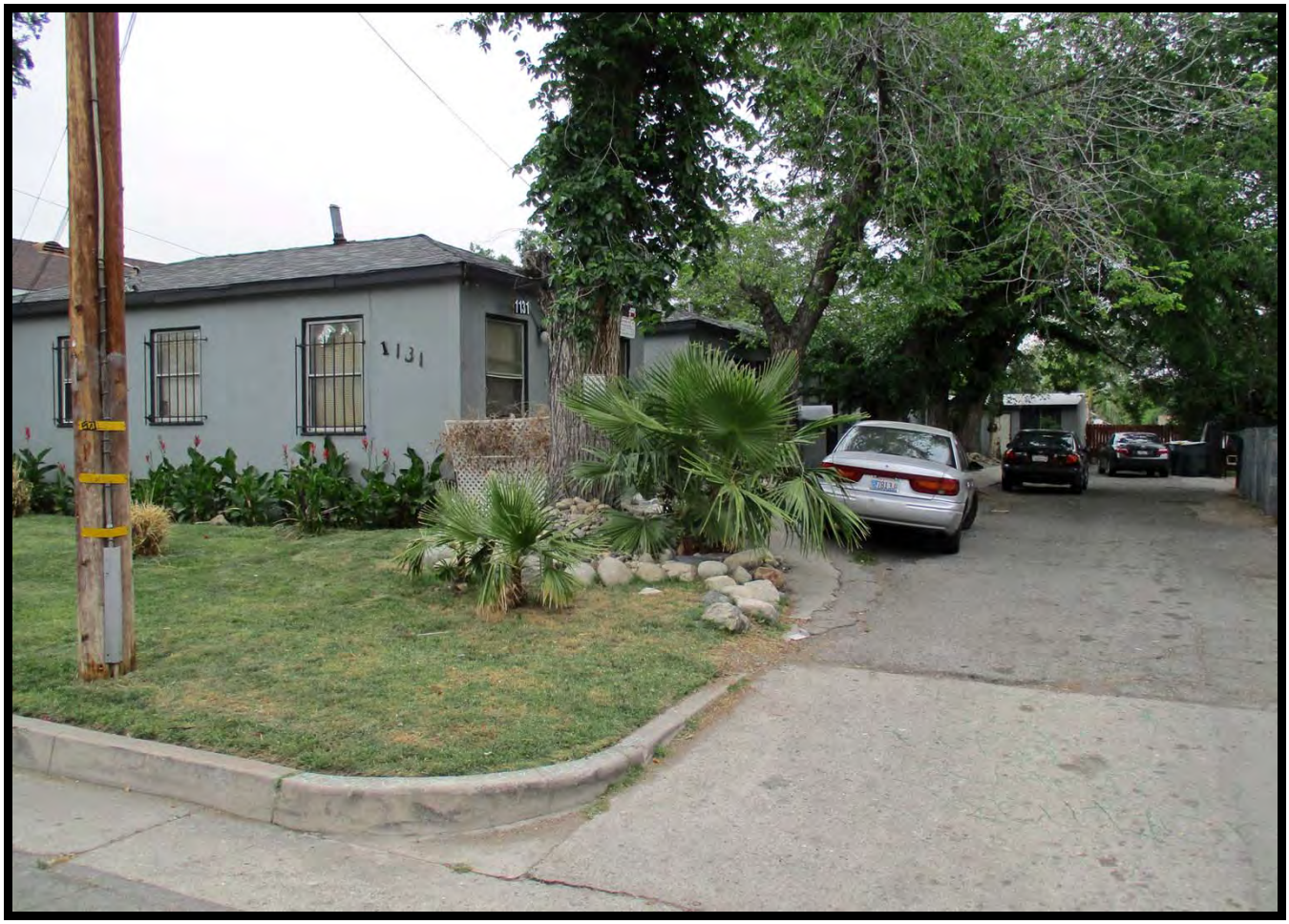
Residence at 248 Orange (N)



Residence at 260 Orange (N)

Abandoned Church on NW of Orange & Waterman (NNE)

Apartments at 1134 Sepulveda (NNW)



Courtyard at 1131 Lugo (E)

Apartments at 1155-1157 Lugo (E)

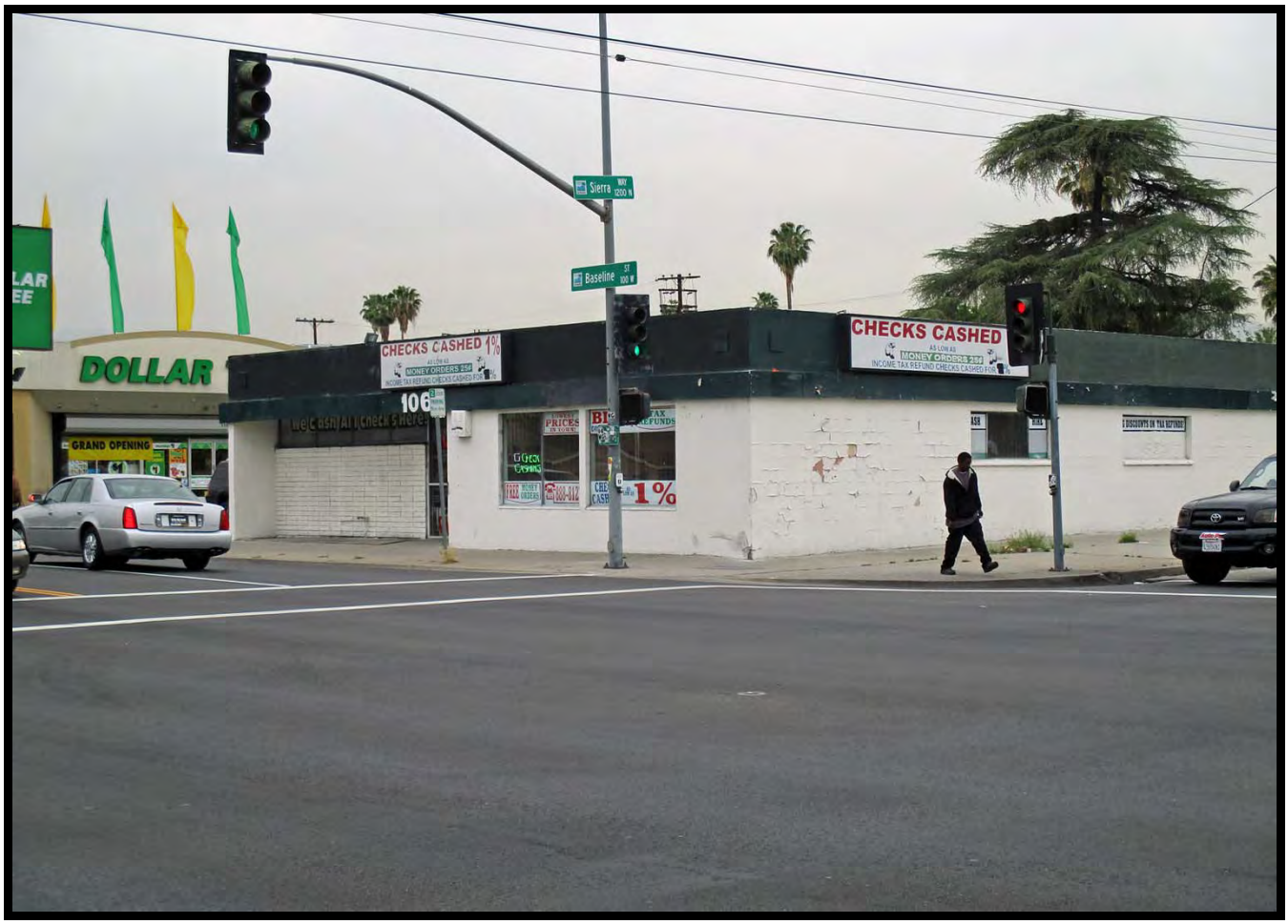
Sierra Way from Baseline Road (S)

Sierra Way from Baseline Road (N)

Overview of Baseline Road from Sierra Way (W)

Overview of Baseline Road from Sierra Way (E)

NE Corner of SierraWay and Baseline Road (N)

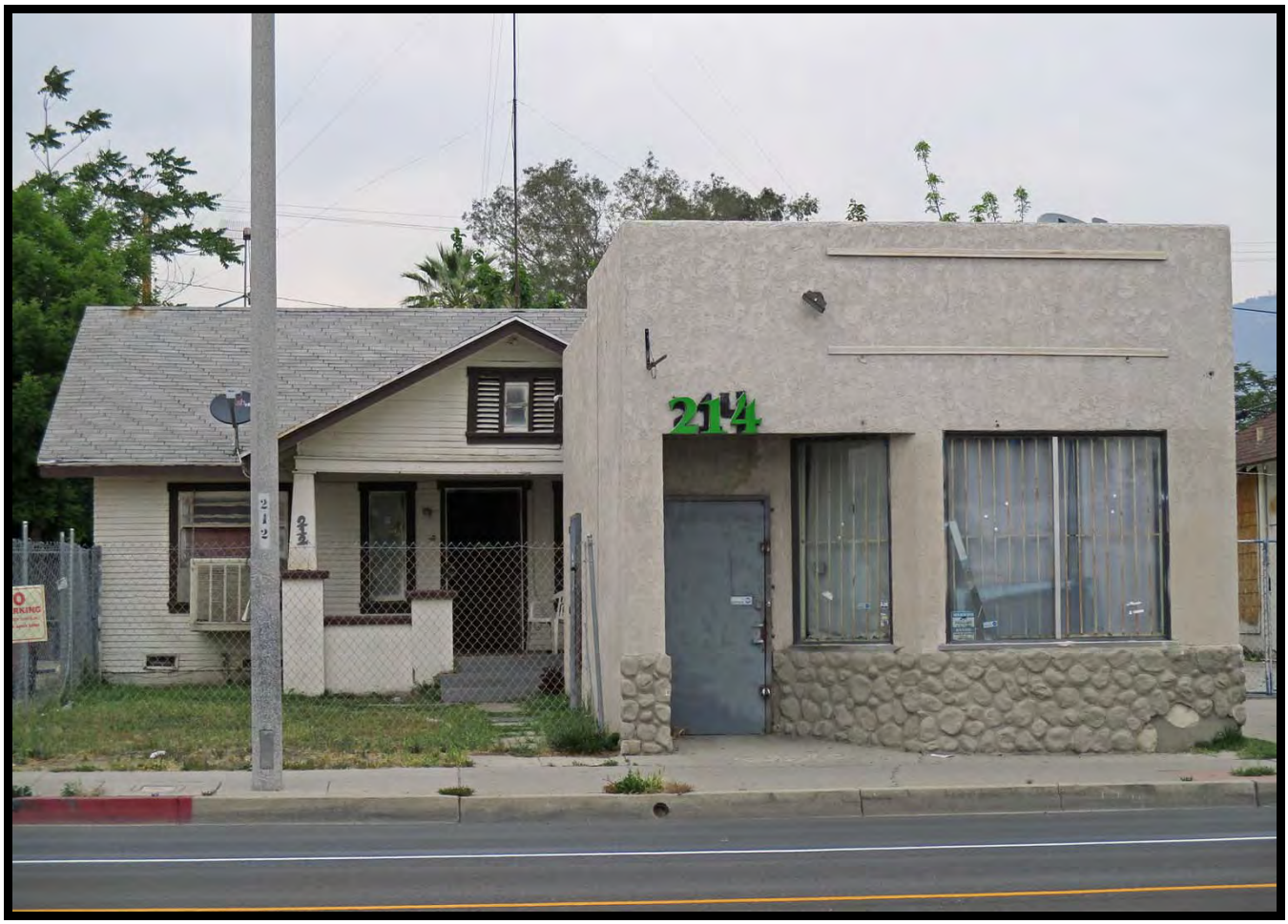


NW Corner of Sierra Way and Baseline Road. (N)

SW Corner of SierraWay and Baseline Road (SW)

SE Corner of Sierra Way and Baseline Road (SE)

Commercial Property at 207 Baseline Road (SW)



Residence & Business at 212-214 Baselines Road (N)

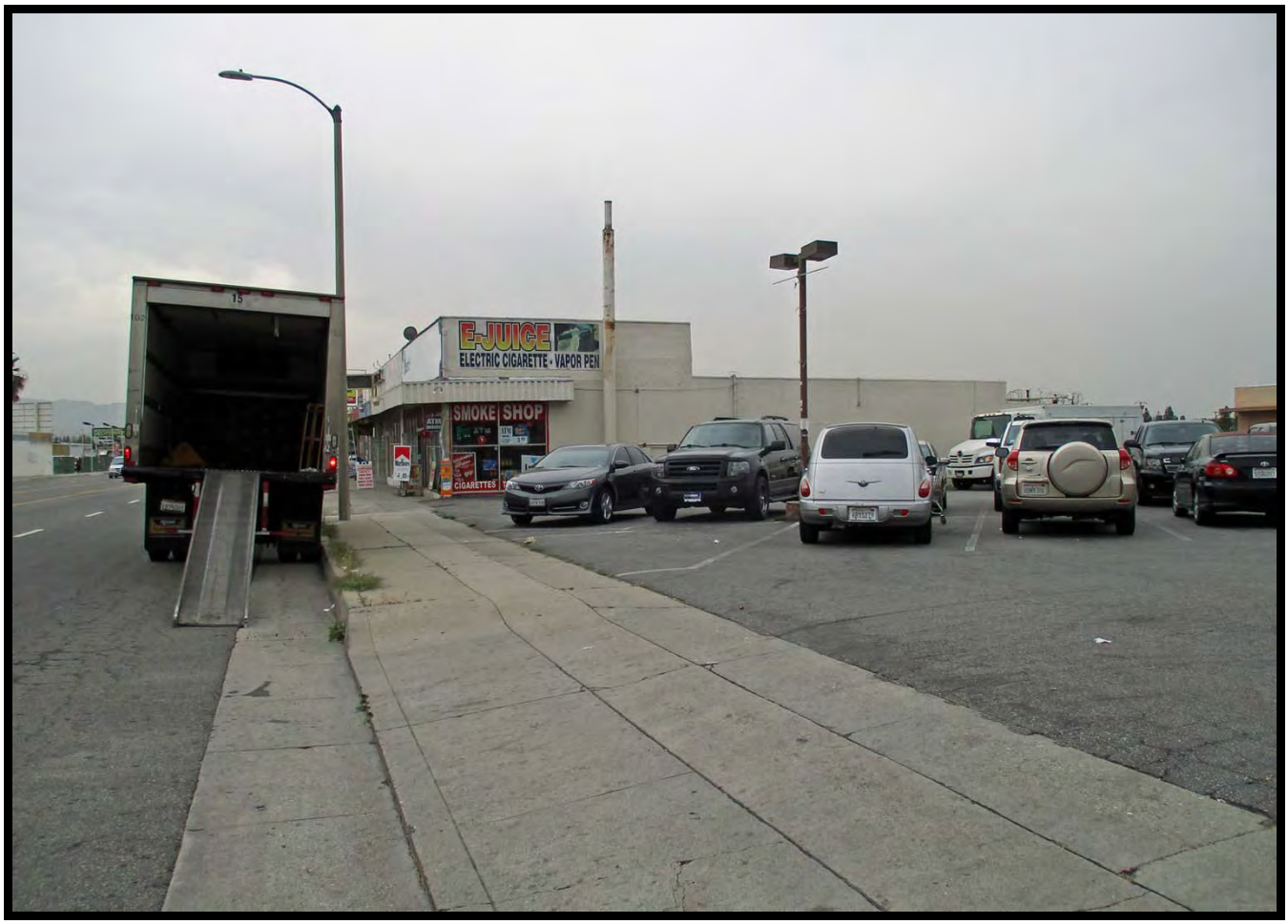
Converted Residence East of 214 Baseline Road (N)

Commercial Business at 220 Baseline Road (N)

Overview of Waterman Avenue from 10th Street (S)

Overview of Waterman Avenue from 10th Street (N)

Strip Mall at 822 Waterman Avenue (NW)



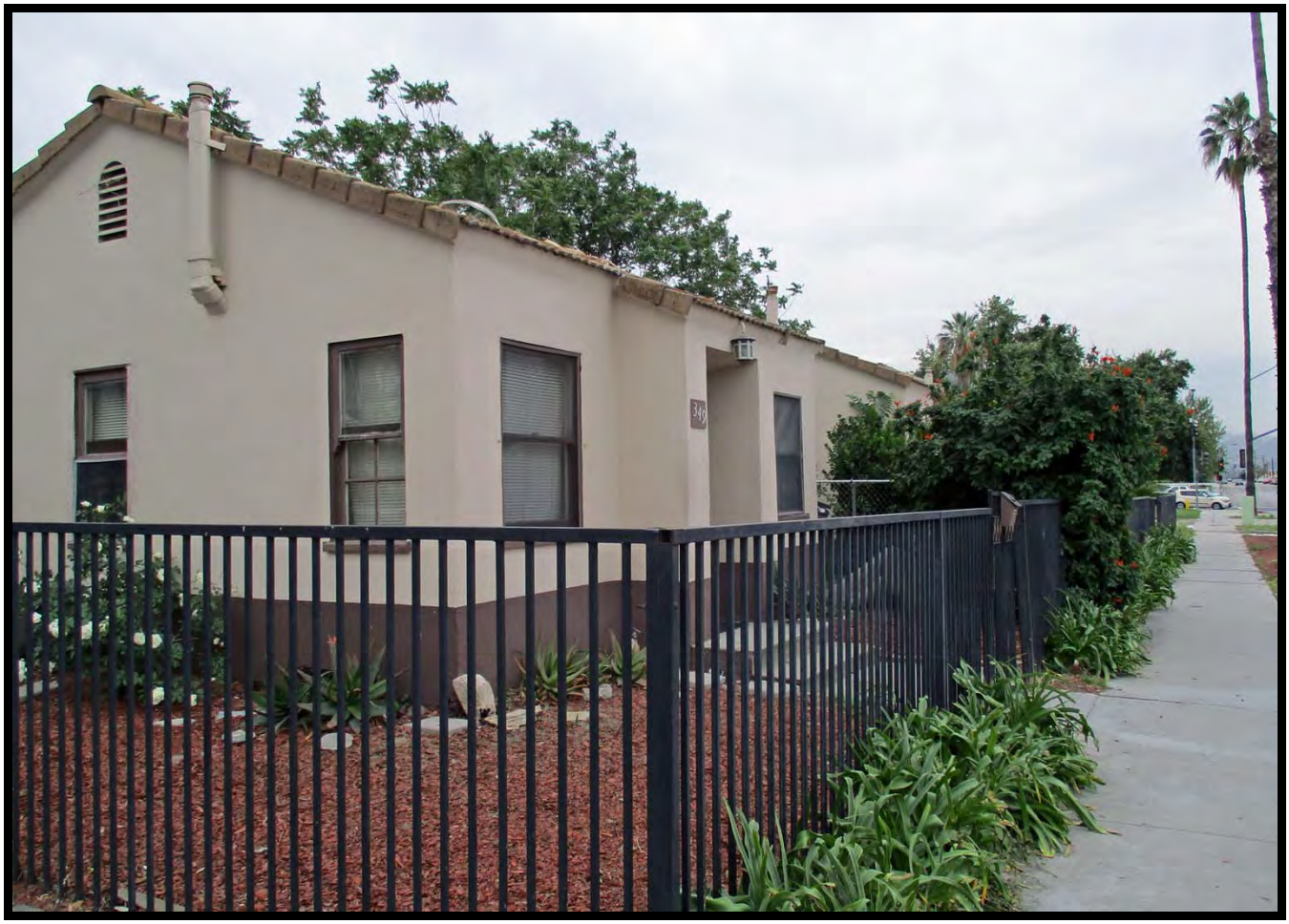
Strip Mall at 784 Waterman Avenue (SW)

SW Corner of 7th and Waterman (Vacant) (S)

Baseball Field at Seccombe Park (SW)

US Army Reserve Complex – 3rd & Waterman (NE)

US Army Reserve Complex – 3rd & Waterman (NW)

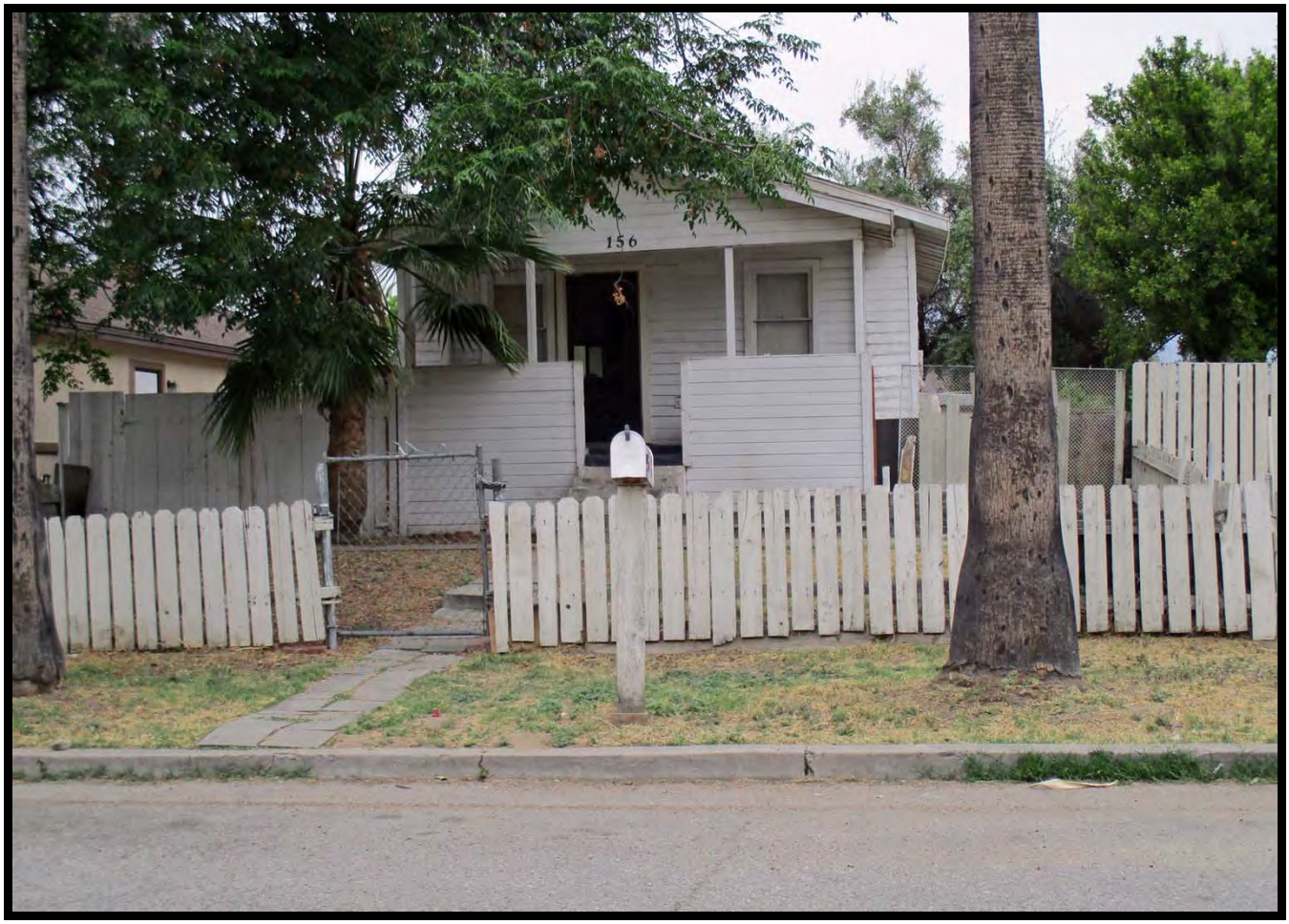


Courtyard at SE Corner of Court and Sierra Way (SSW)

Courtyard at 115 Kingman Street (SE)

Residence at 132 Court Street (N)

Residence at 144 Court Street (N)



Residence at 156 Court Street (N)

Courtyard on Kingman Street (N)

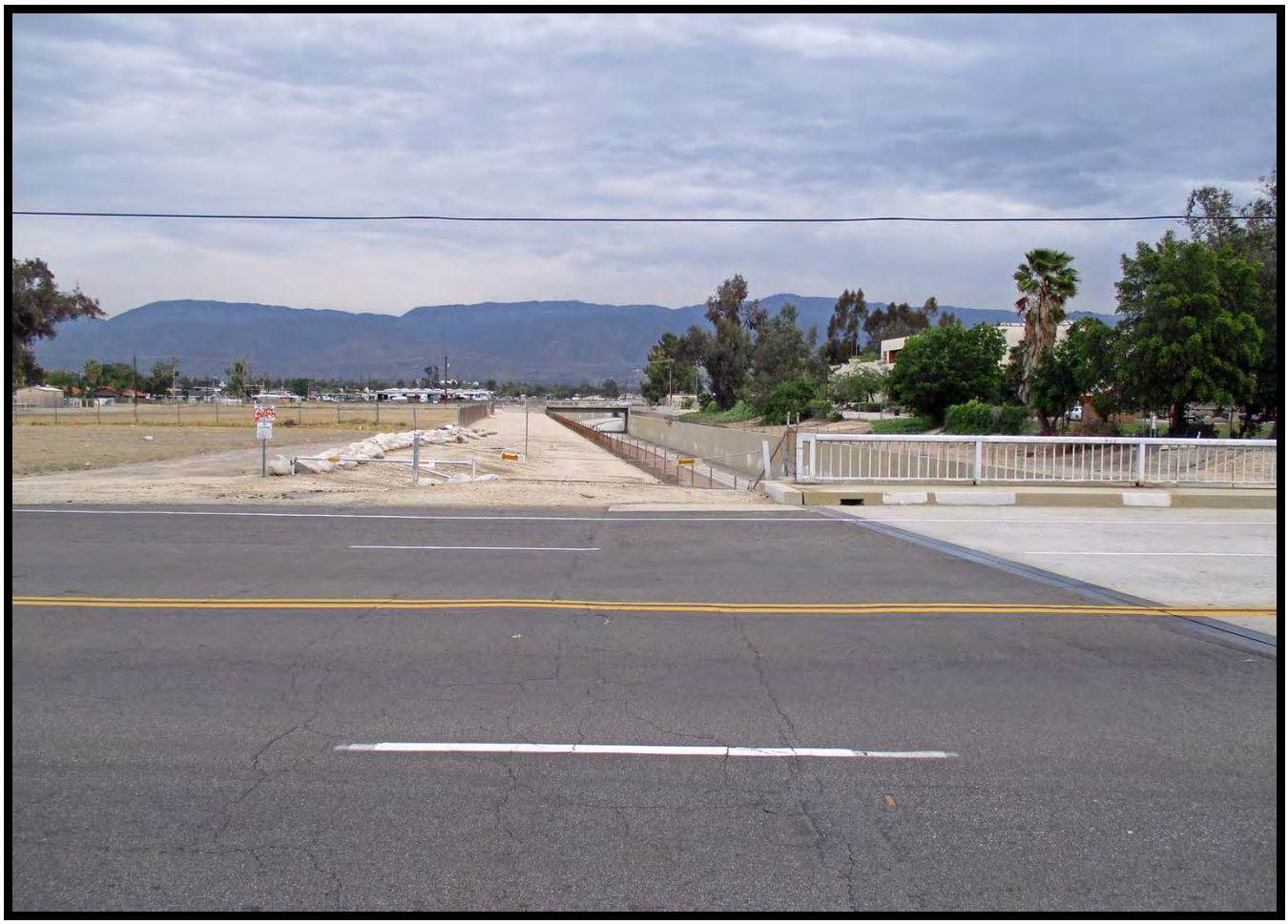
Vacant Lot at 460 Sepulveda (W)

Duplex at 220 Kingman Street (N)

Courtyard at 254 Kingman Street (N)

Courtyard at 276 Kingman Street (N)

Empty Lot @ Waterman and 3rd (N)



Creek Crossing on 3rd Street (N)

Residence at 24186 Monterey (N)

Residence at 24237 Monterey (S)

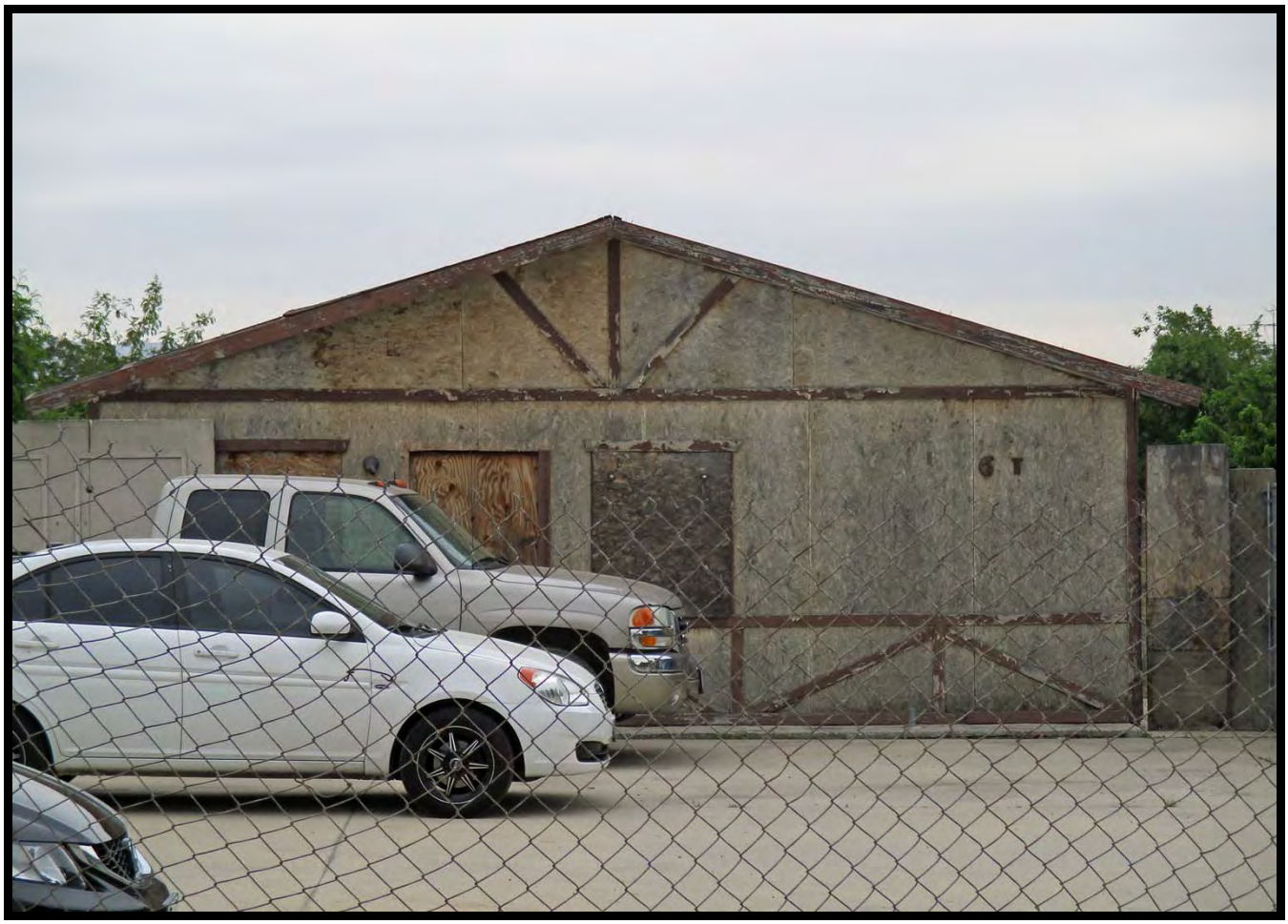
Getsemami Church on Baseline Road (SSW)

Modern Commercial Development at 24215 Ward (S)

Residence at 404 6th Street (N)

Merrell's Auto @ 287 Waterman Avenue (SW)

Merrell's Auto @ 287 Waterman Avenue (SW)



Altered Residence East of 607 Preston (S)

Santiago Mountain View Estates – 721 Preston (SE)

Bus Yard at 844 9th Street (N)

Santiago Mobile Home Park – 780 9th Street (N)

Modern Condos on NE of Valencia and 9th Street (NW)

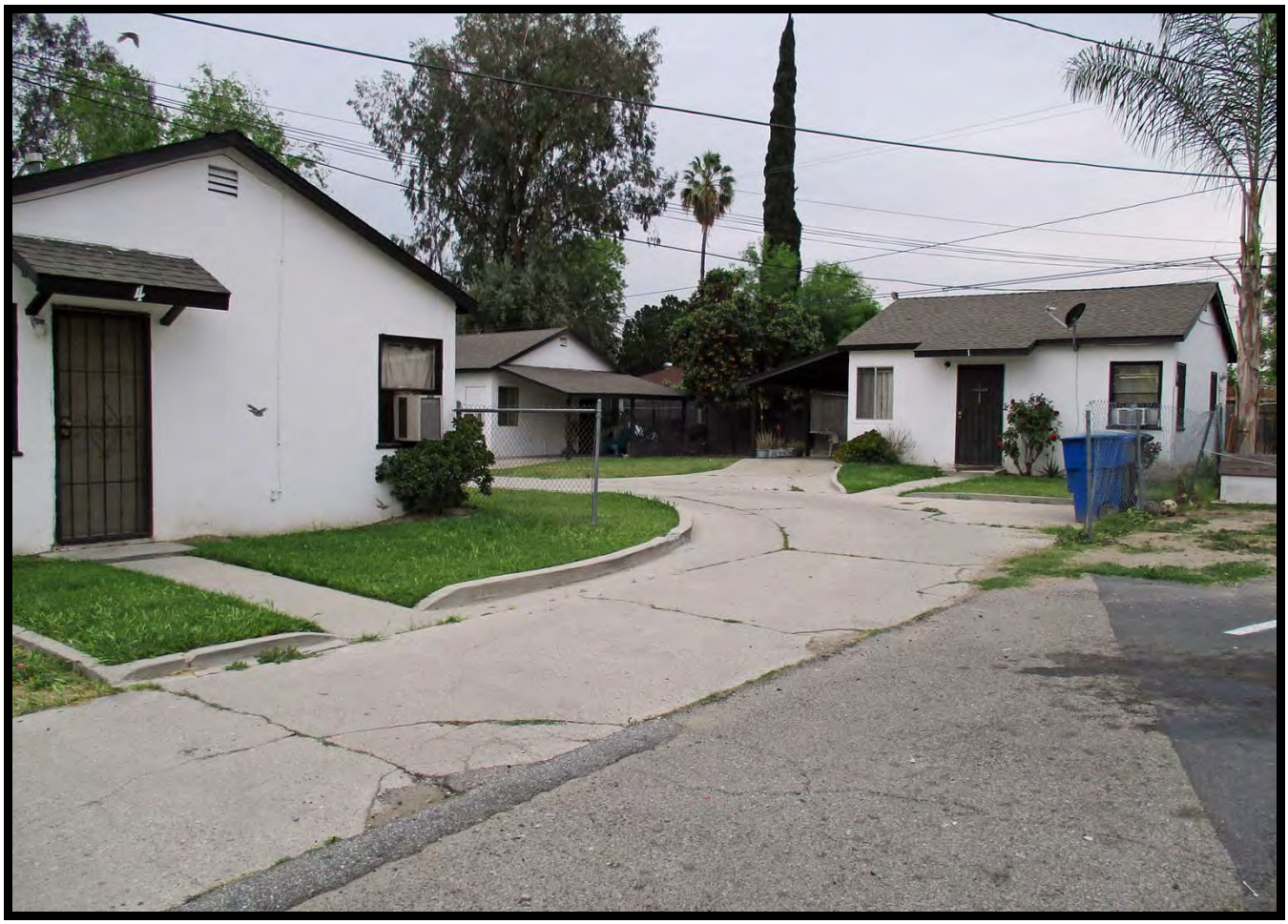
Catholic Church at Olive and Valencia (W)

Remains of Citrus Orchard at Olive and La Junta (NE)

Apartments at East End of Olive Street (N)

Apartments at 1180 Bobbett (W)

MFR at 1123 Bobbett (E)



Residence at 1100 Bobbett (W)

Residence at 1134 Bobbett (N)

Courtyard at 1159 Myrtle (SE)

Residence at 550 Baseline Road (NNW)

Commercial Building at 899 Baseline Road (ESE)

Commercial Building at 899 Baseline Road (WSW)

Old School Tires (NE Baseline and Tippecanoe; NE)

E&L Auto Repair (NW Baseline and Tippecanoe; NW)

Unified Baptist Church 1094 Baseline Road (N)

Baseline Iron Works – 1021 Baseline Road (NW)

Commercial Building on Baseline Road (W)

Overview of Hospital from Foothill Blvd. (S)

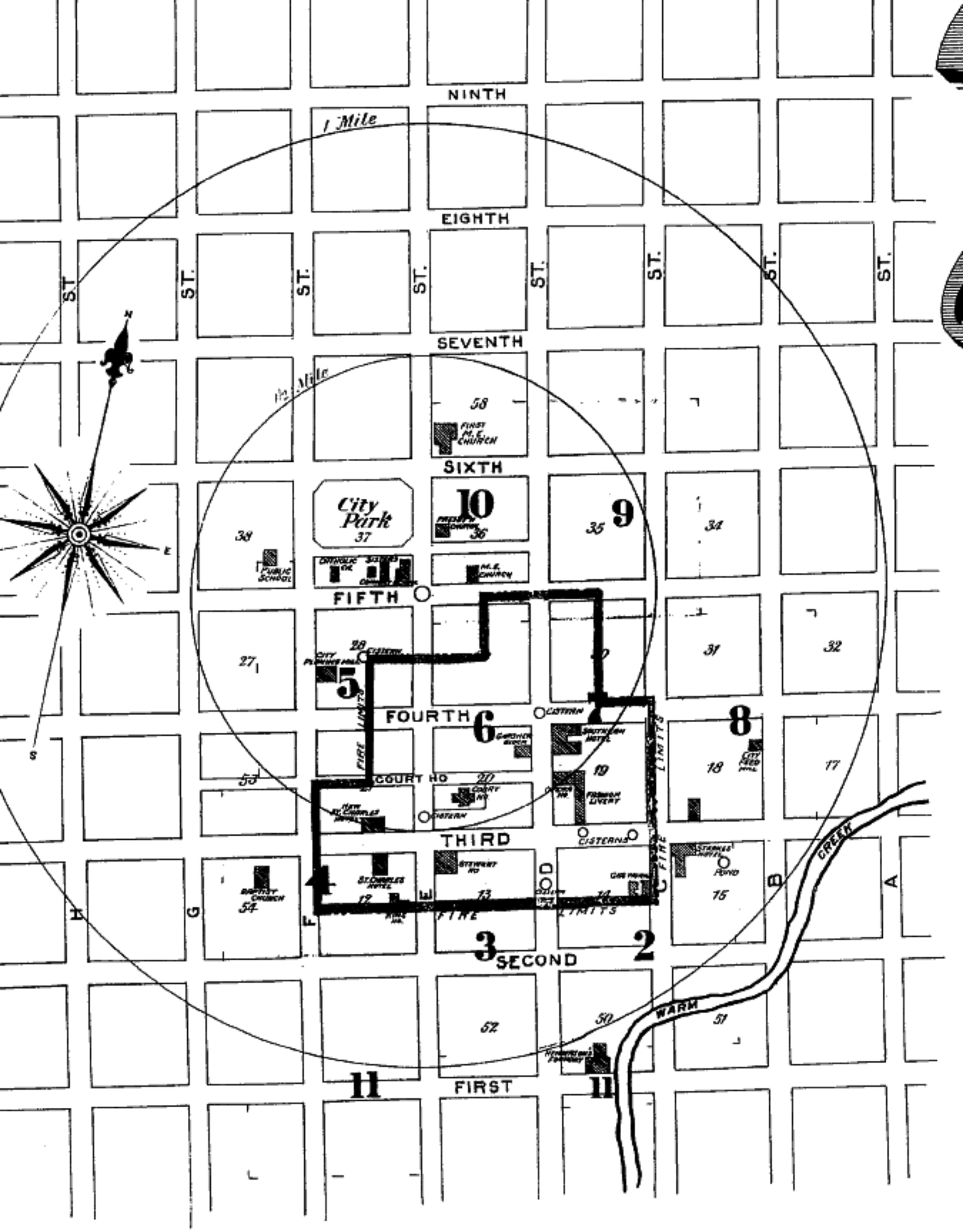
Hospital Frontage on Waterman Avenue (E)

1784 Waterman Avenue (SW)

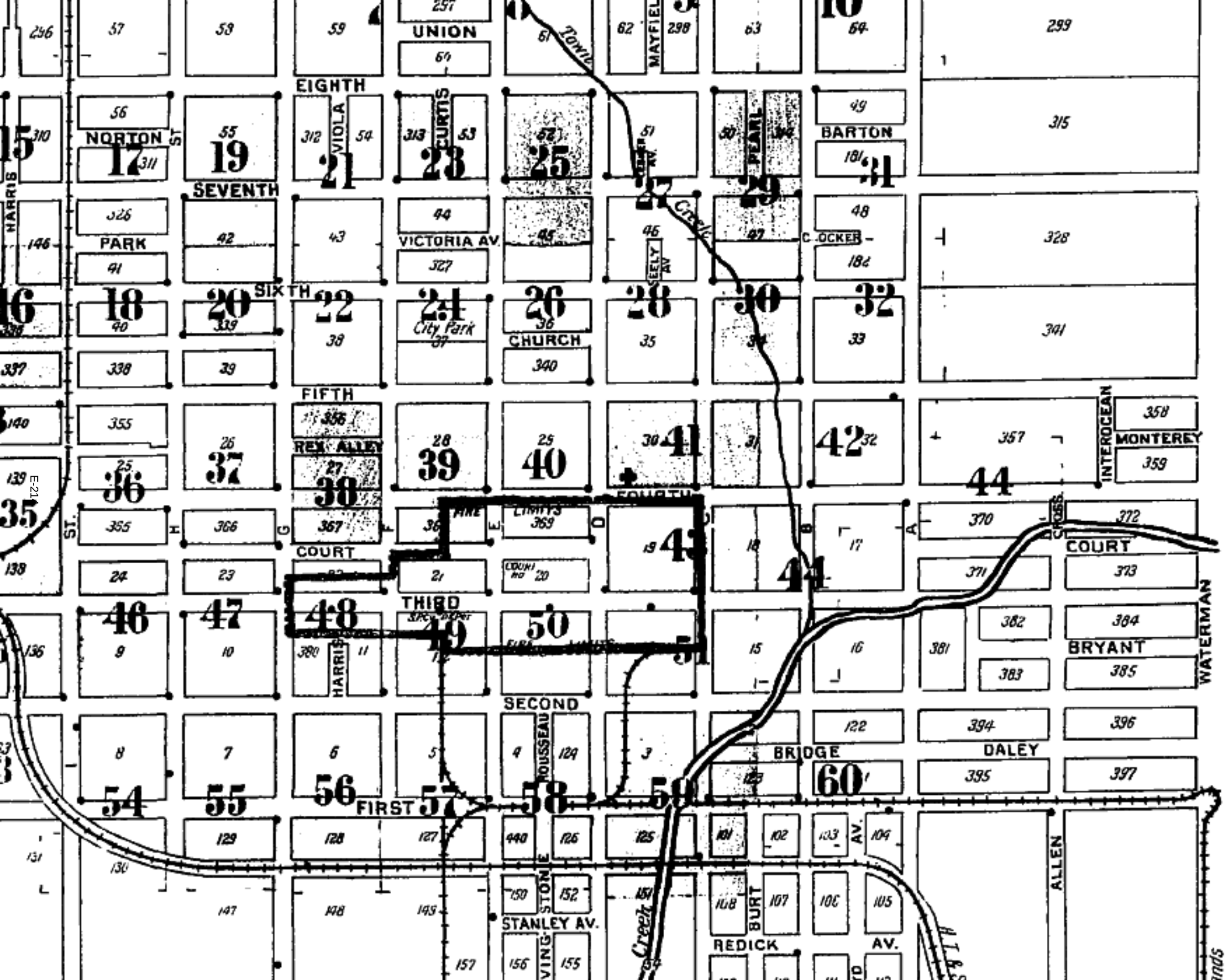
Lemon Tree Courtyard at 1536-1546 16th Street (W)

APPENDIX F:

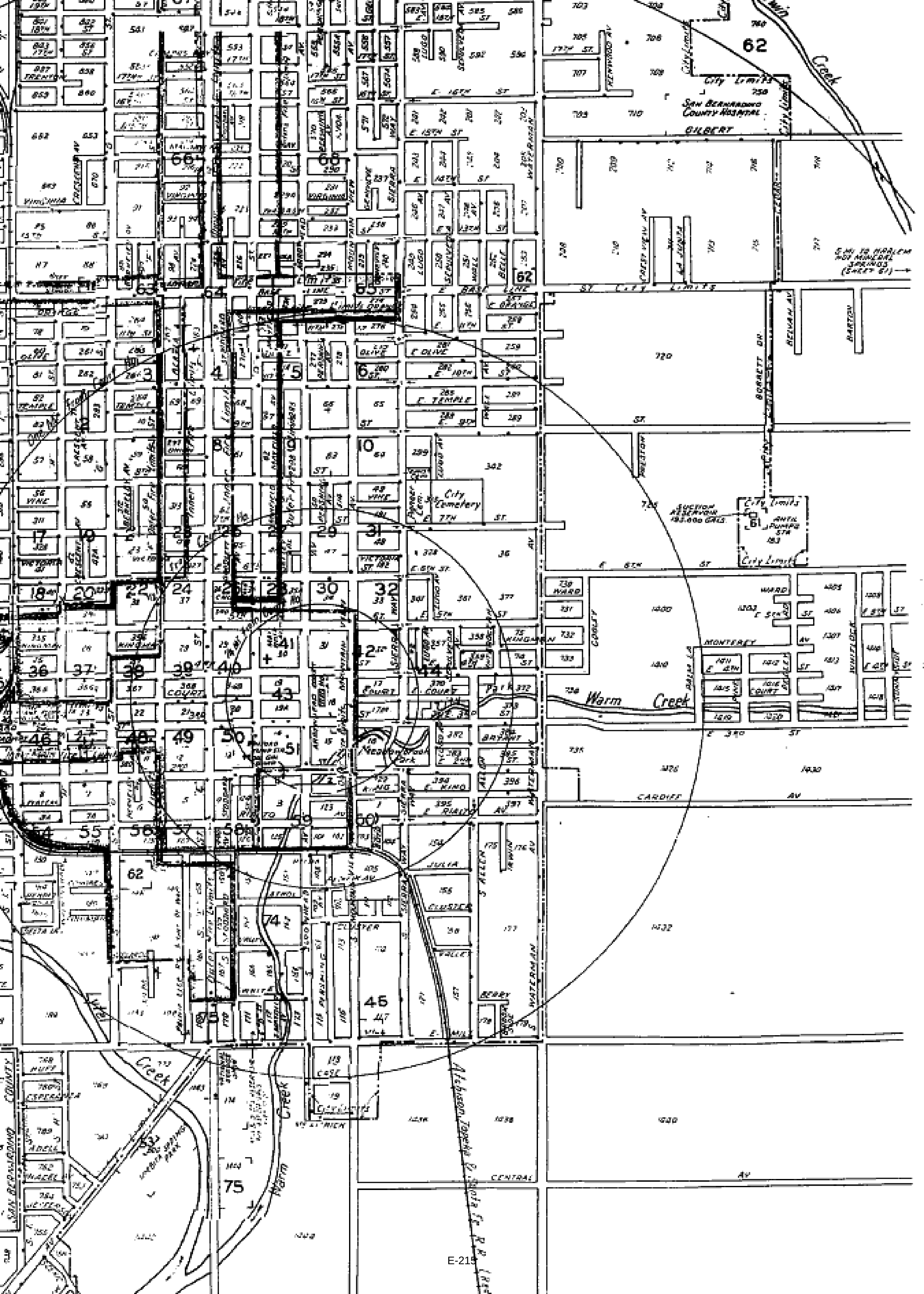
Supplemental Research Data

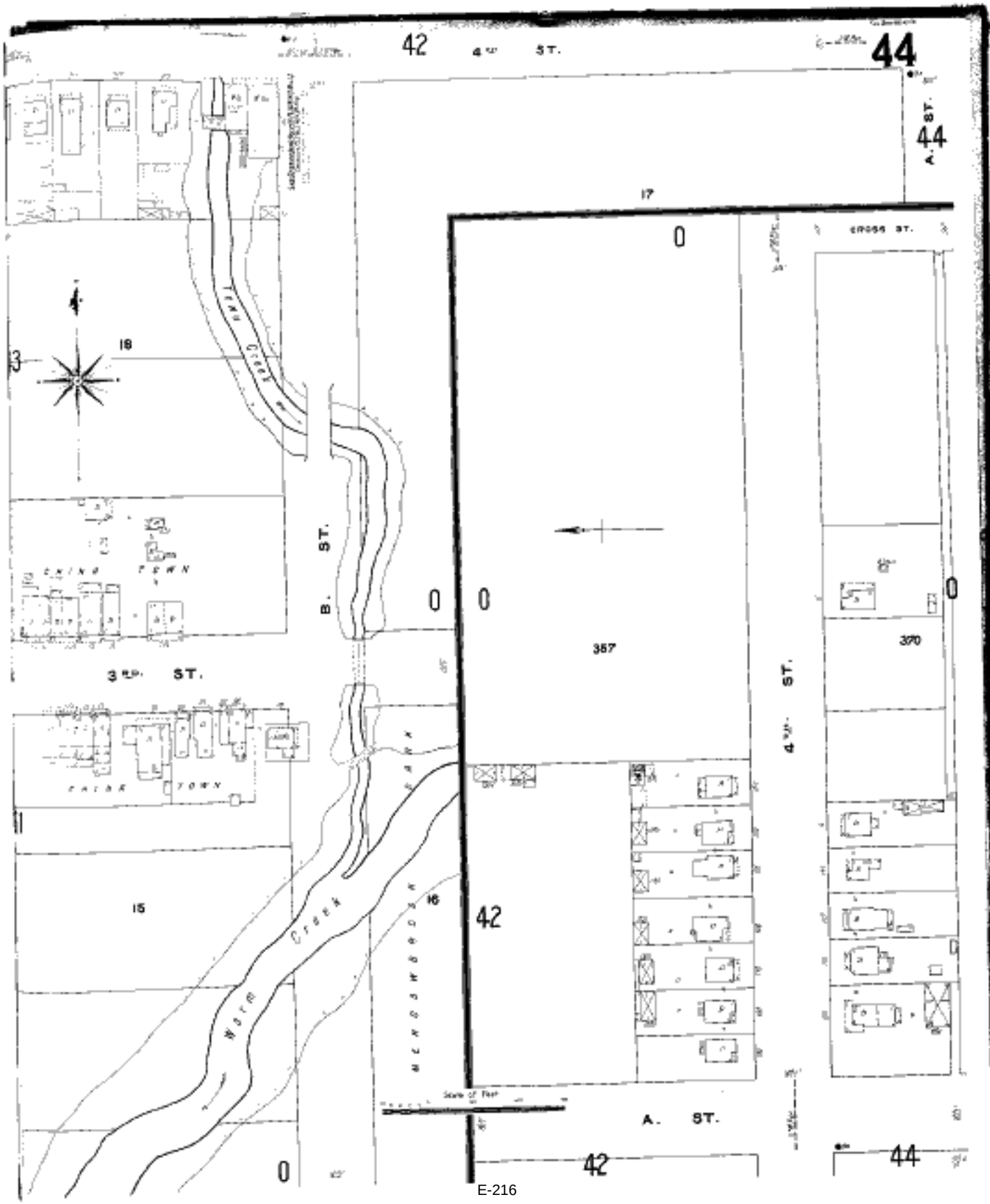

NINTH
1 Mile
EIGHTH
ST.
SEVENTH
½ Mile
58
FIRST M.E. CHURCH
SIXTH
City Park
37
10
36
9
35
34
38
PUBLIC SCHOOL
CATHOLIC CH.
M.E. CHURCH
FIFTH
28
CISTERN
CITY PLANING MILL
5
27
31
32
FOURTH
6
CISTERN
8
SOUTHERN HOTEL
19
18
17
CITY FEED MILL
FIRE LIMITS
COURT HO
20
COURT HO
CISTERN
FEDERAL LIVERY
THIRD
CISTERNS
STEWART HO
STEPHENS' HOTEL
POND
BAPTIST CHURCH
54
ST. CHARLES HOTEL
12
13
14
15
4
3
2
SECOND
52
50
51
WARM
CREEK
11
FIRST
11
N
E
S
W
A
B
C
D
E
F
G
H

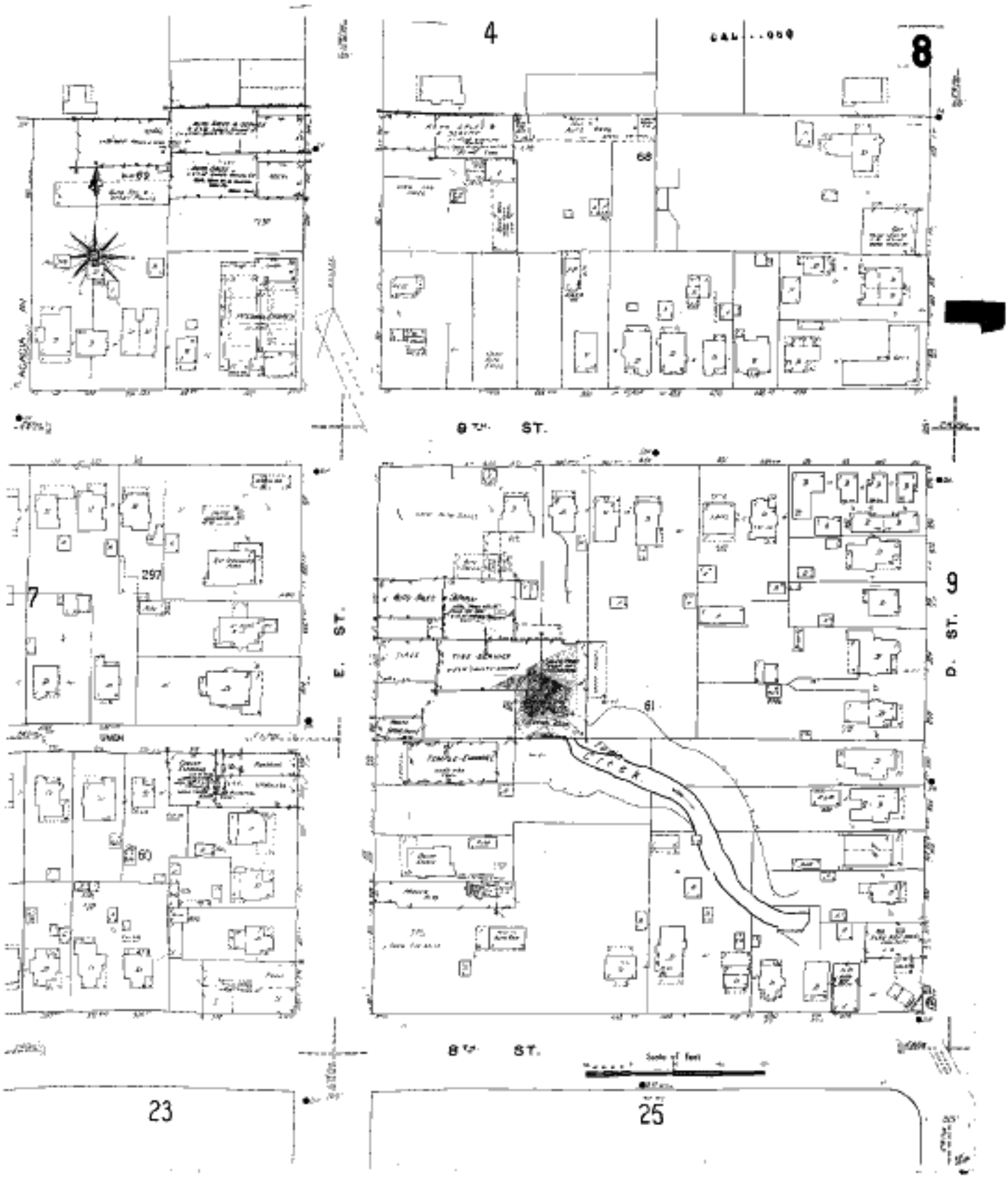
INDE

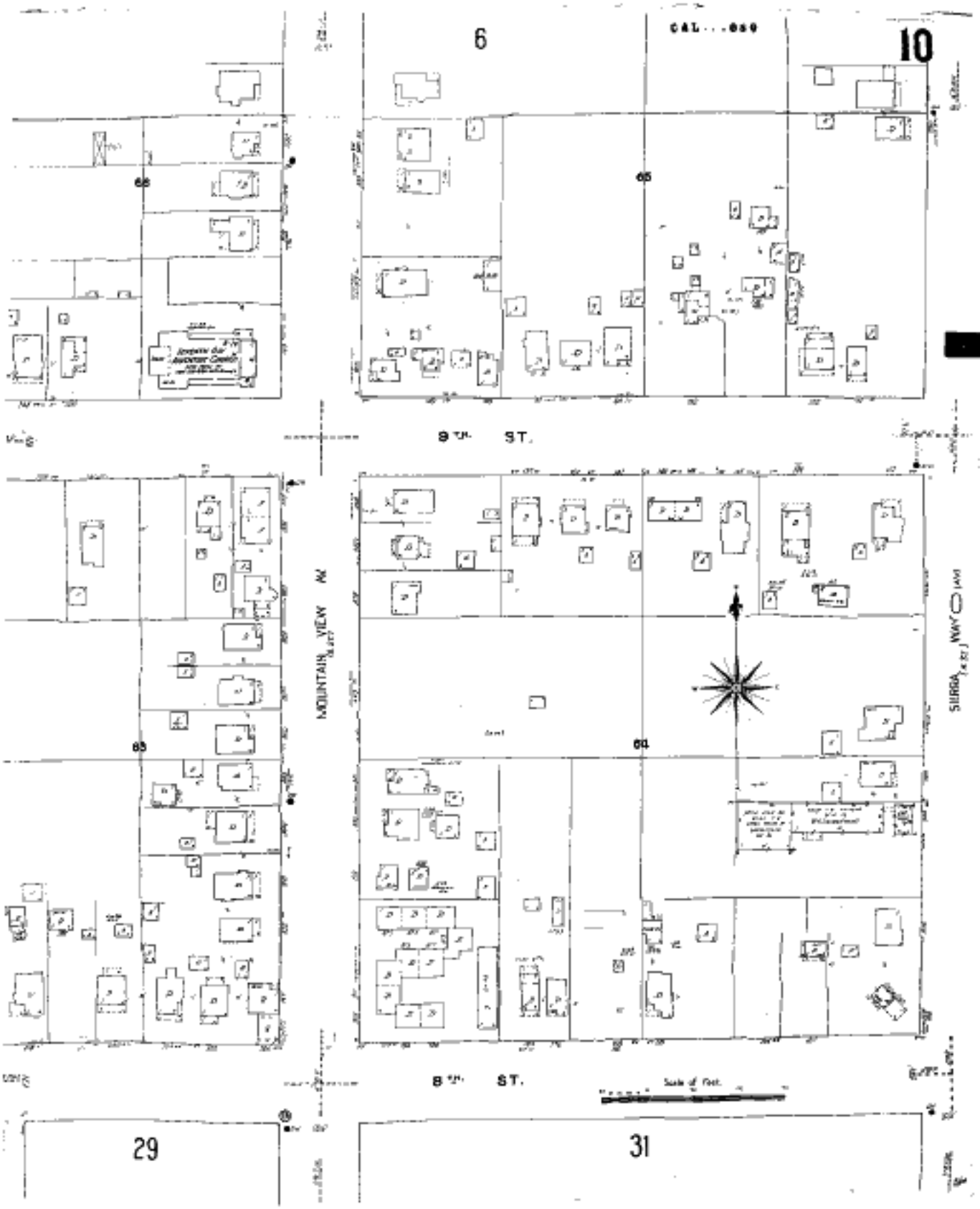

UNION
EIGHTH
NORTON
SEVENTH
PARK
SIXTH
VICTORIA AV.
City Park
CHURCH
FIFTH
REX ALLEY
COURT
THIRD
SECOND
FIRST
STANLEY AV.
REDICK
AV.
BRIDGE
DALEY
BRYANT
BARTON
MONTEREY
INTEROCEAN
WATERMAN
ALLEN
HARRIS
VIOLA
CURTIS
PEARL
MAYFIELD
COCKER
SEELY AV.
ROUSSEAU
STONE
BURT
Creek
FIRE LIMITS

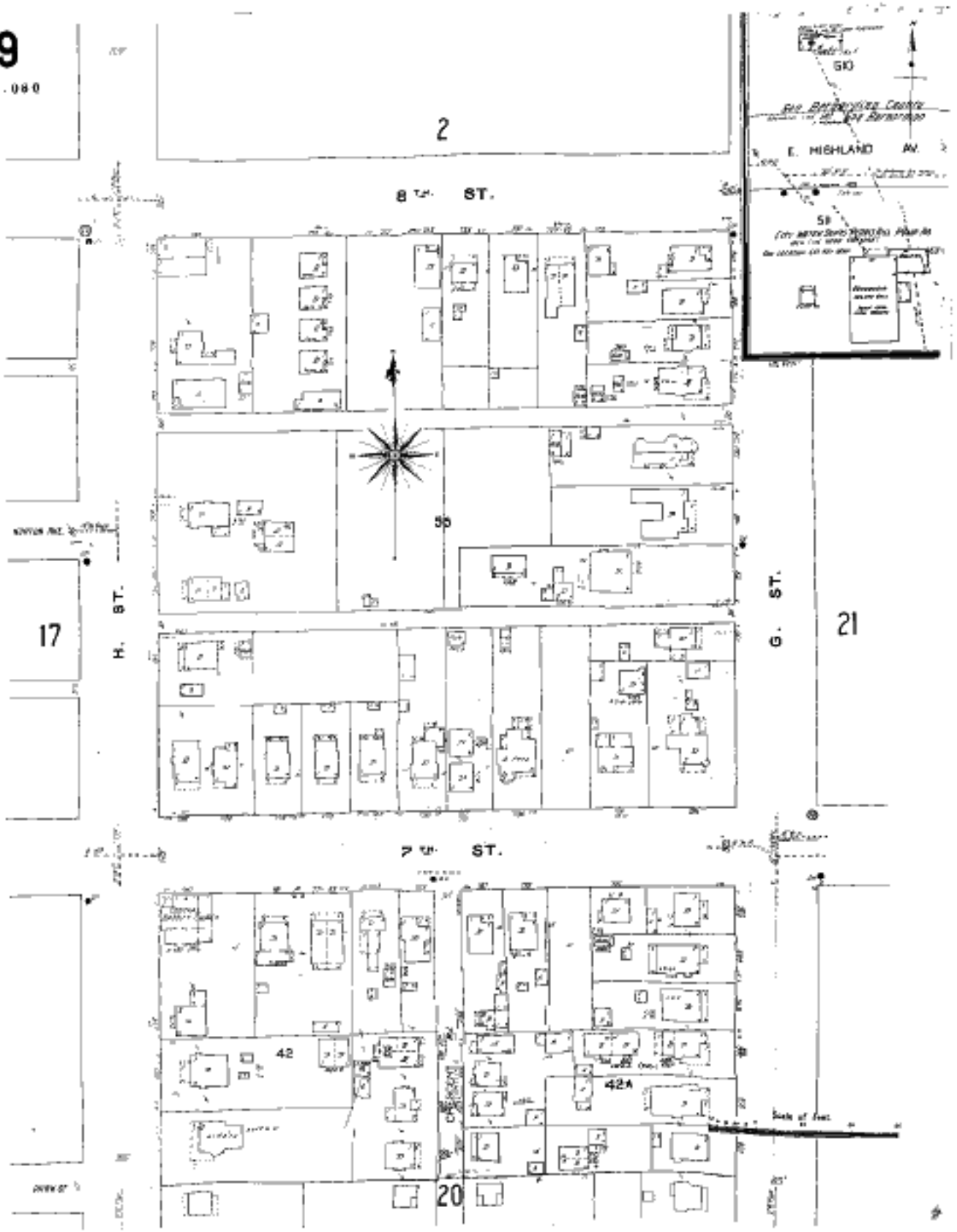
E-21

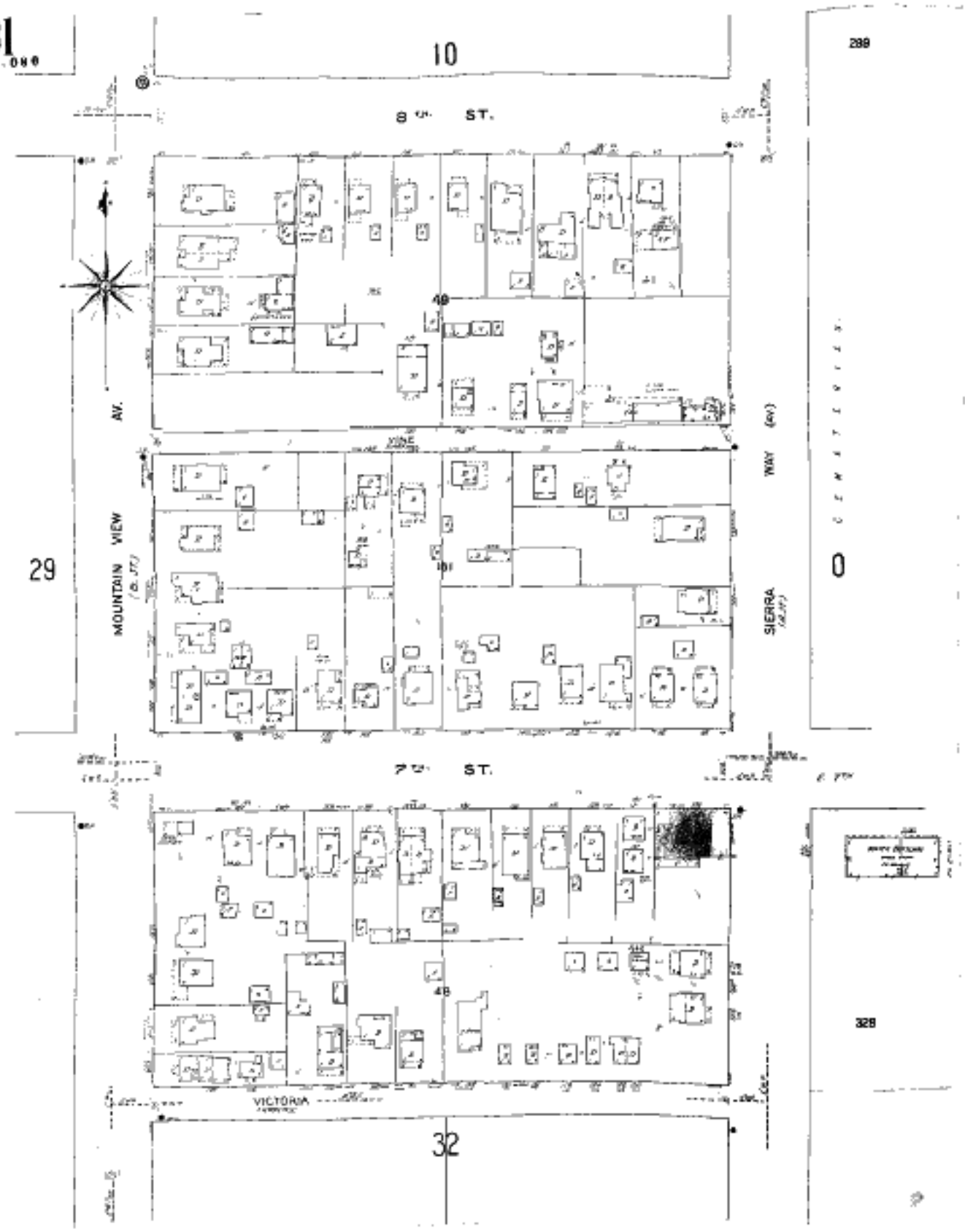

City Limits
San Bernardino County Hospital
Gilbert
Warm Creek
City Cemetery
Meadowbrook Park
Cardiff Av
Central Av
Waterman
Base Line
E Temple
E Olive
E 6th St
E 5th St
E 3rd St
Kingman
Monterey
Court
Bryant
Rialto
Julia
Cluster
Valley
Berry
Mill
Case
Rich
Huff
Esperanza
Adell
Hazel
Suction Reservoir
City Limits
Pump Sta
Atchison Topeka & Santa Fe R.R.

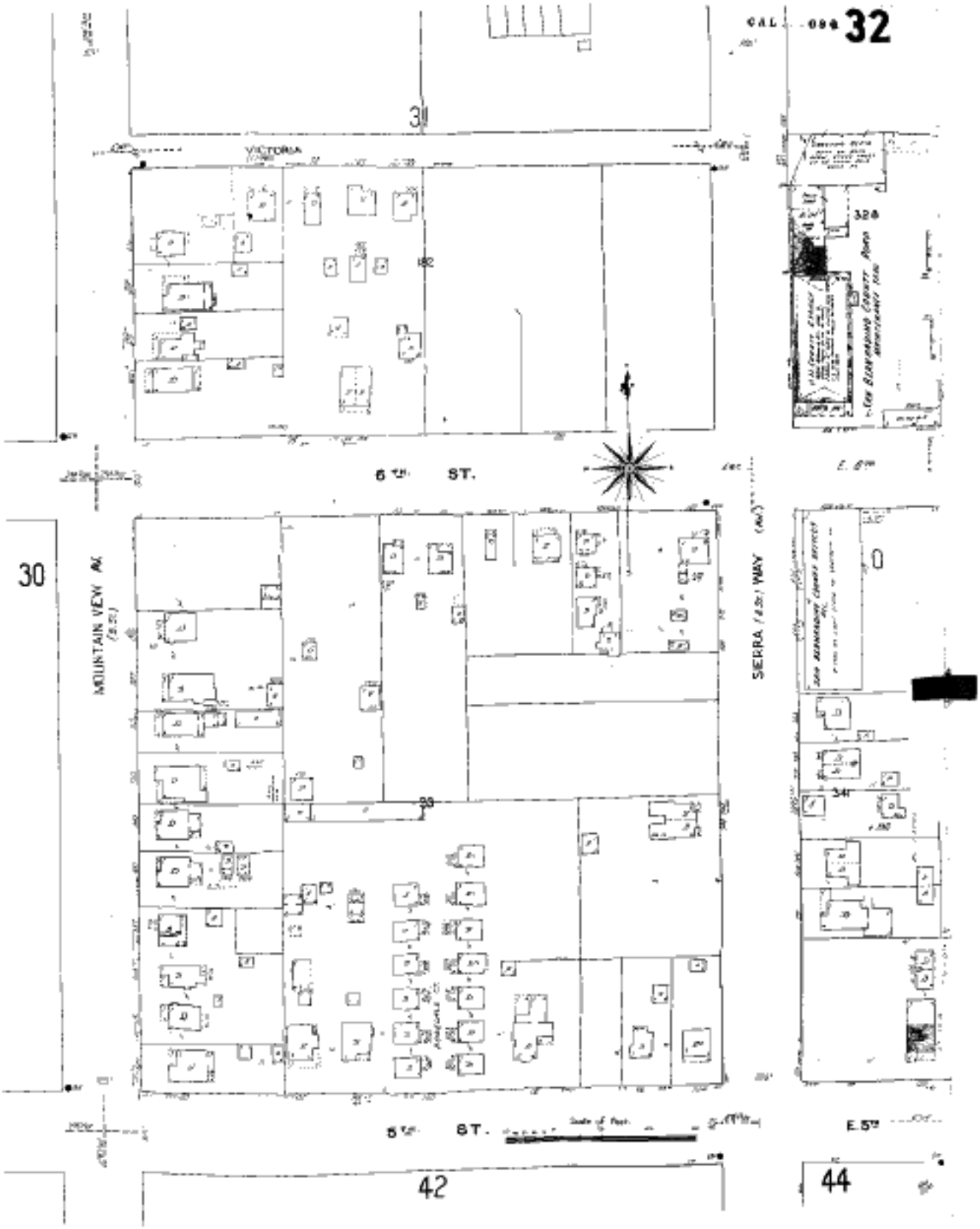

42
4TH ST.
44
A. ST.
44
17
CROSS ST.
0
Tenn Creek
18
3
CHINA TOWN
B. ST.
0
0
357
370
0
3RD ST.
4TH ST.
CHINA TOWN
15
16
42
Wash Creek
McKenzie Park
Scale of Feet
A. ST.
42
44
0

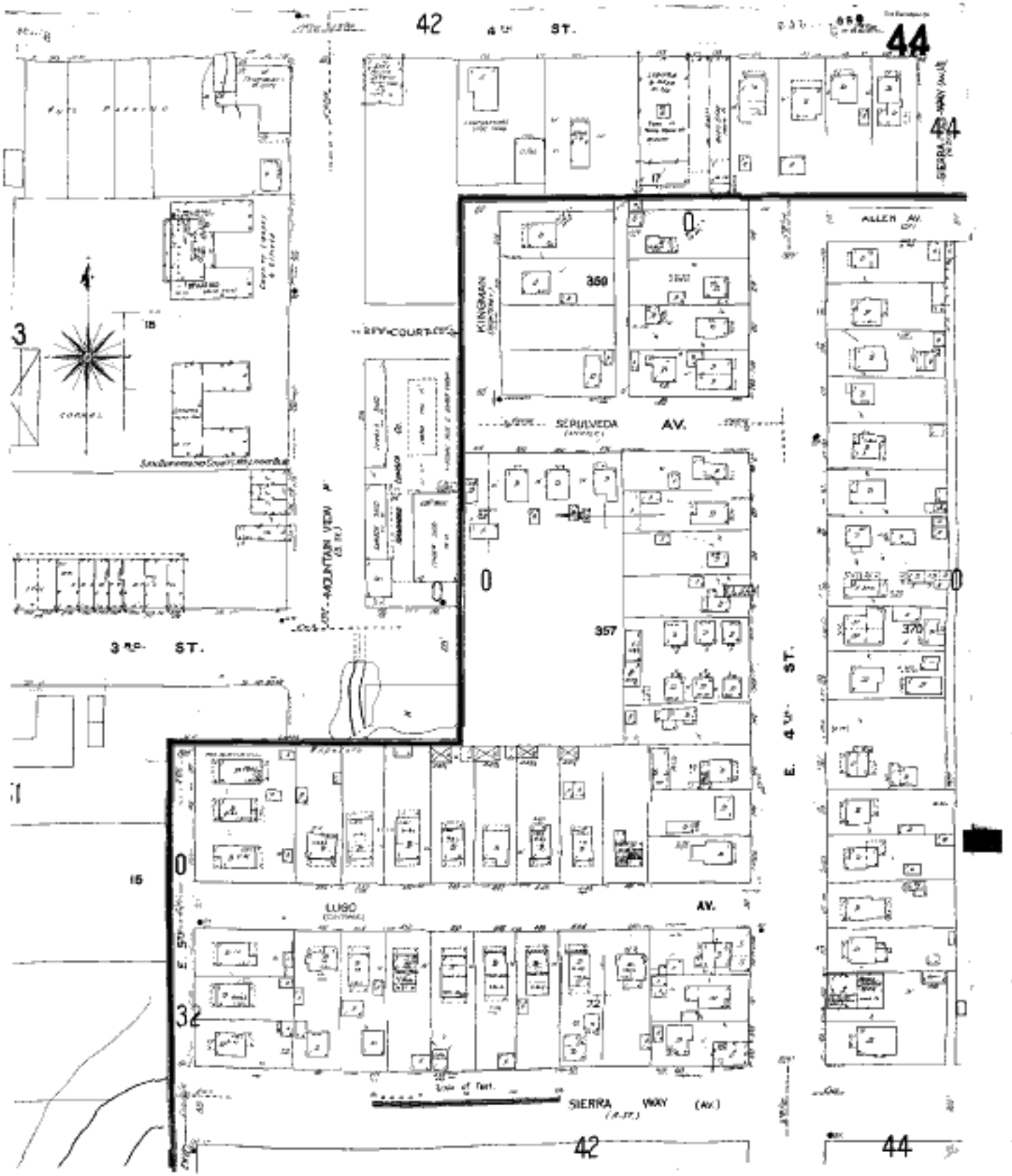

4
8
68
8TH ST.
7
297
E. ST.
UNION
60
61
9
D. ST.
8TH ST.
Scale of Feet
23
25

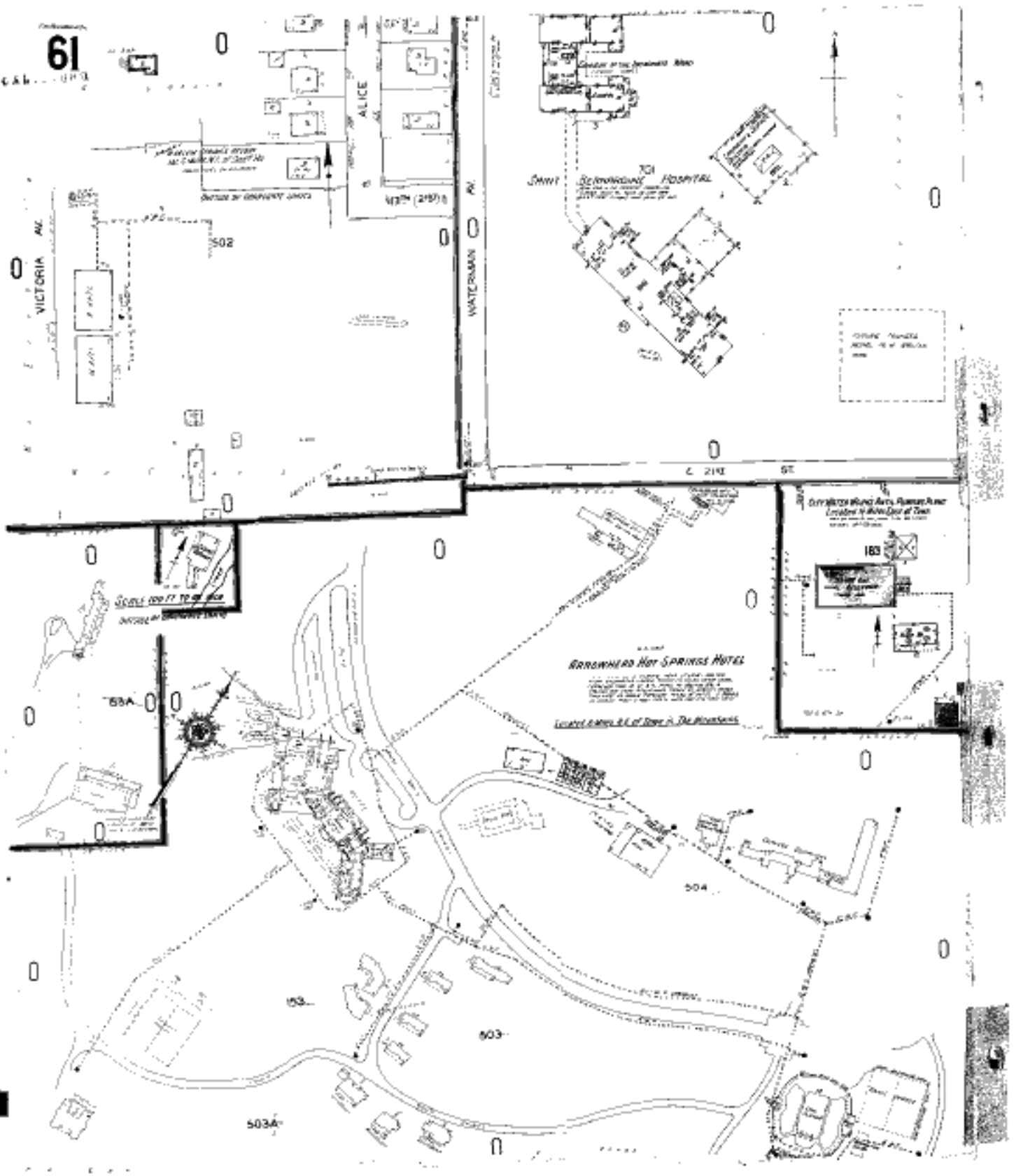

6
10
8TH ST.
MOUNTAIN VIEW AV
SIERRA WAY
8TH ST.
29
31

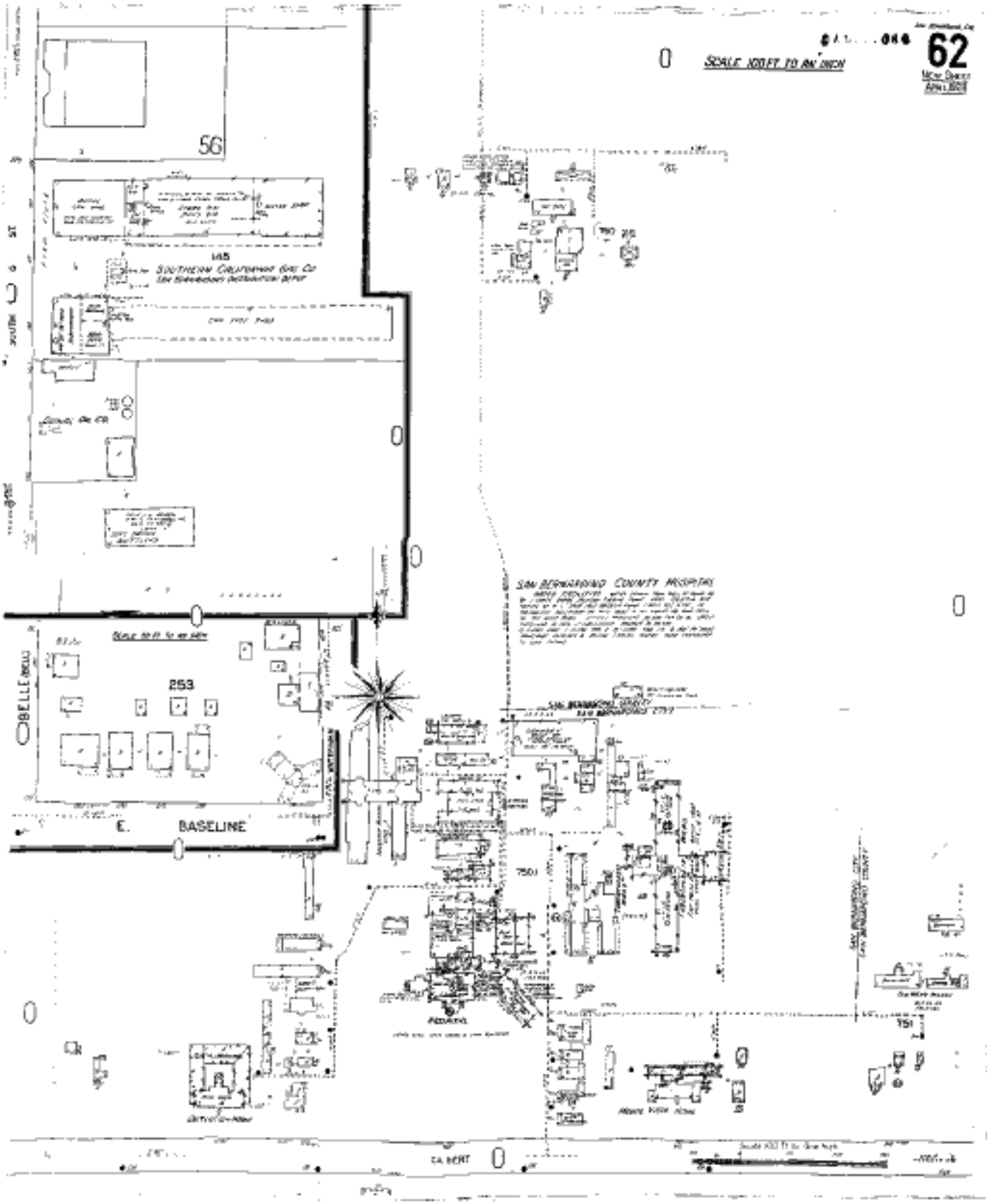

19
2
8TH ST.
E. HIGHLAND AV.
56
H. ST.
G. ST.
17
21
7TH ST.
42
42A
20

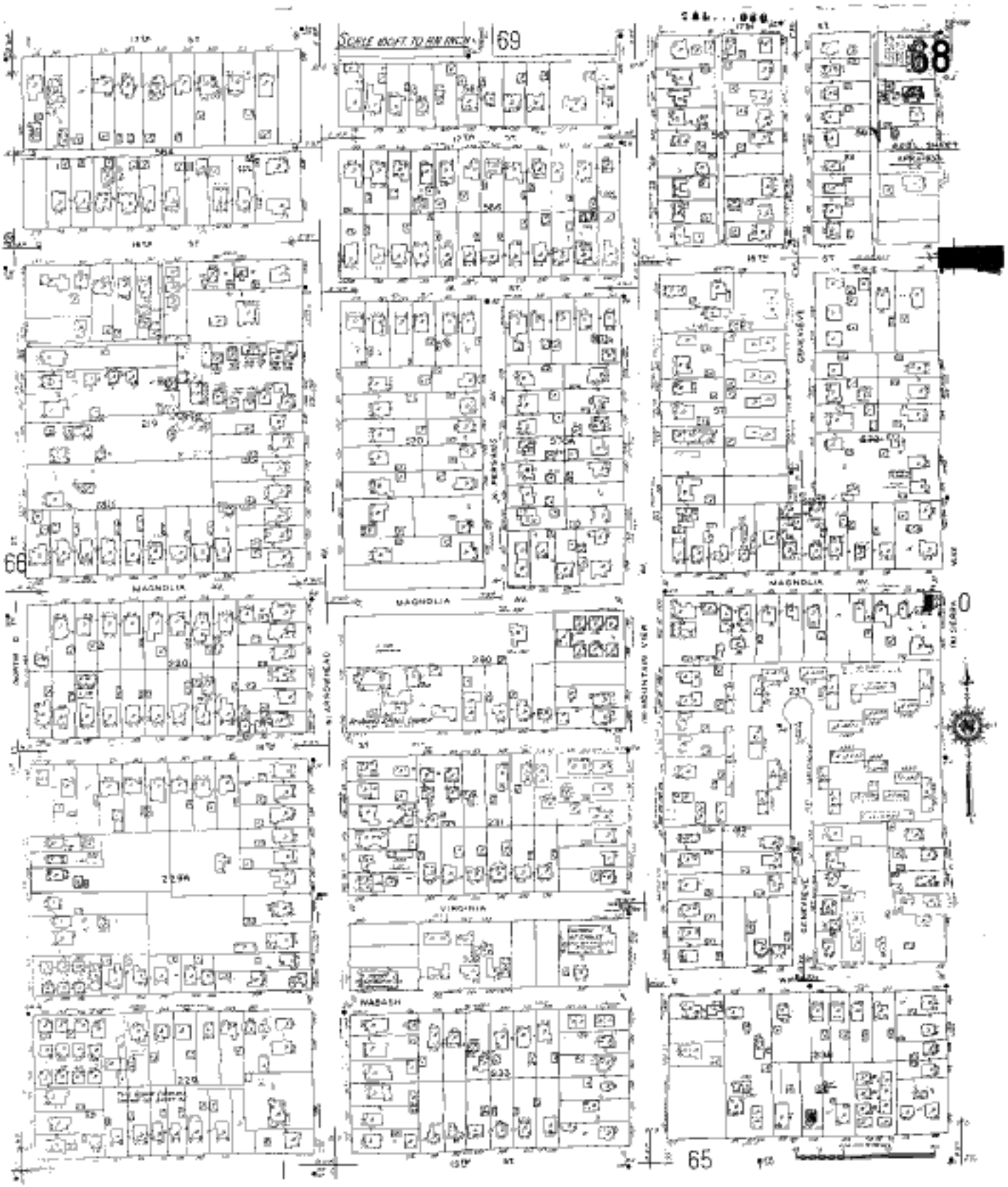

31
10
8TH ST.
49
MOUNTAIN VIEW AV.
29
SIERRA WAY (AV.)
0
7TH ST.
48
VICTORIA
32
328

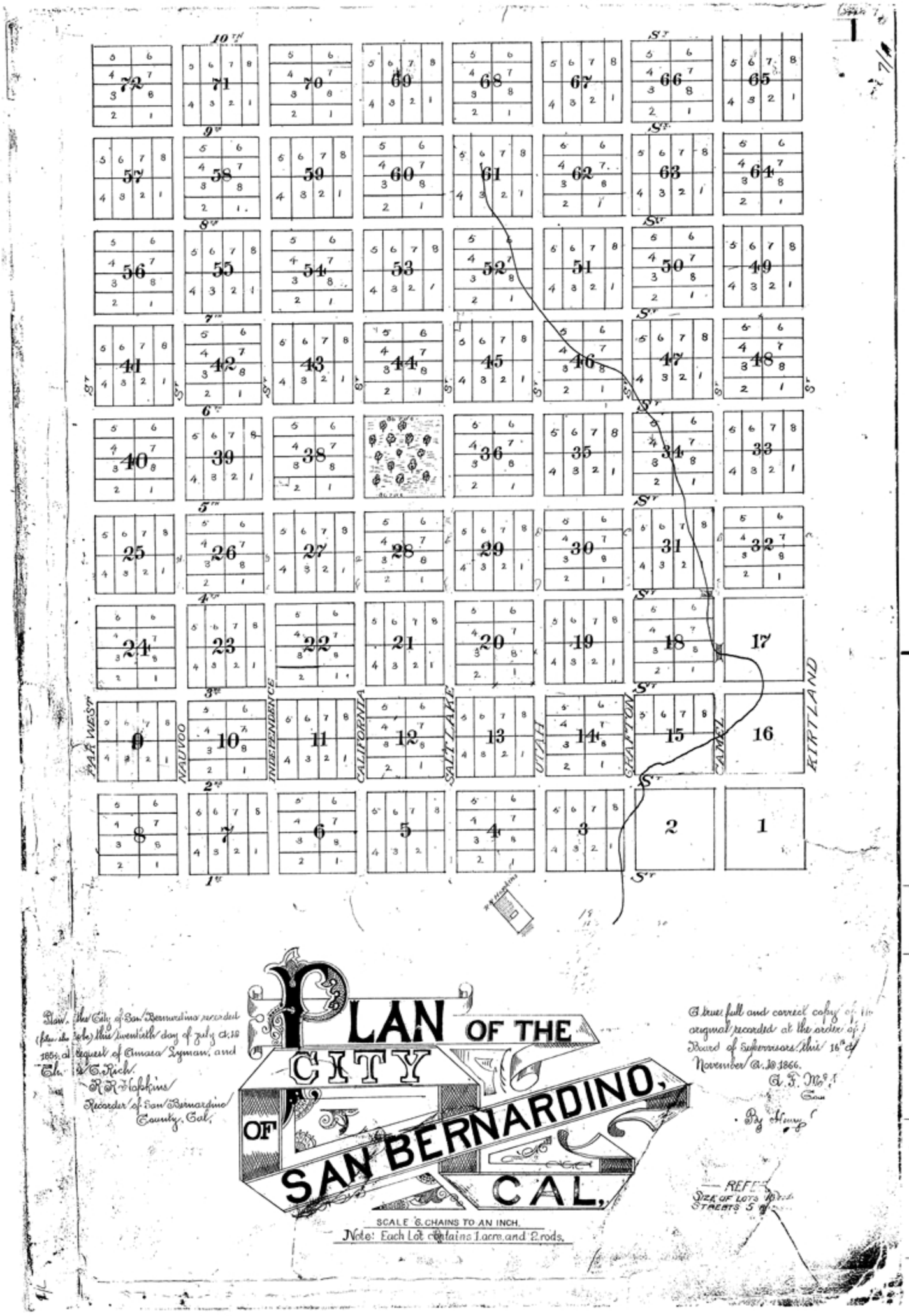

CAL. 094 32
31
VICTORIA
32A
6TH ST.
30
MOUNTAIN VIEW AV.
SIERRA (AVE.) WAY
34
5TH ST.
E. 5TH
42
44


42
4TH ST.
44
SIERRA WAY (AVE.)
ALLEN AV.
KINGMAN
350
SEPULVEDA AV.
357
370
E. 4TH ST.
MOUNTAIN VIEW
3RD ST.
LUGO
AV.
SIERRA WAY (AV.)
Line of Tract
15
32


61
ALICE
VICTORIA AV.
WATERMAN AV.
SAINT JOSEPH'S HOSPITAL
502
183
BROADWATER HOT SPRINGS HOTEL
504
503
503A
61


62
SCALE 100 FT TO AN INCH
56
145
SOUTHERN CALIFORNIA GAS CO
253
BELLE
E. BASELINE
SAN BERNARDINO COUNTY HOSPITAL
750
751
CA BERT


69
68
66
65
MAGNOLIA AV.
VIRGINIA
WABASH
MOUNTAIN VIEW
CENTRAL

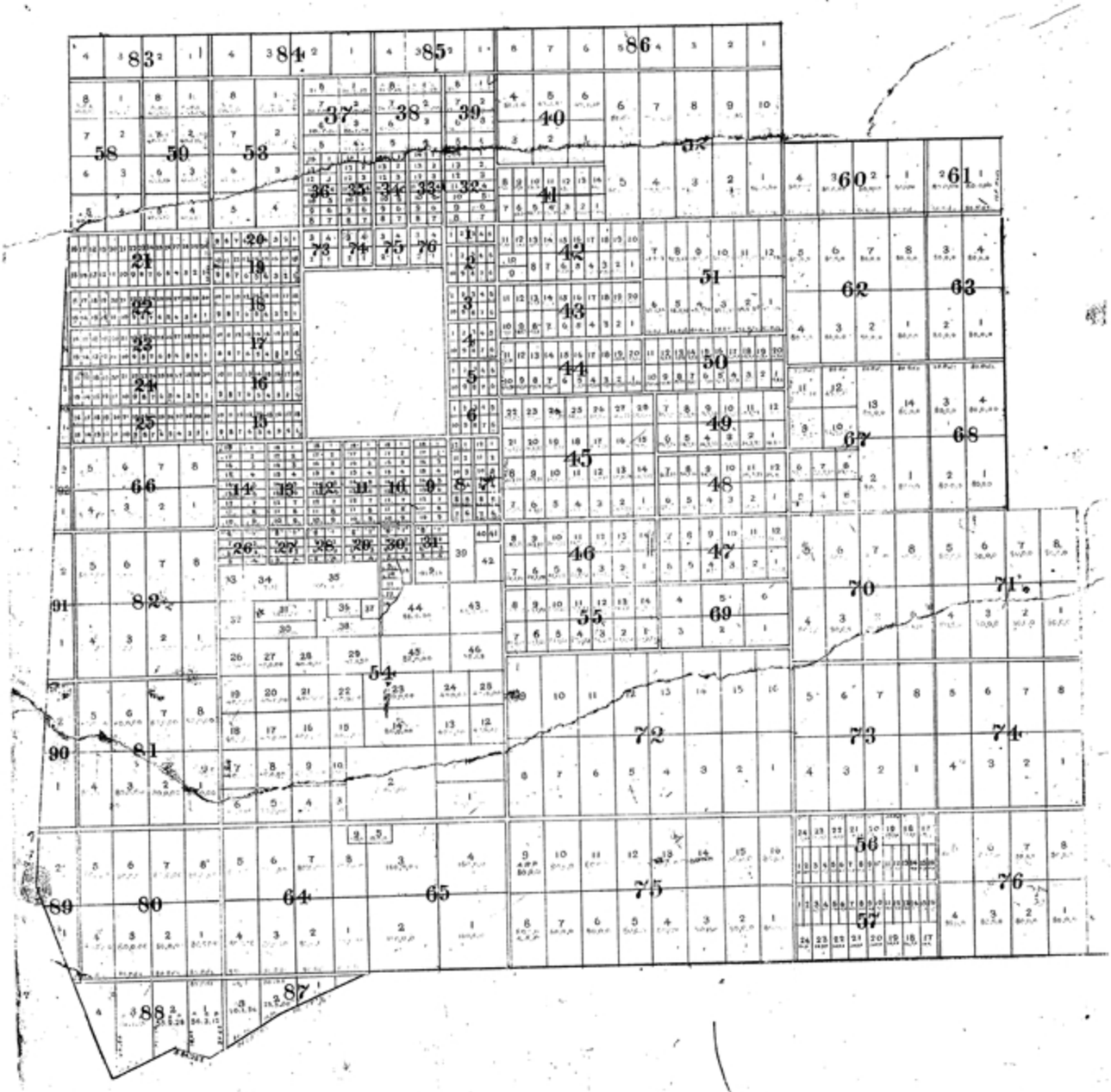


Now, the City of San Bernardino recorded (the above plan) this twentieth day of July A.D. 1855, at request of Amasa Lyman, and Chas. C. Rich.
R. R. Hopkins
Recorder of San Bernardino County, Cal.

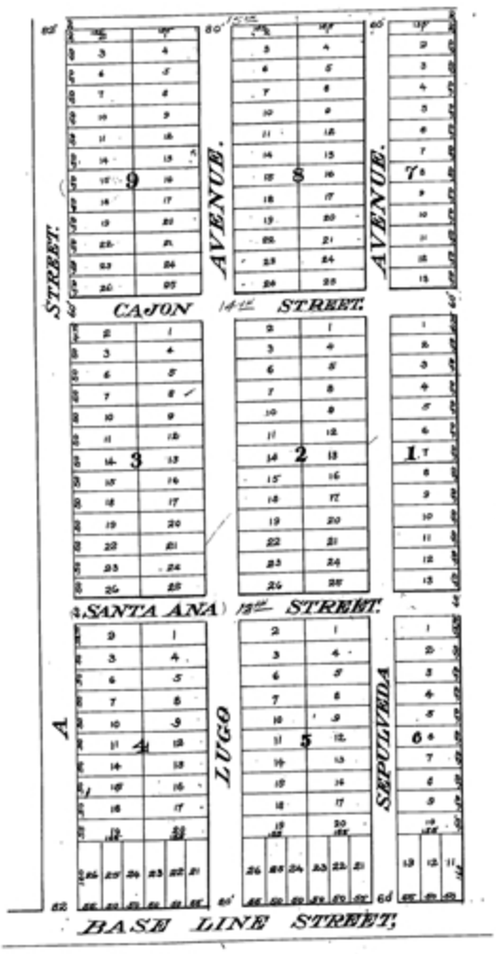
A true full and correct copy of the original recorded at the order of the Board of Supervisors this 16th day of November A.D. 1866.
A. F. McD[illegible]
Clerk
By [illegible]

REFER
SIZE OF LOTS [illegible]
STREETS 5 [illegible]

2



35



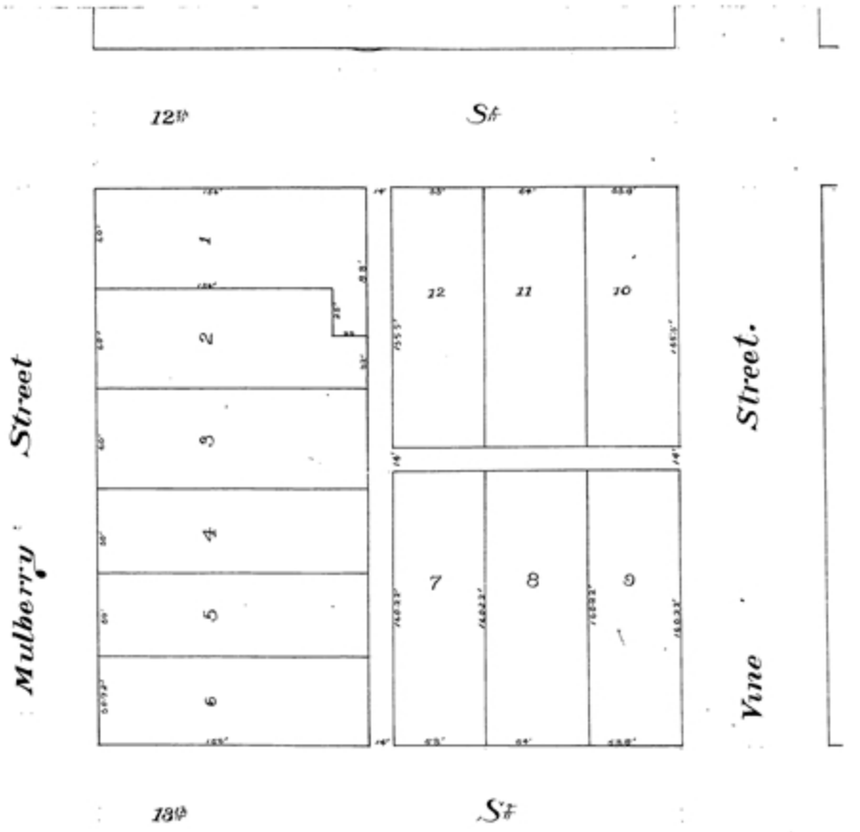
AMENDED MAP
OF
BASE LINE ADDITION
TO THE CITY OF
SAN BERNARDINO.

Being a subdivision of Lot

Filed for record and recorded at the request of O. M. Otis April 24th 1887.

Legare Allen
County Recorder.

By W. P. Gave
Deputy



D.C. Twogood's Subdivision
of Block 12 Range 2. Riverside San Bernardino Co Cal
SCALE 50' 1 INCH — SEPT 1887
James W. Johnson C.E.

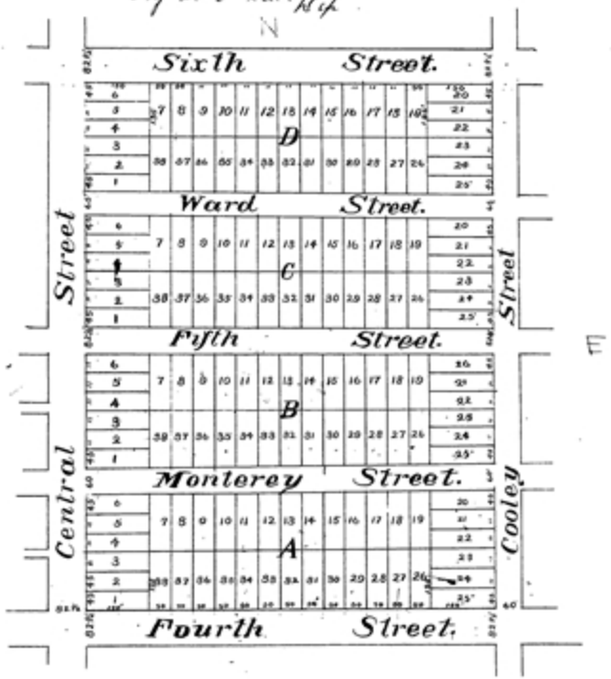
Recorded at request of H. C. Twogood
Dec 7th 1887
Legare Allen
Co Recorder
By W. P. Clark
Dep

97

THE COOLEY TRACT

Subdivision of lots 11 & 12 & part of 9 & 10
Block 44 of Rancho San Bernardino
Scale 200' = 1 inch
J. M. Scott Surveyor
Feby 1887

Recorded at request of Cunningham and Co
Dec 6th 1887
Legare Allen
County Recorder
By W. P. Clark Dep



E-229

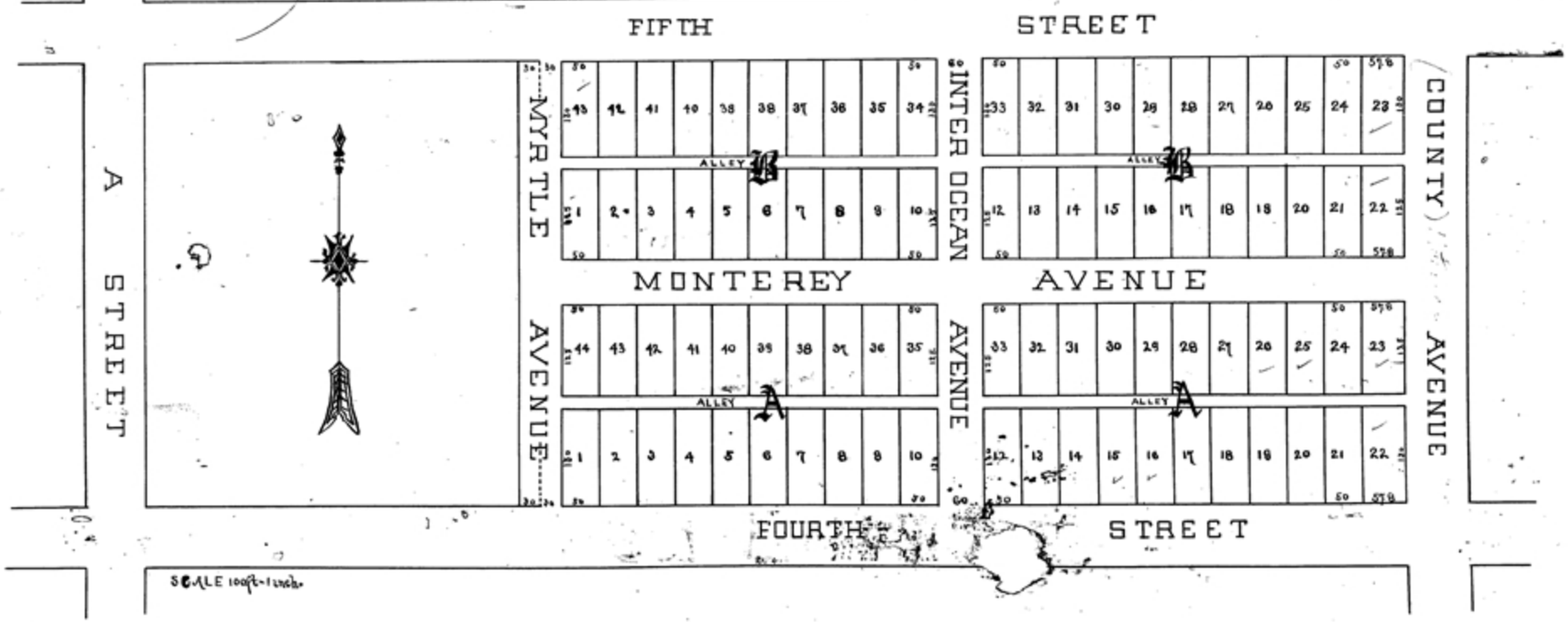
CYPRESS TRACT

No. 32.

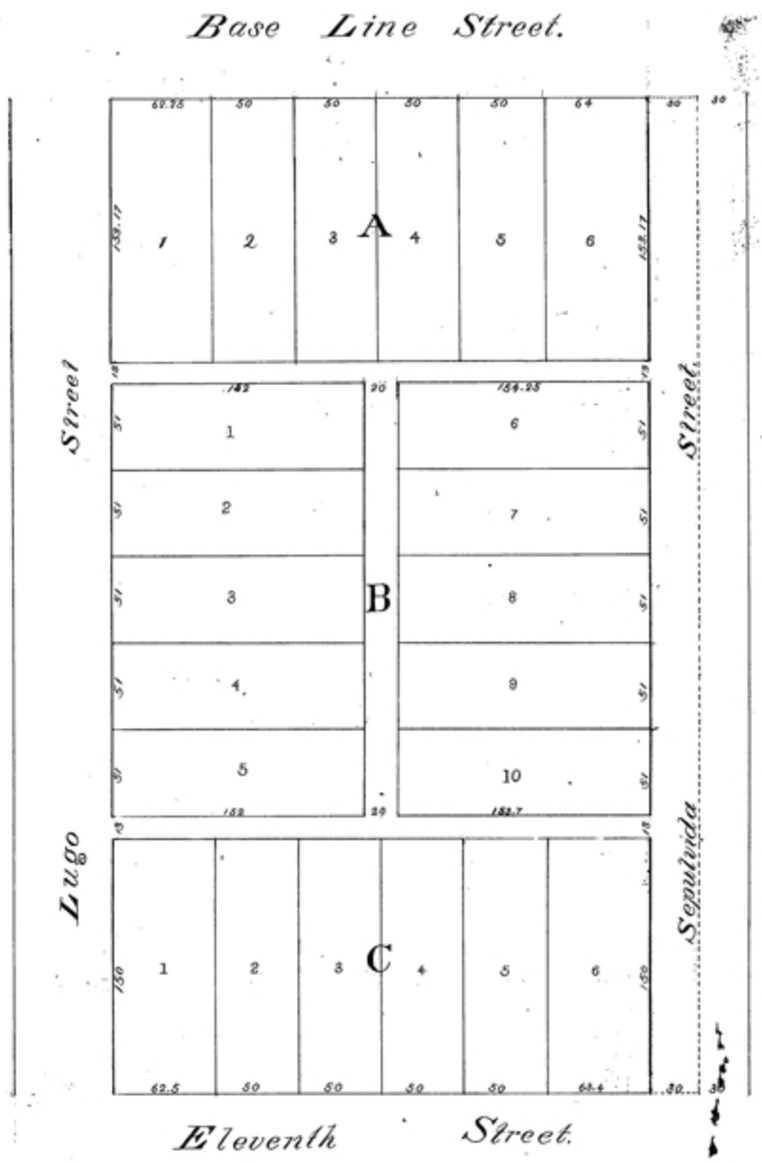
Filed August 29/87
At request of Horner & Bandholt.
Legare Allen,
Co Recorder
By J. J. Galbon Jr.
Deputy
Not Paid

Horner and Bandholt's SUB-DIVISION OF LOTS 3, 4 and 5 OF BLOCK '5' OF THE RANCHO SAN BERNARDINO

SAN BERNARDINO, CAL.



BK 3 85



FAIRBANKS ADDITION TO SAN BERNARDINO

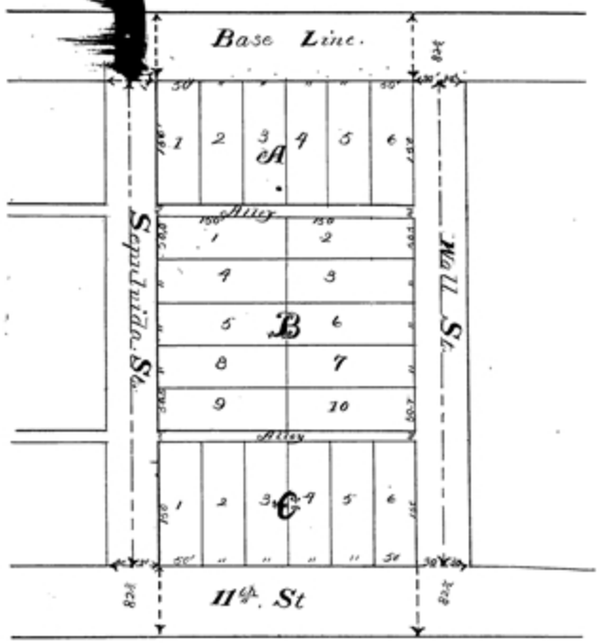
BEING A SUBDIVISION OF LOT "2" BLOCK "1" OF THE RANCHO.

Filed for record May 3rd 1887 and recorded June 25th 1887.

Legare Allen
County Recorder.

By W P Cave
Deputy

BK-5



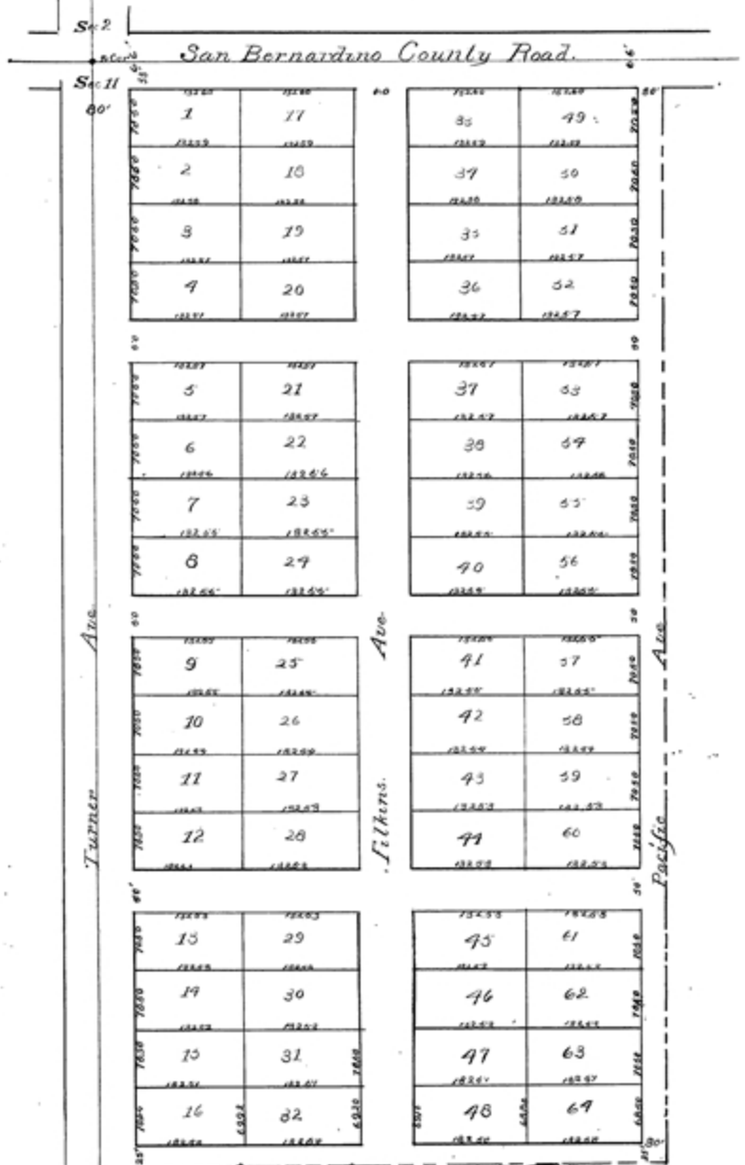
W. J. WILSEY'S BASE LINE ADDITION TO THE CITY OF SAN BERNARDINO

Being a portion of lot 3 of Block 1, of the San Bernardino Rancho.

Recorded at request of W. J. Wilsey August 27th 1887.

Legare Allen
County Recorder

By W. P. Cave Deputy



PLAT OF FILKINS SUBDIVISION OF

LOT 4, SEC. 11, T. 1N., R. 7W.

Property of Waterman & Benney.

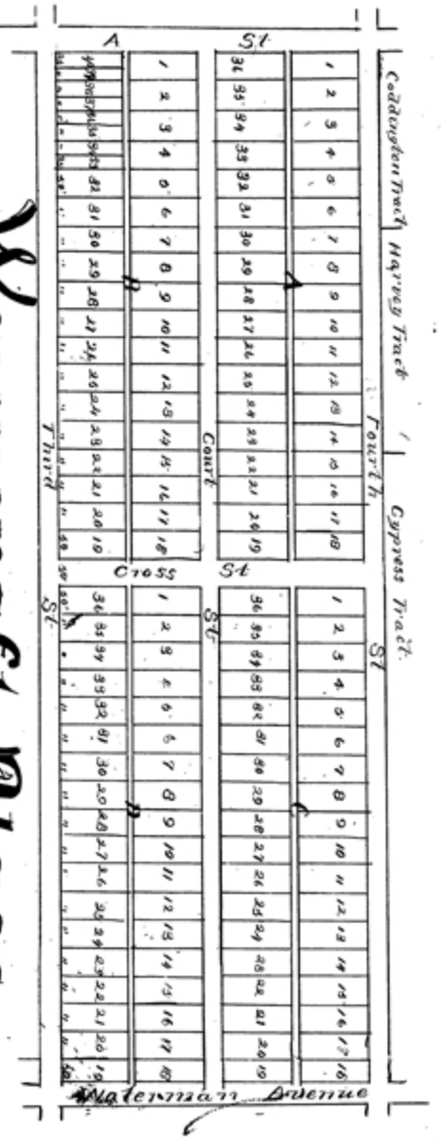
Surveyed June 1887. by E. T. Wright.

W½ N.W.¼ N.E.¼ Sec 11. T. 1S. R. 7W. S.B.M.

Recorded at request of L. C. Cummins Aug. 16th 1887

Legare Allen
County Recorder

By W. P. Cave Deputy



THE ROSENTHAL SUBDIVISION OF

Out Block 10, 10A and 11. Town of Riverside Cal as surveyed by C.O. Newman C.E.

Seal

I hereby certify that the above is a correct Map of the Rosenthal Subdivision of out Block 10 10A and 11 Town of Riverside Cal as Surveyed by C.O. Newman
E. Rosenthal

Subscribed and sworn to before me this 18 day of Oct 1887
A. K. Holt
Notary Public

Recorded at request of
E. Rosenthal Oct 14th 1887.
Legare Allen
County Recorder

By W. P. Kaw
Dep

E-233

MAP of DUNN AND BLACK SUBDIVISION

OF

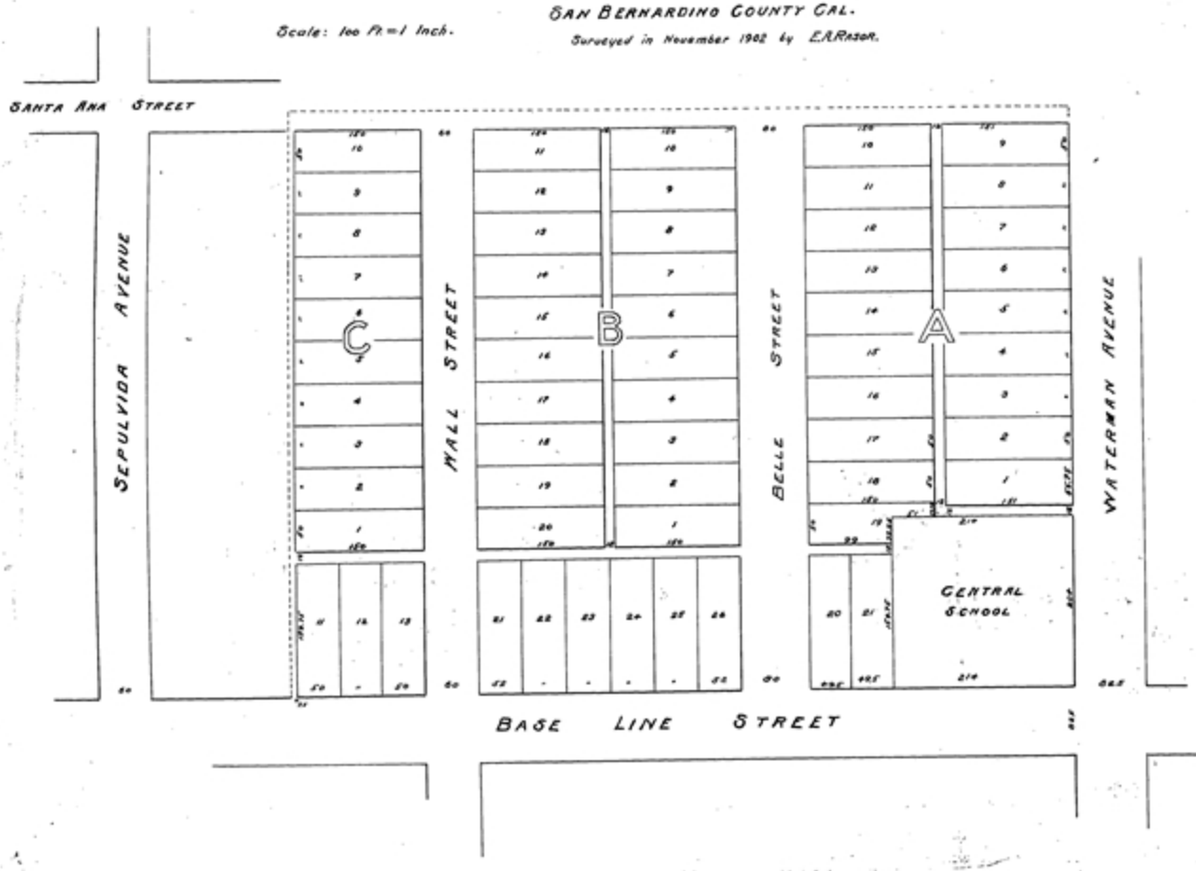
LOT 6 AND A PORTION OF LOT 7, BLK. 32, RO. S.B.

CITY OF SAN BERNARDINO

SAN BERNARDINO COUNTY CAL.

Scale: 100 Ft = 1 Inch.

Surveyed in November 1902 by E.A. Rasor.



No. 28

FILED AT REQUEST OF

Belle M. Dunn and Helen S. Black

MAR 18 1903

at 12 min past 1 P.M.

J. Johnson Jr. COUNTY RECORDER

By C. W. Russell DEPUTY RECORDER

Fee $ 5.00

We, BELLE M. DUNN and HELEN S. BLACK hereby execute and adopt this Map of the DUNN AND BLACK SUBDIVISION, of Lot 6 and a portion of LOT 7, BLK. 32 RANCHO SAN BERNARDINO, COUNTY of SAN BERNARDINO STATE of CALIFORNIA. to designate the different parts of land which it represents as divided into lots.

Witness our hands this day of March A.D. 1903

Belle M. Dunn

Helen S. Black.

STATE OF CALIFORNIA, COUNTY OF SAN BERNARDINO } SS.

On this 17th day of March in the year nineteen hundred and three before me L. L. Hayford a Notary Public in and for the County of San Bernardino, State of California, residing therein, duly commissioned and sworn, personally appeared BELLE M. DUNN and HELEN S. BLACK known to me to be the persons whose names are subscribed to the within instrument, and acknowledged that they executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in the certificate first above written.

L. L. Hayford

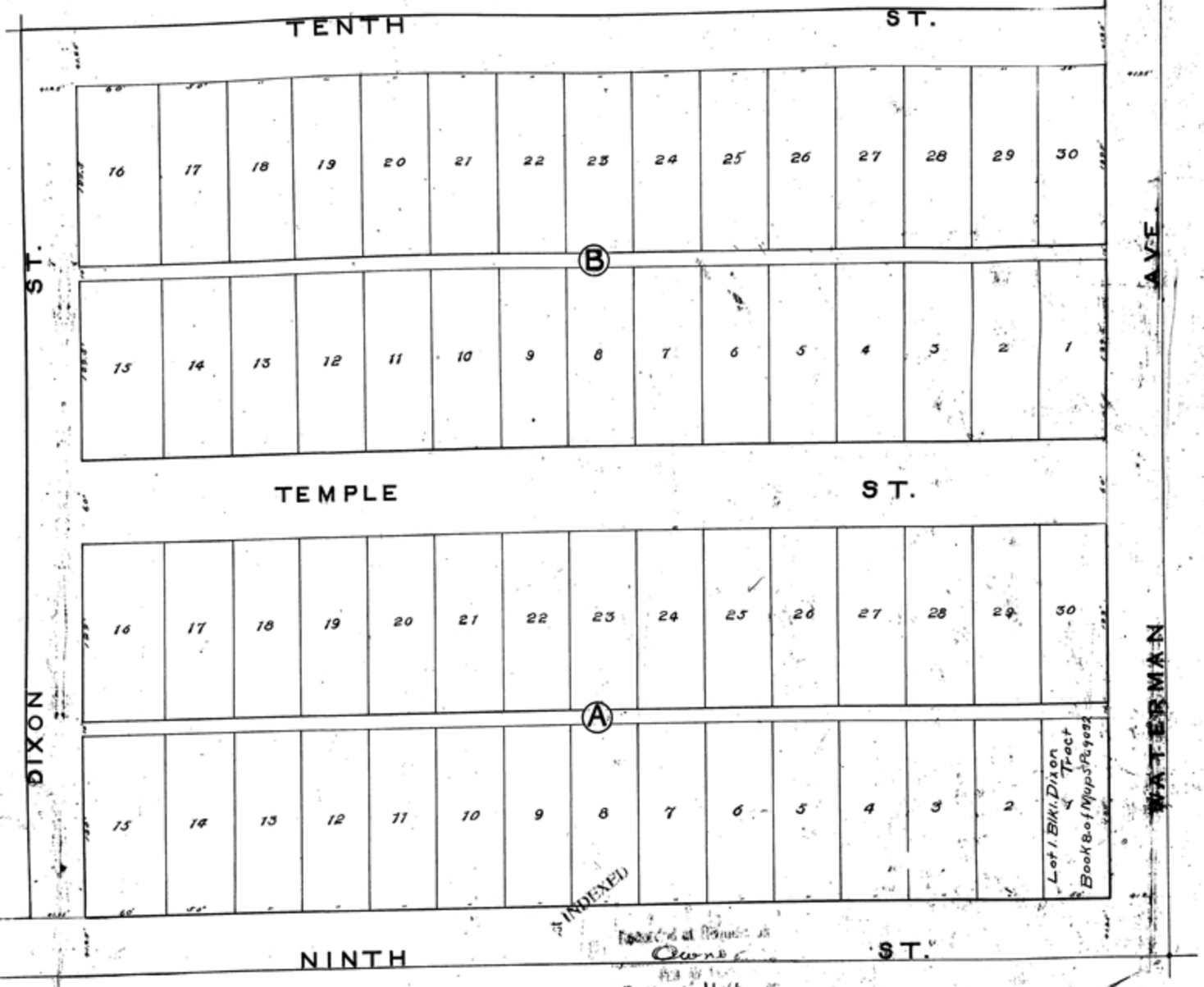
Notary Public
in and for the County of San Bernardino
State of California

At a regular meeting of the BOARD of CITY TRUSTEES of the CITY of SAN BERNARDINO, STATE of CALIFORNIA held on the 17th day of March 1903 the said BOARD of CITY TRUSTEES accepted on behalf of the public, those portions of BELLE STREET and HALL STREET together with all ALLEYS shown on the adjoining Map of the DUNN AND BLACK SUBDIVISION and said acceptance was ordered endorsed upon this Map as provided by law.

Logan Allen
City Clerk

J. J. Hanford
President

BOOK 16 - PAGE 67



I, John Dostal, owner, hereby execute and adopt this map of the "BUNGALOW ADDITION", a subdivision of Lots 6 and 7 of Block 2, of the Rancho San Bernardino, San Bernardino County, California, to designate the different parts of Land which is represented as divided into lots.

Witness my hand this 13th day of January 1909.

John Dostal

State of California } ss
County of San Bernardino }

On this 13th day of January in the year 1909, before me Joseph E. Irving a Notary Public in and for the County of San Bernardino, State of California, residing therein, duly commissioned and sworn, personally appeared, John Dostal, known to me to be the person whose name is subscribed to the within instrument and acknowledged that he executed the same.

In Witness Whereof, I have hereunto set my hand and affixed my official seal the day and year in the certificate first above written.

Joseph E. Irving
Notary Public

At a regular meeting of the Mayor and Common Council of the City of San Bernardino, State of California, held on the 18th day of January 1909, the said Mayor and Common Council accepted on behalf of the Public, those portions of Tenth, Temple and Dixon Streets shown on the adjoining map of the "Bungalow Addition" and said acceptance was ordered endorsed on this map as provided by law.

Dated this 18th day of February 1909.

J. J. Hanford
MAYOR

Attest
Harry Wilson
City Clerk

MAP OF THE BUNGALOW ADDITION

A SUBDIVISON OF

LOTS 6 AND 7 OF BLOCK 2

RANCHO SAN BERNARDINO
SAN BERNARDINO COUNTY
CALIFORNIA
Surveyed January 1909.

Scale 50'-1" by Will L. Brown, C.E.

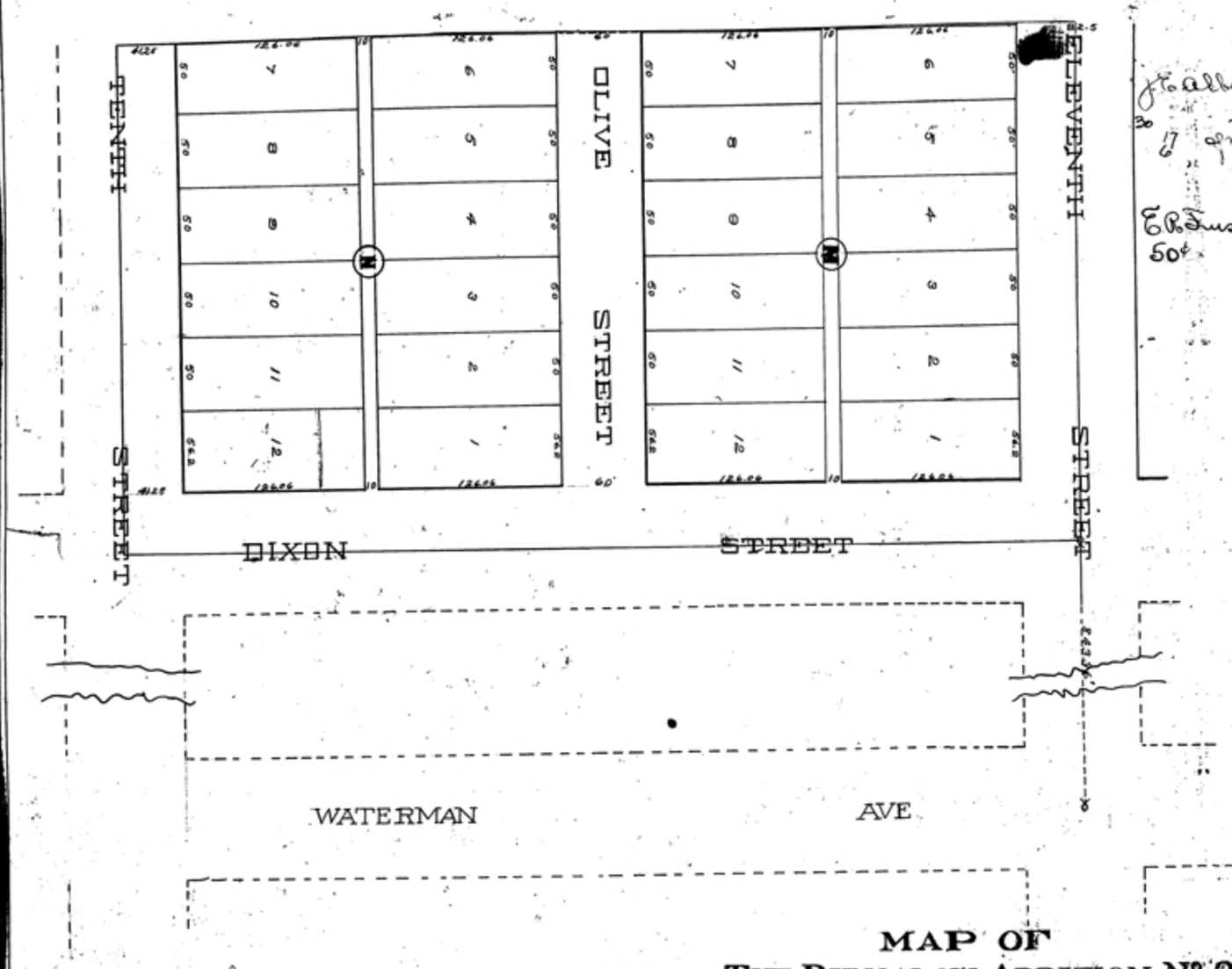
"I hereby certify that all taxes on the above property appearing of record in the office of the County Auditor are paid"

C. E. Hunt
County Auditor

Approved, J. D. Haught Jr. Deputy Co. Surveyor

6

1916



I J E Albert owner, hereby execute and adopt this map of the BUNGALOW ADDITION No 2. a subdivision of Lot 3 of Block 2, of the Rancho San Bernardino, San Bernardino County, California, to designate the different parts of Land which are here represented as divided into lots.

Witness my hand this 25th day of January 1909.

J E Albert

State of California } ss
County of San Bernardino

On the 25th day of January in the year 1909, before me Charles Cook County Clerk in and for the County of San Bernardino State of California, residing therein, duly commissioned and sworn personally appeared J. E. Albert known to me to be the person whose name is subscribed to the within instrument and acknowledged that he executed the same.

In Witness Whereof, I have here unto set my hand and affixed my official seal the day and year in the certificate first above written

Charles Cook
County Clerk

The regular meeting of the Mayor and Common Council of the City of San Bernardino, State of California, held on the 4th day of March 1909, the said Mayor and Common Council accepted on behalf of the Public, those portions of TENTH, OLIVE, and DIXON STREETS shown on the adjoining map of the BUNGALOW ADDITION No 2 and said acceptance was ordered endorsed on the map as provided by law

Dated this 4th day of March 1909

J. H. Hartford
MAYOR

Attest Henry Ellison
City Clerk

MAP OF THE BUNGALOW ADDITION No 2.

A SUBDIVISON OF

LOT 3 BLOCK 2

RANCHO SAN BERNARDINO

SAN BERNARDINO COUNTY CALIFORNIA

Surveyed by Will L. Brown

SCALE 50'=1" JANUARY 1908

I hereby certify that all taxes on the above property appearing on record in the office of the County Auditor are paid.

E. Murphy
County Auditor

Correct
M. L. Rand
Co Surveyor

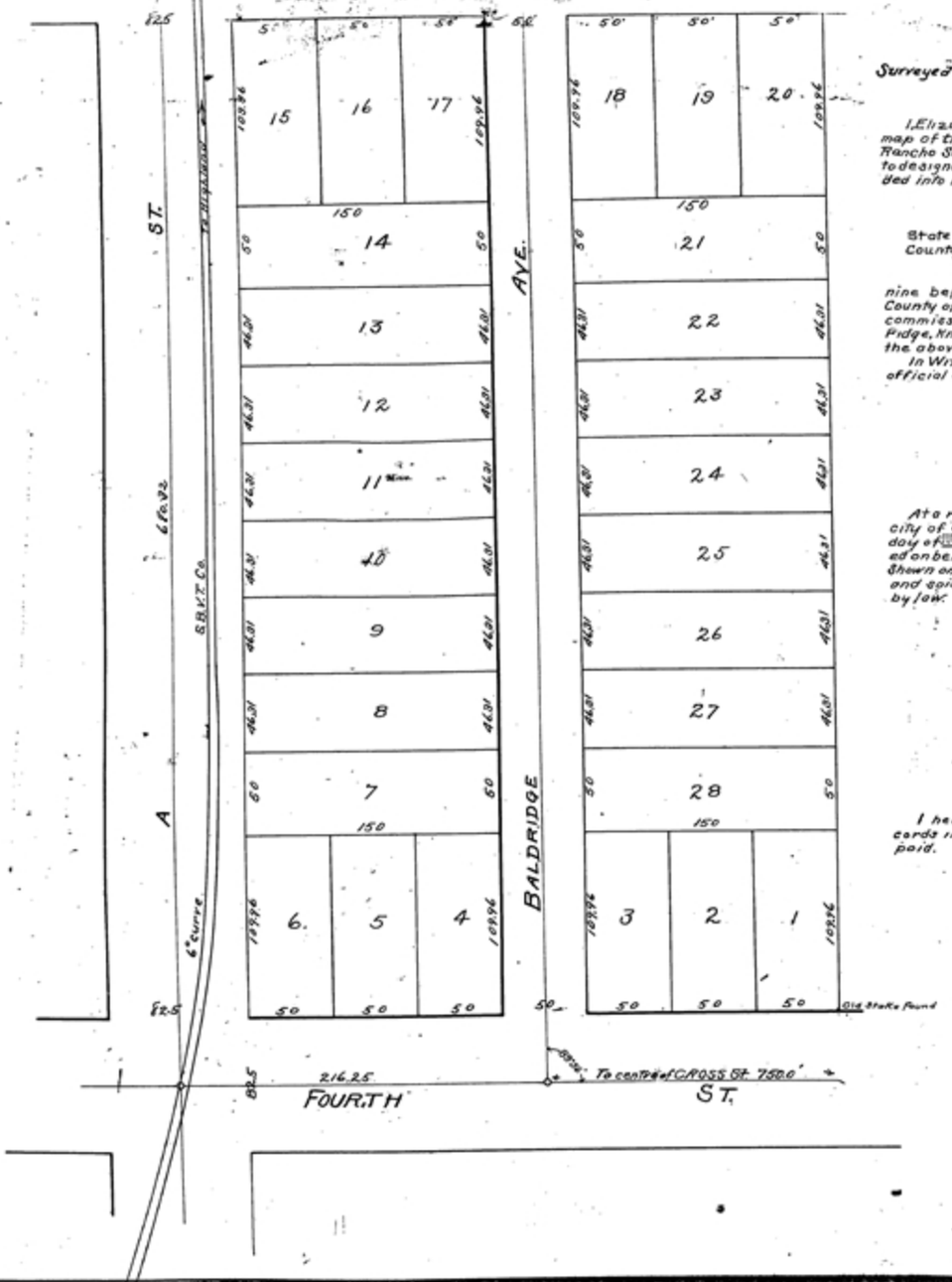
MAP OF A[illegible]

Lot 1 Blk. 5 Rancho San Bernardino

City of San Bernardino

San Bernardino County, California

Surveyed May 1909, by A.L. Sloan C.E. SCALE, 1" = 50'



I, Elizabeth Baldridge, owner, hereby execute and adopt this map of the Amended Baldridge Subdivision of Lot 1 Block 5 of the Rancho San Bernardino, County of San Bernardino, State of California, to designate the different parts of land which are represented and divided into Lots.

Witness my hand this 22 day of MAY 1909.

State of California } ss. Elizabeth Baldridge
County of Los Angeles

On this 22 Day of MAY in the year Nineteen hundred and nine before me [illegible] HAMLIN a Notary Public in and for the County of Los Angeles, State of California, residing therein, duly commissioned and Sworn, Personally appeared Elizabeth Baldridge, known to me to be the person whose name is subscribed to the above instrument and acknowledged that she executed the same.

In Witness whereof I have hereunto set my hand and affixed my official seal the day and year in the certificate first above written.

[illegible] Hamlin

Notary Public
[illegible] for the County of Los Angeles,
State of California.

At a regular meeting of [illegible] Common Council of the City of San Bernardino, [illegible] California, held on the ____ day of [illegible] 1909, the said [illegible] and Common Council accepted on behalf of the Public, those portions of the Streets and Avenues shown on the adjoining Map of the AMENDED Baldridge Subdivision and said acceptance was ordered endorsed on this Map as provided by law.

Dated the ____ Day of [illegible] 1909

S. W. McNabb
Mayor

Attest: Sonny Allison
City Clerk

I hereby certify that all back taxes appearing on the Records in my office, upon the property herein platted have been paid.

C. E. Cameron
County Auditor
County of San Bernardino,
California.

52

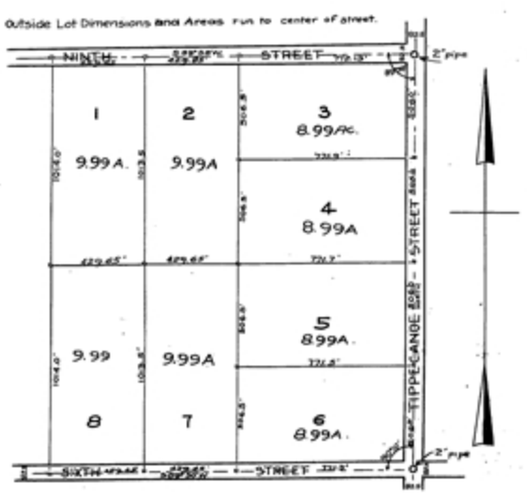
Recorded at Request of
W. W. Swing
JUL [illegible] 1909
[illegible] 17 of Maps
[illegible] 38
Records San Bernardino County
[illegible]
By [illegible] Deputy Recorder
50¢

MAP OF
JACKSON SUBDIVISION

BEING A SUBDIVISION OF LOTS 1, 2, 3, 18, 19, AND 20 BLOCK 43 RANCHO SAN BERNARDINO AS PER MAP FILED IN BOOK 7 OF MAPS PAGE 2 RECORDS OF SAN BERNARDINO COUNTY

Scale 1" = 400' May 22 1914. Surveyed by J.S. Bright. Jr.

Outside Lot Dimensions and Areas run to center of street.



Recorded at Request of J. S. Bright
Book 18 of Maps
Page 22
Henry Gillison
Recorder

We, hereby certify that we are the owners of the land included within this subdivision shown in the annexed map and that we are the only persons whose consent is necessary to pass a clear title to said land and we consent to the making of said map and subdivision as shown hereon and we hereby dedicate for public use all streets and alleys shown hereon and not already dedicated.

Witness our hands this 26th day of May, 1914.

Fred T. Jackson
A. Nolte, J. H. Logie

I hereby certify that I am a Civil Engineer and that this map consisting of 1 sheet correctly represents a survey made under my supervision

J. S. Bright Jr.
Licensed Land Surveyor
City of San Bernardino

I hereby certify that all back taxes on the above property appearing on record in the office of the County Auditor are paid.

C. D. Jameson
County Auditor
by C. E. Hammer
Deputy.

State of California
County of San Bernardino } ss.

On this 26th day of May 1914, before me A. E. Brock, a Notary Public in and for the County of San Bernardino, State of California residing therein, duly commissioned and sworn, personally appeared Fred T. Jackson, A. Nolte and J. H. Logie known to me to be the persons whose names are subscribed to the within instrument and acknowledged that they executed the same.

In witness whereof I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

A. E. Brock
Notary Public in and for San Bernardino County State of California

On approval of the Jackson Subdivision and on motion of Supervisor Hoskins duly seconded and carried it is ordered that the Map of the Jackson Subdivision, be and the same is hereby approved and the bond filed in the office of this Board as security for the payment of taxes is also hereby approved in the sum of $100.00 which is hereby affixed as the required amount of said bond and the clerk of the Board is directed to endorse on the face of said map a copy of this order authenticated by the seal of the Board of Supervisors.

I hereby certify that the foregoing order was adopted by the Board of Supervisors at a meeting of said Board held June 8, 1914.

Charles Veal
County Clerk and Ex Officio Clerk of Board of Supervisors.

by J. A. Mack
Deputy

22

MAP OF STURGES SUBDIVISION AT SAN BERNARDINO, CALIFORNIA.

SCALE: 1 INCH = 50 FEET

June 1915.

Being a subdivision of Lots one and two, block two of the five acre survey of the Rancho San Bernardino.

State of California, County of San Bernardino. On this 18th day of June 1915 before me [illegible] a Notary Public in and for said County of San Bernardino, California, residing therein, duly commissioned and sworn, personally appeared [illegible] personally known to me to be the persons whose names are subscribed to the map herewith, and acknowledged to me that they executed the same. In witness whereof I have hereunto set my hand and affixed my official seal.

[illegible] Notary Public

We, the undersigned, hereby certify that We are the owners of the land shown upon the annexed map, and we are the only persons whose consent is necessary to convey clear title to said land, and We consent to the making of said map, and hereby dedicate for public use, all streets and alleys shown and not already accepted.

[illegible]

A graduate Civil Engineer of Cornell University, do hereby certify that I have made a survey of the lands shown on this map, and that this map represents accurately the results of said survey. [illegible]

Subscribed and sworn to, before me, [illegible] Notary Public in and for said County of San Bernardino, on the 6th day of July 1917. In witness whereof I have herewith set my hand and [illegible] official seal.

[illegible] Notary Public

I, S. G. Bergh County Auditor in and for the County of San Bernardino, state of California do hereby certify that all taxes on property herein shown, have been paid in full to date, including taxes for current year, due.

[illegible]

In approval of Map of Sturges Subdivision:
On motion of Supervisor [illegible] duly seconded and carried it is ordered that the Map of Sturges Subdivision, be and the same is hereby approved, and the bond filed in this office as the security for the payment of taxes, is also hereby approved in the sum of [illegible] which is hereby fixed as the required amount of said bond, and the clerk of the Board is directed to endorse on the face of said Map a copy of this order, authenticated by the seal of the Board of Supervisors.

I hereby certify that the foregoing order was adopted by the Board of Supervisors, at a meeting of said Board held.

Chairman of the Board of Supervisors.

County Clerk & ex-officio clerk of Board of Supervisors.

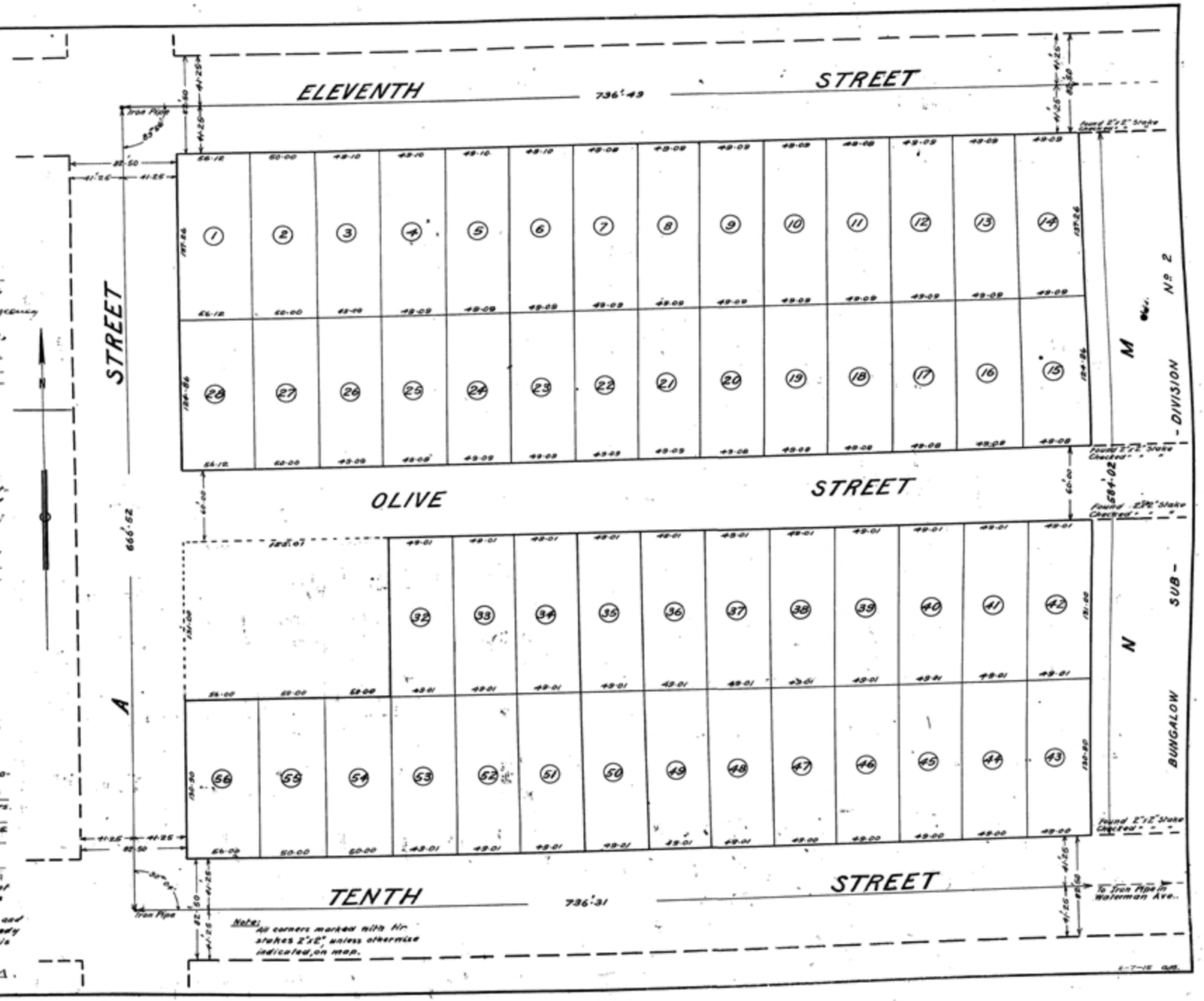
[illegible] Deputy.

Approved: [illegible] County Surveyor.

At a regular meeting of the Mayor and Common Council of the City of San Bernardino, State of California, held on the [illegible] day of [illegible] 1917 the said Mayor and Common Council accepted on behalf of the Public those portions of streets and alleys shown on this map of Sturges Subdivision not already accepted; said acceptance was ordered endorsed on this map as provided by law.

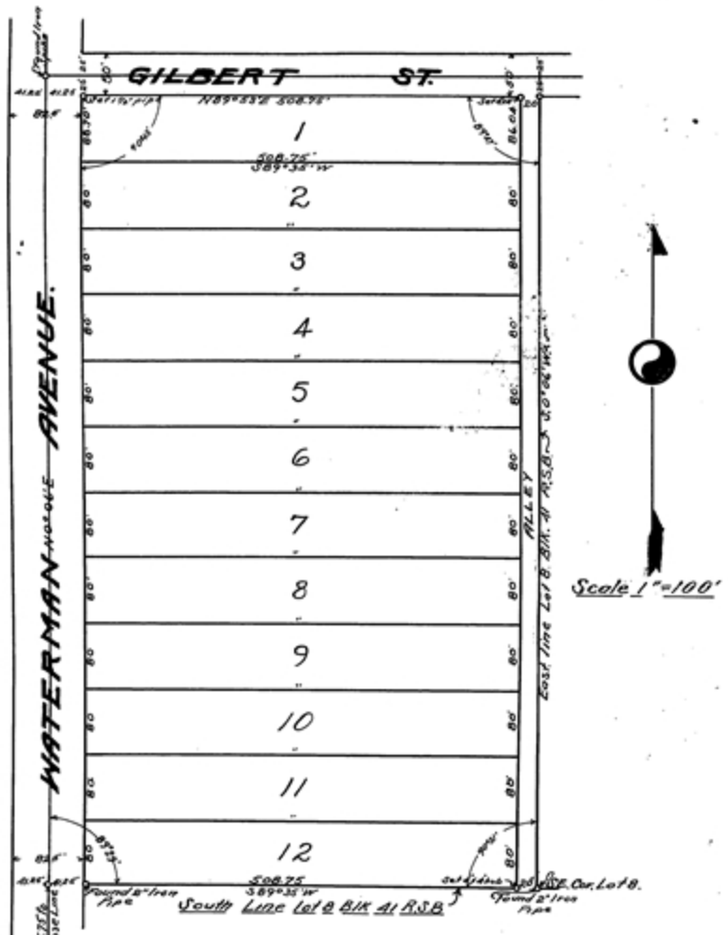
Dated this 3rd day of [illegible]

[illegible] Clerk. [illegible] Mayor.



PRADO VERDE TRACT.

BEING A SUBDIVISION OF LOT No. 8 BLOCK No. 41. RANCHO SAN BERNARDINO AS PER MAP BOOK 1 AT PAGE 3 RECORDS OF SAN BERNARDINO COUNTY, CALIFORNIA.



Note:
2"x2" O.P. Hubs were set at all Lot Corners where not otherwise noted.

SURVEYOR'S CERTIFICATE

I, E.T. Ham, hereby certify that I am a Licensed Surveyor for the State of California and that this map consisting of one sheet correctly represents a survey made under my direction in March 1920 and that all of the monuments shown thereon actually exist and their positions are correctly shown.

E.T. Ham
Licensed Surveyor.

Map Approved: J. P. Kennedy
Deputy County Surveyor

OWNERS CERTIFICATE.

The Undersigned hereby certify that we are the owners of the land included within the subdivision shown on the annexed map and that we are the only persons whose consent is necessary to convey clear title to said land. We hereby consent to the making of the map and subdivision as shown hereon.

Grace M. McIntyre
Laura M. McIntyre

NOTARY.

State of California } ss.
County of San Bernardino }

On the 2nd day of April 1920, before me C.F. Simms a Notary Public in and for the County of San Bernardino State of California, personally appeared Grace M. McIntyre and Laura M. McIntyre known to me to be the persons whose names are subscribed to this instrument and acknowledged to me that they executed the same.

In witness whereof I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

Signed C.F. Simms
Notary Public in and for San Bernardino County State of California.

AUDITOR

I hereby certify that all back taxes on the lands within the boundaries of the subdivision shown on the annexed map appearing on record in the Office of the County Auditor are paid.

S. Lynch
County Auditor

BOARD OF SUPERVISORS

On motion of Supervisor Mulvane duly seconded by Supervisor Kendall and carried it is ordered that the map of The PRADO VERDE TRACT be and the same is hereby approved and the bond filed in the office of the Board of Supervisors as security for payment of taxes in the sum of $100.00 which is hereby fixed as the amount of said bond to insure the payment of taxes which are at the time of filing said map a lien against any such tract or part thereof but not yet payable, is hereby approved; and the Clerk of the Board is hereby directed to endorse his certificate on said Map showing that said bond has been fixed as required by law.

Harry L. Allen
County Clerk and ex-officio Clerk of the Board of Supervisors
By W. R. Mackey Deputy

SURVEYOR and Assessor.

E.T. Ham, County Surveyor, and E.J. Gilbert County Assessor, hereby certify that they have examined the land shown on this map as to its value for residence and commercial purposes and do hereby recommend its acceptance and approval by the Board of Supervisors.

E.T. Ham
County Surveyor.
E.J. Gilbert
County Assessor.

Map Approved Will A. Brown
City Engineer.
City of San Bernardino
California.

E J Ham
10 21 3 P
3

James Tuhert
5.00

E-240

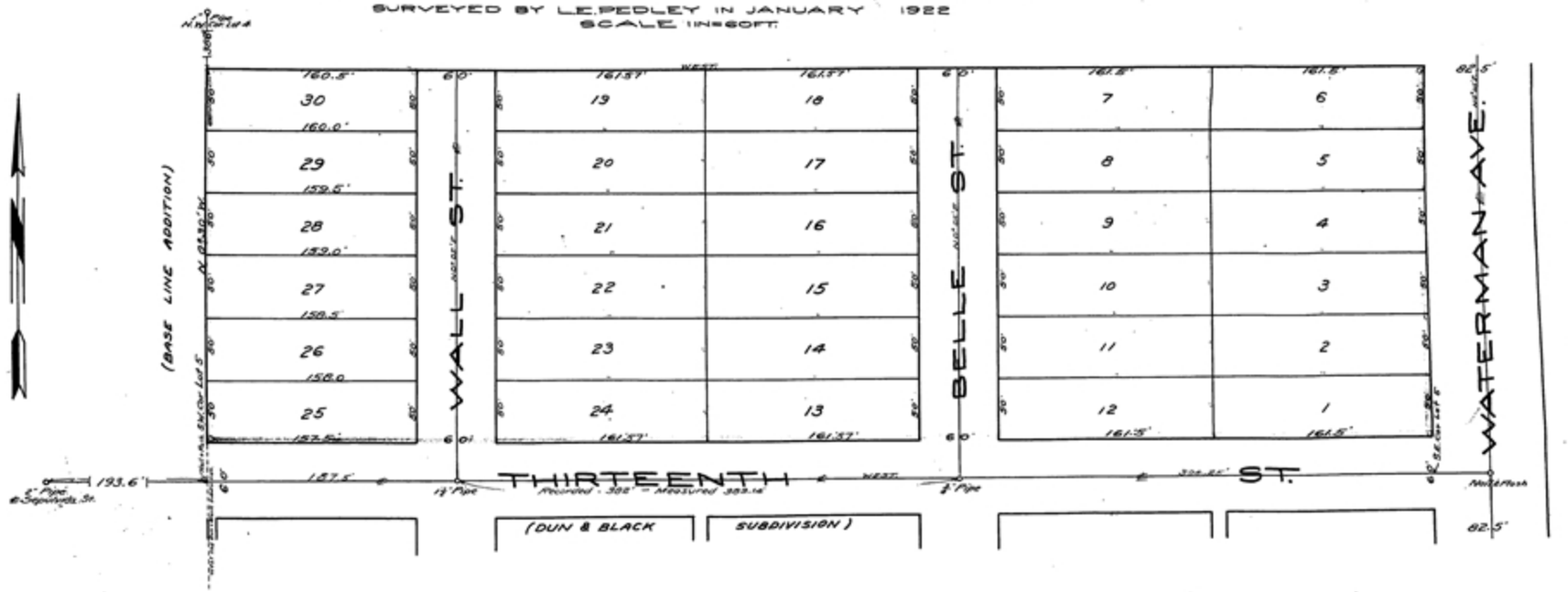
3

3

GRANT SUBDIVISION

BEING A SUBDIVISION OF THE SOUTH 300 FEET OF LOT 5
BLOCK 32 RANCHO SAN BERNARDINO
SAN BERNARDINO CALIFORNIA

SURVEYED BY L.E. PEDLEY IN JANUARY 1922
SCALE 1IN=50FT.



Resolved by the Mayor and Common Council of the City of San Bernardino That this Map of Grant Subdivision be and the same is hereby accepted.
Ayes: [illegible]
Noes: [illegible]
Dated this [illegible] day of January 1922
Attest [illegible] City Clerk.
I hereby approve the foregoing resolution
[illegible]
Mayor of the City of San Bernardino

I hereby Certify that all back street and sewer assessments on the above property, on record in the office of Superintendent of Streets have been paid.
[illegible]
Superintendent of Streets-City of San Bernardino.

State of California
County of San Bernardino } SS
We the undersigned County Surveyor and County Assessor in and for San Bernardino County Cal. do hereby certify that we have carefully examined each and every Lot and Block of Land delineated on this map or plat as to its fitness for residence and Commercial uses and do hereby recommend its acceptance and approval by the Board of Supervisors
[illegible]
County Assessor
[illegible]
County Surveyor

On motion of Supervisor [illegible] Seconded by Supervisor [illegible] and carried it is ordered that the map of "GRANT Subdivision be and the same is hereby approved and the bond filed in the office of this Board as Security for payment of taxes in the sum of 100 dollars which is hereby fixed as the required amount of said bond to ensure payment of taxes which are at the time of filing said map a lien against any such tract, Subdivision or part thereof but not payable is hereby approved and the Clerk of this Board is hereby directed to endorse the certificate on said map showing that said bond has been filed as required by law
[illegible]
County Clerk and Ex Officio Clerk of the Board of Supervisors
Dated Feb 6 1922
By [illegible]

I hereby certify that all back taxes [illegible] within the subdivision, on the annexed map shown [illegible] of this office are paid
[illegible]
County Auditor for San Bernardino County

Note: The States are set at all lot corners.

I the undersigned hereby certify that I am the owner of "GRANT Subdivision" the Subdivision shown on the annexed map and that I am the only person whose consent is necessary to convey a clear title to said land. I consent to the making of said map and Subdivision shown hereon and hereby dedicate to public use all streets, avenues, etc as shown and not already accepted
Grant McIntyre
Laura McIntyre

State of California
County of San Bernardino } SS
On this 1st day of January 1922 before me [illegible] a notary in and for the County of San Bernardino State of California residing therein duly commissioned and sworn appeared Grant McIntyre known to me to be the person whose name is subscribed to the annexed instrument and acknowledged to me that he executed the same.
In witness whereof I have hereunto set my hand and affixed my official seal this day and year in this certificate first above written
My Commission Expires
April 2 1922
[illegible]
Notary Public in and for San Bernardino County, State of California.

I L.E. Pedley hereby certify that I am a Civil Engineer in the State of California and this map consisting of one sheet Correctly represents a survey made by me in January 1922 and all monuments shown actually exist and their positions are correctly shown
L.E. Pedley
Civil Engineer

Map Approved [illegible]
County Surveyor San Bernardino Co.
Map Approved [illegible]
City Engineer City of San Bernardino.

Recorded at Request of
Grant McIntyre
APR 10 1922
at 30 Min. past 2 P.M.
Book 21 of Maps
Page 58
Records San Bernardino Co
FRANK E. SUTTER
County Recorder
By Sutter Gerard
Deputy Recorder
500

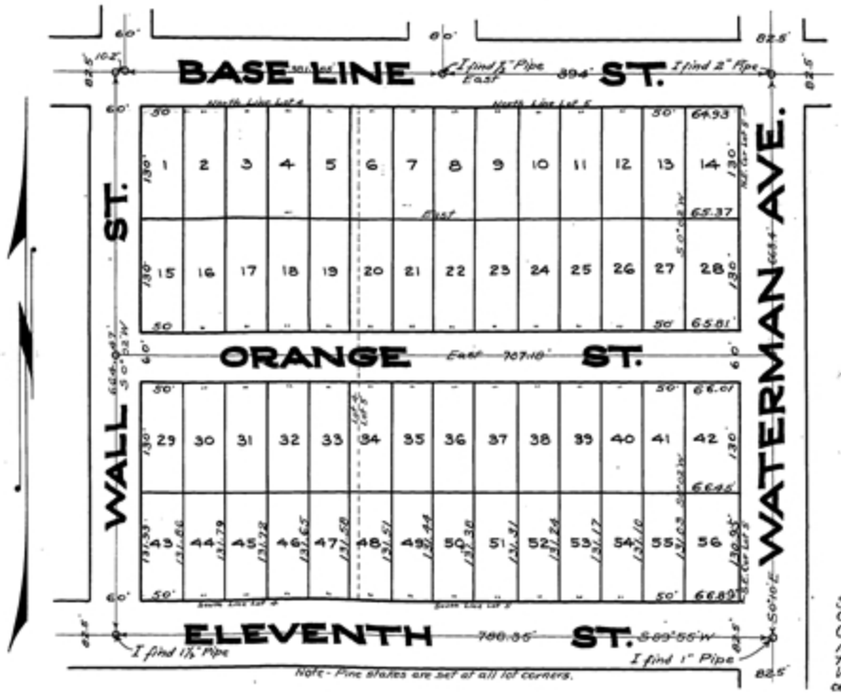
58

DAIMWOOD SUBDIVISION

A SUBDIVISION OF LOT 5 AND ALL OF LOT 4 BLK. 1 Ro.S.B. LYING EAST OF WALL ST.

SURVEYED BY LIONEL PEDLEY MAY 1923

SCALE 1" = 100'



INDEXED

Recorded at Request of
W E Daimwood
MAY 23
at 9 A.M.
in Book 23 Page 72 of Maps
Records San Bernardino County
Sutton G. Renaud
County Recorder
By
Fee 5.00

OWNERS CERTIFICATE

We, the undersigned, hereby certify that we are the owners of the land included within the subdivision shown on the annexed map and that we are the only persons whose consent is necessary to convey a clear title to said land and we hereby consent to the making of said map and subdivision and hereby dedicate to public use all streets shown on said map within said subdivision

W E Daimwood & Minnie J. Daimwood

NOTARY

State of California } S.S.
County of San Bernardino }

Guarantee Bldg & Loan Assn
for V. M. Pinkley - Sty.

On this 1 day of May before me Agnes Morgan a Notary Public in and for the County of San Bernardino, State of California, residing therein duly commissioned and sworn, personally appeared before me W.E. Daimwood and Minnie J. Daimwood Known to me to be the persons whose names are subscribed to the annexed instrument and acknowledged to me that they executed the same. In witness whereof, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

My Commission expires May 12 1924 Agnes Morgan.
Notary Public in and for said County and State.

MAP APPROVED _____ County Surveyor

MAP APPROVED _____ City Engineer

BOARD OF SUPERVISORS

On motion of Supervisor Crain seconded by Supervisor Coy and carried, it is ordered that the map of Daimwood Subdivision be and the same is hereby approved and the bond filed in the office of the Board of Supervisors as security for payment of taxes in the sum of $ which is hereby fixed as the required amount of said bond to insure payment of all taxes which are at the time of filing said map a lien against said tract, subdivision or part thereof, but not payable, is hereby approved and the Clerk of the Board of Supervisors is hereby directed to endorse this certificate on this map showing that said bond has been filed as required by law and that the foregoing order was adopted by the Board of Supervisors at a meeting held May 8 1923.

Harry L. Allison
County Clerk and Ex Officio Clerk of the Board of Supervisors, San Bernardino County
By _____ Deputy

CITY OFFICIALS

Resolved by the Mayor and Council of the City of San Bernardino that the Map of Daimwood Subdivision be and the same is hereby accepted and the streets and alleys thereon shown are hereby accepted as public streets and alleys.

Ayes Mayor Morris, Councilmen Crowley, Noes None, Absent None.

Dated this 21 day of May 1923

Attest _____ City Clerk

I hereby approve the foregoing resolution. Leo A. Shannon Mayor Pro Tem

NOTARY

State of California } S.S.
County of San Bernardino }

On this 14 day of May before me Agnes Morgan a Notary Public in and for the County of San Bernardino, State of California, residing therein duly commissioned and sworn personally appeared V. M. Pinkley known to me to be the secretary of the Guarantee Building and Loan Association and acknowledged to me that he executed the within instrument on behalf of such Corporation. In witness where of I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written

My Commission expires May 12 1924 Agnes Morgan
Notary Public in and for said County and State

ENGINEERS CERTIFICATE

I Lionel Pedley hereby certify that I am a Civil Engineer in the State of California and that this map consisting of one sheet correctly represents a survey made by me in May 1923 and that all monuments shown actually exist and their positions are correctly shown Lionel Pedley Civil Engineer

SURVEYOR AND ASSESSOR

We the undersigned, County Surveyor and County Assessor in and for the County of San Bernardino, State of California, do hereby certify that we have examined each and every lot delineated on this map as to its value for residential or commercial uses and do hereby recommend its acceptance and approval by the Board of Supervisors

_____ County Surveyor _____ County Assessor

STREET SUPERINTENDENT

I hereby certify that all street and sewer assessments on the property shown on the annexed map are paid

_____ Street Superintendent

COUNTY AUDITOR

I hereby certify that all taxes on the property delineated on the annexed map appearing on record in the books of this office are paid, except taxes not yet payable

_____ County Auditor San Bernardino County.

By _____ Dep.

State of California
County of San Bernardino } ss.
On this 4th day of November in the year of our Lord Nineteen Thousand nine hundred and Twenty three before me C.M. Marshall a Notary Public in and for said County of San Bernardino State of California residing therein, duly commissioned and sworn, appeared J.P. Pinkley known to me to be the Secretary of the Guarantee Building and Loan Association the Corporation that executed the within and foregoing instrument known to me to be the person who executed the within instrument on behalf of the corporation therein named and acknowledged to me that such corporation executed the same.
In witness Whereof I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written
C.M. Marshall
Notary Public in and for the County of San Bernardino State of California

INDEXED

Charles Propst
2 10 A
24 69 Tkps
Sutton G. Travid
5.00

INDEXED

MAP
OF THE
PROPST SUBDIVISION
BEING A PORTION OF LOT 1 BLOCK 39
RANCHO SAN BERNARDINO
SAN BERNARDINO COUNTY
CALIFORNIA
Scale 1" = 50 ft.

OWNERS' CERTIFICATE.

We, the undersigned, hereby certify that we are the owners of the land included within the subdivision shown on the annexed map and that we are the only persons whose consent is necessary to convey a clear title to said land and we hereby consent to the making of said map and subdivision and hereby dedicate to public use all streets shown on said map within said subdivision.

Charles Propst Hattie May Propst
Guarantee Bldg & Loan Association
J.P. Pinkley, Secretary.

NOTARY'S CERTIFICATE.

State of California,
County of San Bernardino. } ss.
On this 22nd day of October before me F.W. Francis a Notary Public in and for the County of San Bernardino, State of California, residing therein, duly commissioned and sworn, personally appeared Charles Propst and Hattie May Propst known to me to be the persons whose names are subscribed to the annexed instrument and acknowledged to me that they executed the same.
In witness whereof, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above mentioned.
F.W. Francis
Notary Public in and for said County and State.
My Commission Expires Oct 5 1924

SUPERVISORS' CERTIFICATE.

On motion of Supervisor Crain, seconded by Supervisor Biggin, and carried, it is ordered that the map of Propst Subdivision be and the same is hereby approved and the bond filed in the office of the Board of Supervisors as security for the payment of taxes in the sum of $100 dollars which is hereby fixed as the required amount of said bond to insure payment of all taxes which are at the time of filing said map a lien against said tract, subdivision or part thereof, but not payable, is hereby approved and the Clerk of the Board of Supervisors is hereby directed to endorse this certificate on the map showing that said bond has been filed as required by law and that the foregoing order was adopted by the Board of Supervisors at a meeting held Nov 6 1923
Harry L. Wilson
County Clerk and Ex-Officio Clerk of the Board of Supervisors, San Bernardino County.
By [illegible] Deputy.

ENGINEER'S CERTIFICATE.

I, C.E. Johnson hereby certify that I am a Licensed Land Surveyor of the State of California (or Civil Engineer) and that this map consisting of one sheet correctly represents a survey made under my supervision in October 1923 and that all monuments shown actually exist and their positions are correctly shown.
C.E. Johnson
Licensed Land Surveyor.

COUNTY AUDITOR.

I hereby certify that all taxes on the property delineated on the annexed map appearing on record in the books of the office of the County Auditor are paid, except taxes not yet payable.
[illegible]
County Auditor, San Bernardino County.
Map approved [illegible] County Surveyor.
Map approved [illegible] City Engineer.

SURVEYOR'S AND ASSESSOR'S CERTIFICATE.

We, the undersigned, County Surveyor and County Assessor, in and for the County of San Bernardino, State of California, do hereby certify that we have examined each and every lot delineated on this map and in its value for residential or commercial use we do hereby recommend its acceptance and approval by the Board of Supervisors.
[illegible]
County Surveyor.
H.E. Allen
County Assessor.

CITY OFFICIAL CERTIFICATE.

Resolved by the Mayor and Common Council of the City of San Bernardino that the map of Propst Subdivision and the same is hereby accepted and the streets and alleys thereon shown are hereby accepted as public streets and alleys.
Ayes Sutton Rogers Rowell Stone Combs
Noes None
Dated this 30th day of October
Attest J.H. Wilson City Clerk.
I hereby approve the foregoing resolution. S.M. McNeill Mayor.

SUPERINTENDENT OF STREETS.

I hereby certify that all street and sewer assessments on the property shown on the annexed map are paid.
[illegible]
Superintendent of Streets.

69

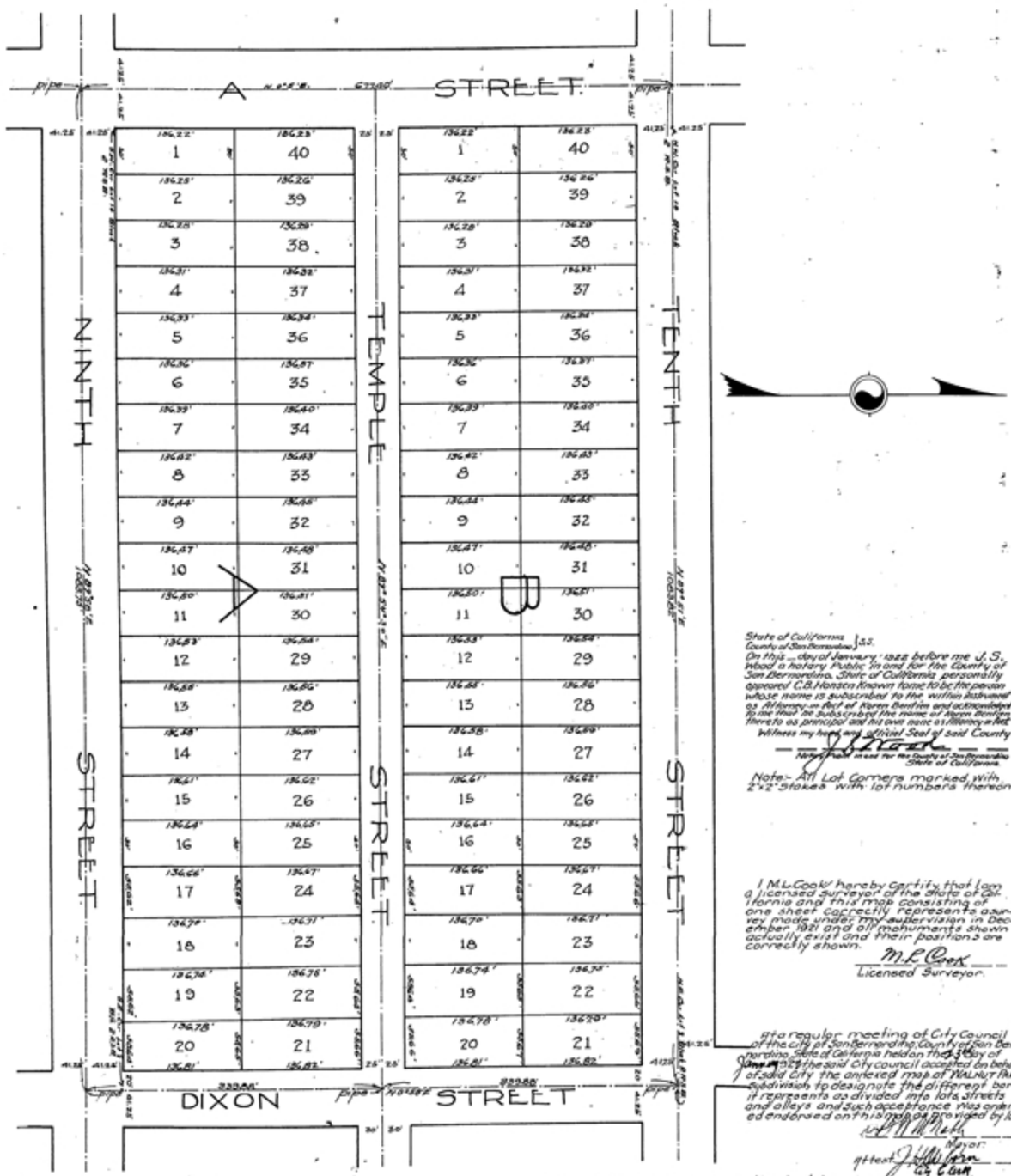
E-243

M. L. Cook
3.5
21
2.7
Map
Geo. Rennie
5.00

MAP OF

WALNUT PARK

BEING A SUBDIVISION OF LOTS
8, 9 AND 10 BLOCK 2.
RANCHO SAN BERNARDINO
Scale 1" = 80'
Surveyed by M. L. Cook
San Bernardino Calif.



State of California
County of San Bernardino } S.S.
On this ... day of January 1922 before me J. S. Wood a notary Public in and for the County of San Bernardino, State of California personally appeared C. B. Hanson known to me to be the person whose name is subscribed to the within instrument as Attorney-in-fact of Farm Bonfire and acknowledged to me that he subscribed the name of Farm Bonfire thereto as principal and his own name as Attorney-in-fact.
Witness my hand and official Seal of said County
J. S. Wood
Notary Public in and for the County of San Bernardino State of California.

Note- All Lot Corners marked with 2"x2" Stakes with lot numbers thereon

I M. L. Cook hereby certify that I am a licensed surveyor of the state of California and this map consisting of one sheet correctly represents a survey made under my supervision in December 1921 and all monuments shown actually exist and their positions are correctly shown.
M. L. Cook
Licensed Surveyor.

At a regular meeting of City Council of the city of San Bernardino, County of San Bernardino, State of California held on the 3 day of January 1922 the said City council accepted on behalf of said City the annexed map of "WALNUT PARK" subdivision to designate the different parts it represents as divided into lots, streets and alleys and such acceptance was ordered endorsed on this map as provided by law.
... Mayor.
Attest J. S. Wood
City Clerk.

State of California
County of San Bernardino } S.S.
We the undersigned County Surveyor and County Assessor in and for San Bernardino County California, do hereby certify that we have carefully examined each and every Lot and Block of Land delineated on the major plat as to its value for residential and commercial uses and do hereby recommend its acceptance and approval by the Board of Supervisors.
... County Assessor
... County Surveyor

On motion of Supervisor Chase seconded by Supervisor Gram and carried it is ordered that the map of "WALNUT PARK" be and the same is hereby approved and the bond filed in the office of this Board as security for payment of taxes in the sum of 400 dollars which is hereby fixed as the required amount of said bond to insure the payment of all taxes which are at the time of filing of said map a lien against any such tract, subdivision or part thereof but not payable is hereby approved. And the Clerk of this board is hereby directed to endorse this certificate on said map showing that said bond has been filed as required by law.
Dated Jan 30 1922
Gary L. Allison
County Clerk and Ex Officio Clerk of the Board of Supervisors
By ... Deputy

I hereby certify that all back taxes on the property within the subdivision on the annexed map have been paid in the office
... County Auditor for San Bernardino Co.
... Deputy

I the undersigned hereby certify that I am the owner of "WALNUT PARK" the subdivision shown on the annexed map and that I am the only person whose consent is necessary to convey a clear title to said land. I consent to the making of said map and subdivision as shown hereon and hereby dedicate for public use all streets, Avenues etc as shown on not already dedicated
Elizabeth E. Ralphs
John Ralphs Jr
Geo. P. Martin
By ... Attorney-in-fact.

State of California
County of San Bernardino } S.S.
On this ... day of December 1921 before me ... a notary in and for the County of San Bernardino state of California residing therein duly commissioned and sworn appeared John Ralphs Jr and Elizabeth E. Ralphs known to me to be the persons whose names are subscribed to the annexed instrument and acknowledged to me that they executed the same
In witness whereof I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.
My Commission Expires May 14 1926
J. S. Wood
Notary Public in and for San Bernardino County State of California.

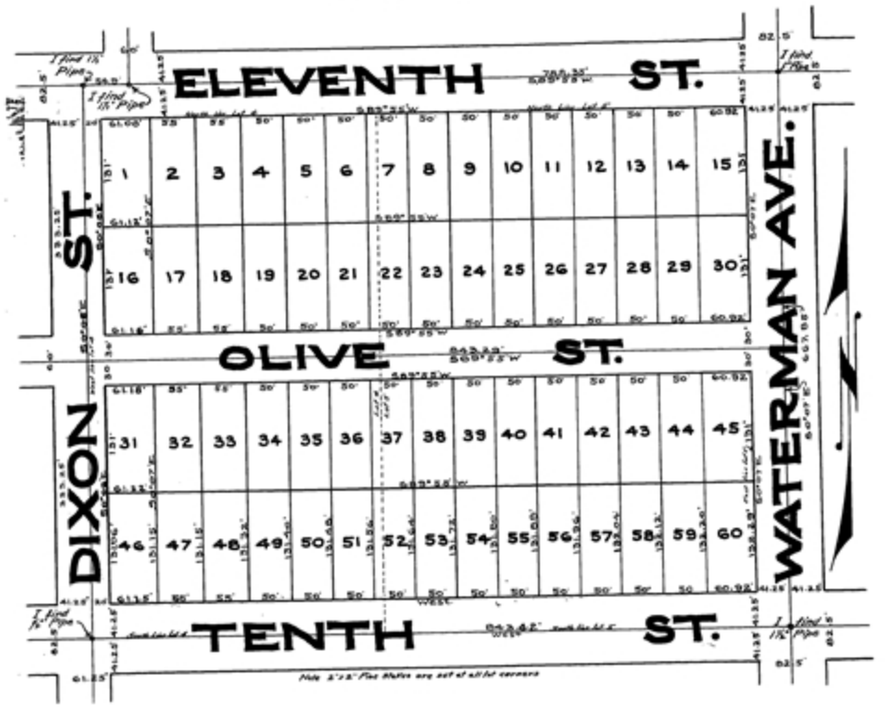
Map Approved ... County Surveyor San Bernardino County
Map Approved ... City Engineer City of San Bernardino.

POLING SUBDIVISION

BEING A SUBDIVISION OF LOTS 4 AND 5 BLOCK 2 OF THE 5 ACRE SURVEY OF THE RANCHO SAN BERNARDINO

SURVEYED BY LIONEL PEDLEY - SEPTEMBER-1923

SCALE 1" = 100'



OWNERS CERTIFICATE

We the undersigned, hereby certify that we are the owners of the land included within the subdivision shown on the annexed map and that we are the only persons whose consent is necessary to pass a clear title to said land and we hereby consent to the making of said map and subdivision and hereby dedicate to public use all streets shown on said map within said subdivision.

J. D. Poling Lois L. Poling

NOTARY

State of California, County of San Bernardino } S.S.

On this 4 day of September before me J. Kaepha a Notary Public in and for the County of San Bernardino, State of California, residing therein duly commissioned and sworn, personally appeared J. D. Poling and Lois L. Poling known to me to be the persons whose names are subscribed to the annexed instrument and acknowledged to me that they executed the same. In witness whereof I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written

My commission expires Oct. 7th 1923 J. Kaepha Notary Public in and for said County and State

MAP APPROVED Edgar Mann County Surveyor

MAP APPROVED [illegible] City Engineer

BOARD OF SUPERVISORS

On motion of Supervisor [illegible] seconded by Supervisor [illegible] and carried, it is hereby ordered that the map of Poling Subdivision be and the same is hereby approved and the bond filed in the office of the Board of Supervisors as security for payment of taxes in the sum of $100 which is hereby fixed as the required amount of said bond to insure payment of all taxes which are at the time of filing said map a lien against said subdivision or part thereof, but not payable, is hereby approved and the Clerk of the Board of Supervisors is hereby directed to endorse this certificate on this map showing that said bond has been filed as required by law and that the foregoing order was adopted by the Board of Supervisors at a meeting held [illegible]

County Clerk and Ex Officio Clerk of the Board of Supervisors, San Bernardino County

By [illegible] Deputy

CITY OFFICIALS

Resolved by the Mayor and Council of the City of San Bernardino that the Map of Poling Subdivision be and the same is hereby accepted and the streets shown thereon are hereby accepted as public streets

Ayes: [illegible] Noes: NONE

Dated this 1 day of [illegible] 1923

Attest [illegible] City Clerk.

I hereby approve the foregoing resolution [illegible] Mayor

ENGINEERS CERTIFICATE

I Lionel Pedley hereby certify that I am a Civil Engineer in the State of California and that this map consisting of one sheet correctly represents a survey made by me in September 1923 and that all monuments shown actually exist and their positions are correctly shown. Lionel Pedley Cal Engineer

SURVEYOR AND ASSESSOR

We the undersigned County Surveyor and County Assessor in and for the County of San Bernardino, State of California, do hereby certify that we have examined each and every lot delineated on this map as to its value for residential or commercial uses and do hereby recommend its acceptance and approval by the Board of Supervisors

Edgar Mann County Surveyor [illegible] County Assessor

STREET SUPERINTENDENT

I hereby certify that all street and [illegible] assessments on the property shown on the annexed map are paid [illegible] Street Superintendent

COUNTY AUDITOR

I hereby certify that all taxes on the property shown on the annexed map appearing on record in the books of this office are paid, except taxes not yet payable

[illegible] County Auditor, San Bernardino County

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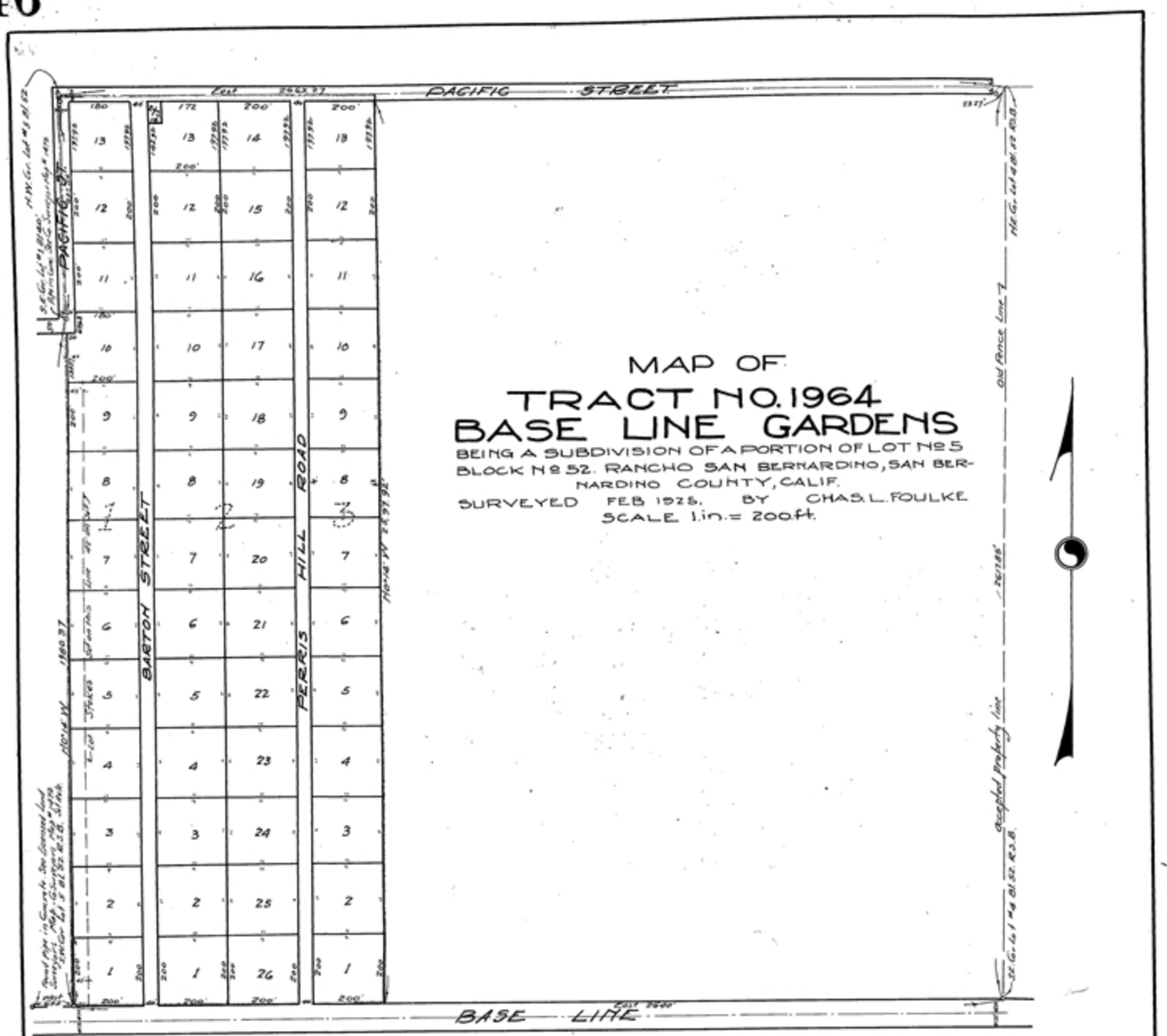


I, Charles L. Foulke hereby certify that I am a Civil Engineer in the State of California and that this map consisting of one sheet correctly represents a survey made under my supervision during Feb. 1925 and that all monuments shown actually exist and their positions are correctly shown, and that all lot stakes are 2"x2" white stakes.

Chas. L. Foulke Civil Engineer

We, the undersigned, hereby that we are the owners of the land included within the subdivision shown on the annexed map and that we are the only persons whose consent is necessary to convey a clear title to said land and we hereby consent to the making and filing of said map and subdivision and hereby dedicate to public use all streets shown on said map within said subdivision.

Pioneer Abstract and Title Guaranty Co

W. E. Black Pres.

W. E. Hancock Secy.

State of California County of San Bernardino } SS.
On this 9th day of April 1925 before me R. L. Harise a notary in and for said County of San Bernardino State of California, residing therein, duly commissioned and sworn personally appeared J. L. Mack known to me to be the President and W. E. Hancock known to me to be the Secretary of the Pioneer Abstract and Title Guaranty Company the corporation that executed the within and foregoing instrument. Known to me to be the persons who executed the within instrument on behalf of the corporation therein named and acknowledged to me that the corporation executed the same.
In witness whereof I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

R. L. Harise
Notary Public in and for said County and State.

State of California County of San Bernardino } SS.
On this ___ day of ___ 1925 before me ___ a notary in and for the County of San Bernardino State of California residing therein and duly commissioned and sworn personally appeared ___ known to me to be the persons whose names are subscribed to the annexed instrument and acknowledged to me that they executed the same.
In witness where of I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

Notary Public in and for said County and State

I hereby certify that all taxes on the property delineated on the annexed map appearing on record in the books of the office of the County Auditor are paid, except taxes not yet payable.

Auditor
County Auditor San Bernardino County.

We the undersigned County Surveyor and County Assessor, in and for the County of San Bernardino State of California, do hereby certify that we have examined each and every lot delineated on this map as to its value for residential and commercial purposes and do hereby recommend its acceptance and approval by the Board of Supervisors.

J. P. Kemmerer County Surveyor. H. E. Allen County Assessor.

Motion of Supervisor Rigdon 2nd Carried it is ordered that the map of Tract No. 1964 Base Line Gardens, be and the same is hereby approved and the bond filed in the office of the Board of Supervisors as security for the payment of taxes in the sum of $100 dollars which is hereby fixed as the required amount of said bond, to insure payment of all taxes which are at the time of filing said map a lien against said Tract, Subdivision or part thereof, but not payable, is hereby approved and the Clerk of the Board of Supervisors is hereby directed to endorse this certificate on this map showing that said bond has been filed as required by law and that the foregoing order was adopted by the Board of Supervisors at a meeting held Apr. 13 1925.

Harry L. Allison
County Clerk and Ex Officio Clerk of the Board of Supervisors of San Bernardino County Calif.
By D. J. Atkinson Deputy.

Map Approved J. P. Kemmerer County Surveyor

Map Approved ___ City Engineer, San Bernardino

Recorded at Request of Pioneer Abst. & Title Gty Co
15 min past 2 P
28 Maps
46
Fee
W. J. Guthrie
5.00

File 221

13

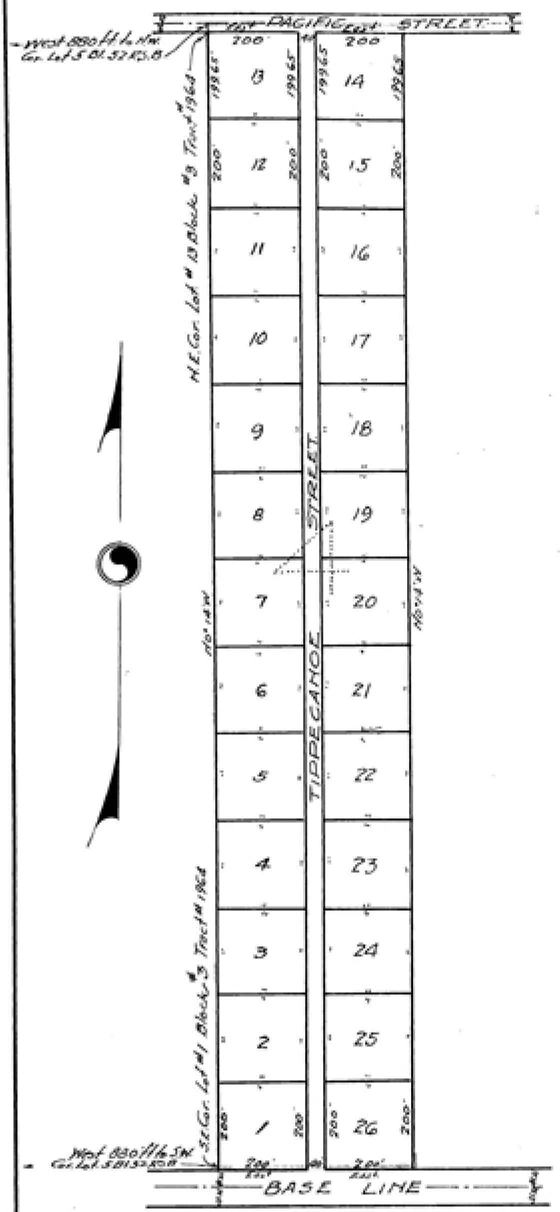
Recorded at Request of Pioneer Title Ins Co
DEC 9 1925
at 35 Min. past 9 A.M.
In Book 30 of Maps
Page 13
Records San Bernardino County.
FULTON G. FEBAUD,
County Recorder.
By Eva Harris
Deputy Recorder.
Fee 5.00

File 311

MAP OF
TRACT No. 2074
BASE-LINE-GARDENS No. 2.

BEING A SUBDIVISION OF A PORTION OF LOT No. 5
BLOCK No. 52. RANCHO SAN BERNARDINO, SAN BERNARDINO COUNTY CALIFORNIA.

SURVEYED NOV. 1925 BY CHAS. L. FOULKE
SCALE 1" = 200'



We the undersigned hereby certify that we are the owners of the land included within the Subdivision shown on the annexed map and are the only persons whose consent is necessary to convey a clear title to said land and we hereby consent to the making of said map and subdivision and hereby dedicate to public use all streets shown on said map within said Subdivision.

Pioneer Abstract and Title Guaranty Company
J L Mack President W.H. Glasscock Secretary

State of California
County of San Bernardino } ss.

On this 3rd day of December 1925 before me C K Cooper a Notary Public in and for said County of San Bernardino State of California, appeared J L Mack, known to me to be the President and W.H. Glasscock known to me to be the Secretary of the corporation that executed the within and foregoing instrument, known to me to be the persons who executed the within instrument on behalf of the corporation therein named and acknowledged to me that said corporation executed the same.

In witness whereof I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

C K Cooper
Notary Pub.

I Chas L Foulke hereby certify that I am a licensed land surveyor in the State of California and this map consisting of one sheet correctly represents a survey made under my supervision in November 1925 and that all monuments shown actually exist and their positions are correctly shown. All lot corners are marked by 2x2 stakes.

Chas. L. Foulke
Licensed Land Surveyor

I hereby certify that all taxes on the property delineated on the annexed map appearing of record in the books of the office of County Auditor are paid, except taxes not yet payable.

V. Roth
County Auditor
[illegible] Dep.

We the undersigned, County Surveyor and County Assessor, in and for the County of San Bernardino, State of California, do hereby certify that we have examined each and every lot delineated on this map as to its value for residential and commercial purposes and do hereby recommend its acceptance and approval by the Board of Supervisors.

J.P. Kemmerer
by H.L. Way Dep. County Surveyor

A. E. Allen
County Assessor
By [illegible] Deputy

On motion of Supervisor [illegible] seconded by Supervisor Biggin and carried, it is ordered that the map of Tract No. 2074 be and the same is hereby approved and the bond filed in the office of the Board of Supervisors as security for the payment of taxes in the sum of 200 which is hereby fixed as the required amount of said bond to insure payment of all taxes which are at the time of filing of said map a lien against said tract, subdivision or part thereof but not payable, is hereby approved and the Clerk of the Board of Supervisors is hereby directed to endorse this certificate on this map showing that said bond has been filed as required by law and that the foregoing order was adopted by the Board of Supervisors held Dec. 7 1925

Harry L. Allison
County Clerk and Ex Officio Clerk of the Board of Supervisors San Bernardino
By D. J. Atkinson Deputy.

Map Approved
[illegible]
City Engineer, San Bernardino

Map Approved
J. P. Kemmerer
County Surveyor San Bernardino Co.
by H.L. Way, Dep.

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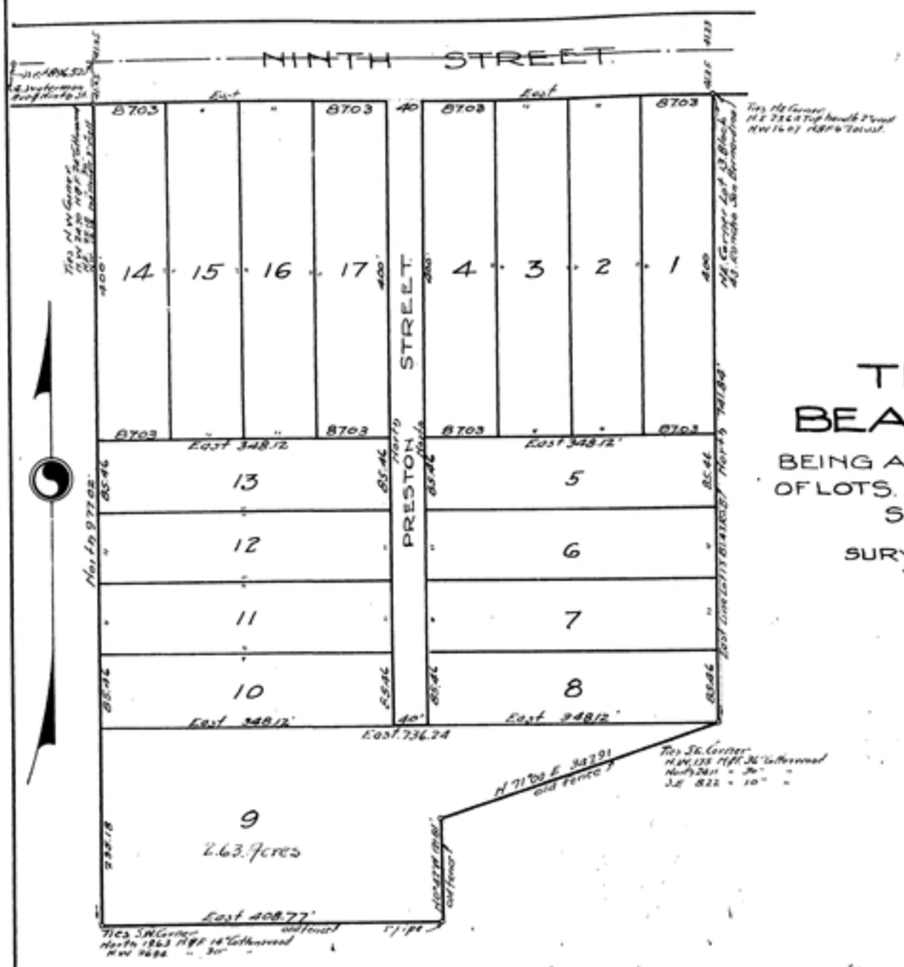


TRACT 2078
BEAM SUBDIVISION

BEING A SUBDIVISION OF A PORTION OF LOTS 12 AND 13 BLOCK 43 RANCHO SAN BERNARDINO

SURVEYED BY CHAS. L. FOULKE
SCALE 1 inch = 100 feet

We the undersigned hereby certify that we are the owners of the land included within the subdivision shown on the annexed map and that we are the only persons whose consent is necessary to convey a clear title to said land and we hereby consent to the making of said map and subdivision and hereby dedicate to public use all streets shown on said map within said subdivision.

Pioneer Abstract and Title Guaranty Company.

J. L. Mack President. W. H. Glasscock Secretary.

State of California } S.S.
County of San Bernardino

On this ____ day of December 1925 before me a notary public in and for the county of San Bernardino, State of California, residing therein duly commissioned and sworn, personally appeared known to me to be the persons whose names are subscribed to the annexed instrument and acknowledged to me that they executed the same.

In witness whereof I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

Notary Public in and for said County and State

I Chas. L. Foulke hereby certify that I am a licensed Land Surveyor in the State of California and this map consisting of one sheet correctly represents a survey made under my supervision in December and that all monuments shown actually exist and their positions are correctly shown. All lot corners are marked by 2x2 stakes.

Chas. L. Foulke
Licensed Land Surveyor

I hereby certify that all taxes on the property delineated on the annexed map appearing on record in the books of the office of County Auditor are paid, except taxes not yet payable

V. Root
County Auditor
By [illegible] Deputy

State of California
County of San Bernardino } S.S.

On this 15th day of December 1925 before me C.K. Cooper a notary Public in and for said County of San Bernardino, State of California, appeared J.L. Mack known to me to be the President and W.H. Glasscock known to me to be the Secretary of the Pioneer Abstract and Title Guaranty Company the corporation that executed the within and foregoing instrument known to me to be the persons who executed the within instrument on behalf of the corporation therein named and acknowledged to me that said corporation executed the same.

In witness whereof I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

C.K. Cooper
Notary Public.

On motion of Supervisor Gray Seconded by Supervisor Cuffy and carried, it is ordered that the map of Tract No. 2078 be and the same is hereby approved and the bond filed in the office of the Board of Supervisors as security for the payment of taxes in the sum of 700 dollars which is hereby fixed as the required amount of said bond to insure payment of all taxes which are at the time of filing of said map a lien against said tract, subdivision or part thereof but not delinquent is hereby approved and the Clerk of the Board of Supervisors is hereby directed to endorse this certificate on this map showing that said bond has been filed as required by law and that the foregoing order was adopted by the Board of Supervisors at a meeting held Dec. 14, 1925.

Harry L. Allison
County Clerk and Ex Officio Clerk of the Board of Supervisors San Bernardino Co.
By [illegible] Deputy

We the undersigned, County Surveyor and County Assessors in and for the County of San Bernardino State of California, do hereby that we have examined each and every lot delineated on this map as to its value for residential and commercial purposes and do hereby recommend its acceptance and approval by the Board of Supervisors

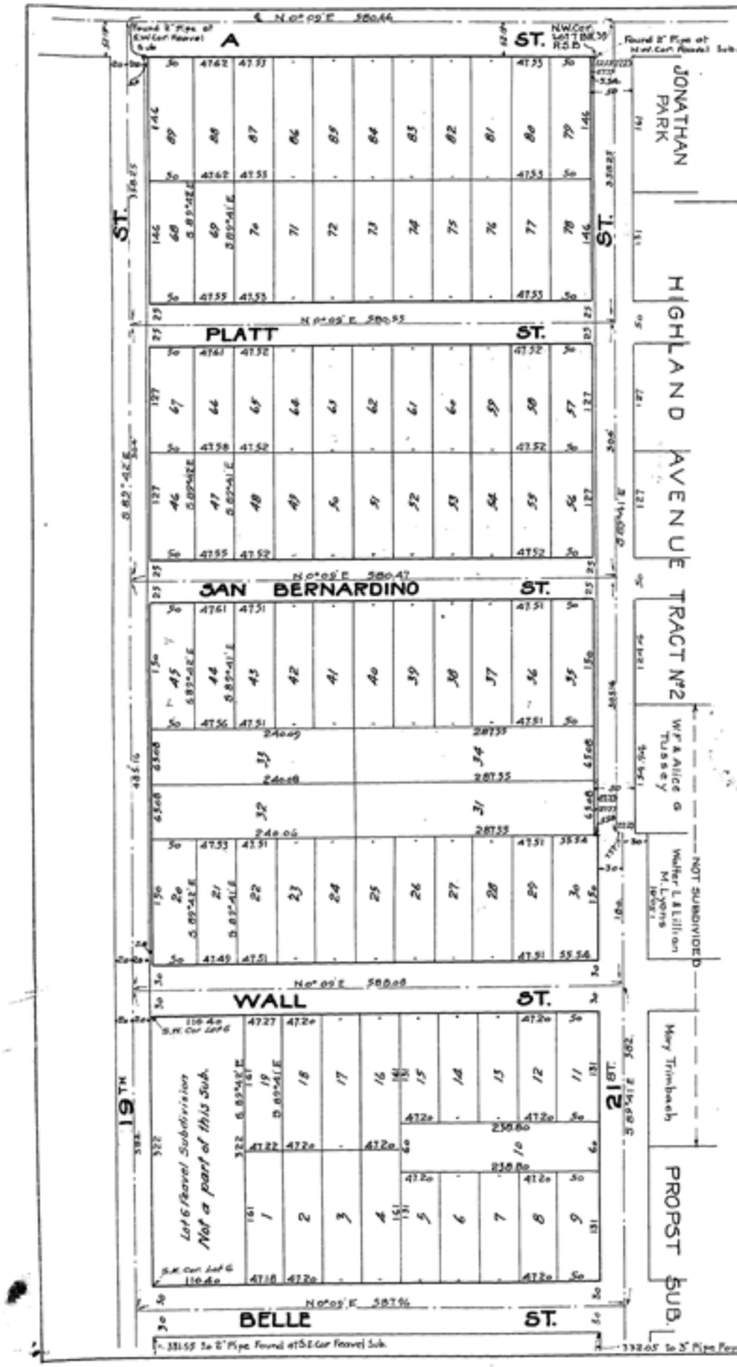
H. E. Allison County Assessor
J. B. Kemmerer County Surveyor by [illegible] Dep.

Map Approved [illegible] City Engineer San Bernardino
Map Approved J. B. Kemmerer County Surveyor by [illegible] Dep.

INDEXED

Recorded at Request of Pioneer Title Ins. Co.
DEC 15 1925
at 15 Min. past 2 P. M.
In Book 30 of Maps
Page 15
Records San Bernardino County
FULTON O. FERAUD,
County Recorder.
By [illegible] Deputy Recorder.
Fee 5.00

File #313



HIGHLAND AVENUE TRACT Nº 3

TRACT Nº 1959

BEING A RESUBDIVISION OF LOTS 7 TO 25 INCLUSIVE FEAVEL SUBDIVISION ALSO SOUTH 50 FT. OF EASTERLY 154.94 FT. LOT 8 BLK. 39 R.S.B.

SAN BERNARDINO — M.L.COOK, ENGR

Scale 1 inch = 100 feet

SUPERVISORS' CERTIFICATE

On motion of Supervisor Crain, Seconded by Supervisor Gray and carried, it is ordered that the map of tract "1959" be and the same is hereby approved and the bond filed in the office of the Board of Supervisors as security for the payment of taxes in the sum of 1000 dollars, which is hereby fixed as the required amount of said bond to insure payment of all taxes which are at the time of filing said map a lien against said tract, subdivision or part thereof, but not payable, is hereby approved and the Clerk of the Board of Supervisors is hereby directed to endorse this certificate on this map showing that said bond has been filed as required by law and that the foregoing order was adopted by the Board of Supervisors at a meeting held Mar. 16, 1925

Harry L. Allison
County Clerk and Ex-Officio Clerk Board of Supervisors.
San Bernardino County
By J. Atkinson Deputy

CITY OFFICIALS' CERTIFICATE

Resolved by the Mayor and Common Council of the City of San Bernardino that the map of tract "1959" be and the same is hereby accepted and the streets thereon shown are hereby accepted as public streets.

Ayes Rogers, Rose, Stremer, Conde
Noes None Absent Pittman

Dated this 10 day of March 1925

Attest J. Osborn City Clerk.

I approve the foregoing resolution Grant Holcomb Mayor

CORPORATION ACKNOWLEDGEMENT

State of California } S.S.
County of San Bernardino }

On this 13th day of March in the year of our Lord One Thousand Nine Hundred and Twenty Five before me Clara P. Colgan, a Notary Public in and for the County of San Bernardino, State of California, residing therein, duly commissioned and sworn, personally appeared H. Sloan Known to me to be the President, and H. E. Wimack Known to me to be the Secretary of Consolidated Abstract and Title Guaranty the corporation that executed the within and foregoing instrument, Known to me to be the persons who executed the within instrument on behalf of the Corporation therein named and acknowledged to me that such corporation executed the same. In Witness whereof I have hereunto set my hand and affixed my official seal the day and year in this Certificate first above written.

Clara P. Colgan
Notary Public in and for said County and State.

OWNER'S CERTIFICATE

We, the undersigned, hereby certify that we are the owners of the land included within the subdivision shown on the annexed map and that we are the only persons whose consent is necessary to convey a clear title to said land and we hereby consent to the making of said map and subdivision and hereby dedicate to public use all streets shown on said map within said subdivision.

Consolidated Abstract & Title Guaranty Company
H. Sloan President
H. E. Wimack Secretary

Lawrence T. Platt
Doris L. Platt
Doris L. Platt
Florence E. Swartz
Austin J. Fravel
W. H. Tussey
Alice G. Tussey
Witness to mark of Alice G. Tussey Elva Howard

NOTARY'S CERTIFICATE

State of California } ss.
County of San Bernardino }

On this 27th day of January 1925 before me Elva Howard a Notary Public, in and for the County of San Bernardino, State of California, residing therein, duly Commissioned and Sworn, personally appeared Lawrence T. Platt, Doris L. Platt, Doris L. Platt, Florence E. Swartz, Austin J. Fravel, W. H. Tussey and Alice G. Tussey, known to me to be the persons whose names are subscribed to the annexed instrument and acknowledged to me that they executed the same. In Witness Whereof, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above mentioned.

Elva Howard
Notary Public in and for said County and State.

My commission expires May 10 1928

ENGINEER'S CERTIFICATE

I, M. L. Cook, hereby certify that I am a Licensed Land Surveyor of the State of California and this map consisting of One sheet, correctly represents a survey made under my supervision in January 1925, and monuments shown actually exist and their positions are correctly shown.

M. L. Cook
Licensed Land Surveyor.

SURVEYOR'S and ASSESSOR'S CERTIFICATE

We, the undersigned, County Surveyor and County Assessor, in and for the County of San Bernardino, State of California, do hereby certify that we have examined each and every lot delineated on this map as to its value for residential or commercial uses and do hereby recommend its acceptance and approval by the Board of Supervisors.

J. P. Kennedy County Surveyor
A. E. Allen County Assessor.
By Mildred E. Johnson Chief Deputy.

COUNTY AUDITOR'S CERTIFICATE

I hereby certify that all taxes on the property delineated on the annexed map appearing on record in the books of the office of the County Auditor are paid except taxes not yet payable.

Duncan Lott
County Auditor, San Bernardino County

SUPERINTENDENT OF STREETS

I hereby certify that all street and sewer assessments on the property shown on the annexed map are paid.

L. B. Cretsop
Superintendent of Streets.

Map Approved J. P. Kennedy County Surveyor
Map Approved [illegible] City Engineer

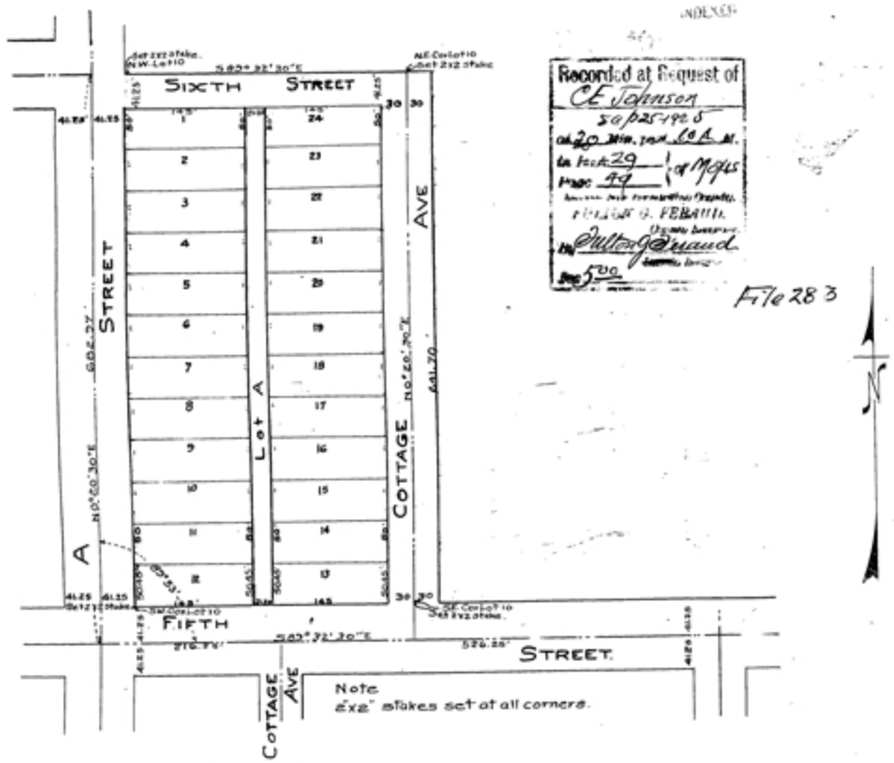
Note. All Block corners marked by 1½" Iron Pipes.
All Lot corners marked by 2"×2" White hubs.

M. L. Cook
8 10 A
28 Maps
38

W. J. Guthrie
Nº 500

File 214

38



Recorded at Request of
C E Johnson
Sep 25 1925
at 20 Min. past 10 A. M.
in Book 29 of Maps
Page 49
Records San Bernardino County, California.
Fee $5.00

File 283

TRACT No 2030

MAP OF

FIFTH STREET PLACE SUBDIVISION

BEING A SUBDIVISION OF LOT 10 & A PORTION of 9 BLK 4
RANCHO SAN BERNARDINO

Scale 1"=100'

OWNER'S CERTIFICATE

We the undersigned hereby certify that we are the owners of the land within the subdivision shown on the annexed map and that we are the only persons whose consent is necessary to convey a clear title to said land and we hereby consent to the making of said map and subdivision and hereby dedicate to public use, all streets and alleys as shown on said map within said subdivision.

H T McGinnis
Ellen McGinnis

SURVEYOR'S and ASSESSOR'S CERTIFICATE

We the undersigned County Surveyor and County Assessor in and for the County of San Bernardino, State of California, do hereby certify that we have examined each and every lot delineated on this map as to its value for residential or Commercial purposes and do hereby recommend its approval and acceptance by the Board of Supervisors.

J P Kimmerer
County Surveyor
A. B. Allen
County Assessor
By Mildred E. Johnson
Chief Deputy

CITY OFFICIAL CERTIFICATE

Resolved by the Mayor and Common Council of the city of San Bernardino that the map of Tract No 2030 be and the same is here by accepted and the streets thereon shown are accepted as public streets.

Ayes Henford Rogers Combs
Noes None. Absent Rouse Stremer
Dated this 10th day of August 1925
Attest City Clerk
I approve the foregoing resolution M. H. Rogers Mayor Pro Tem

SUPERINTENDENT of STREETS

I hereby certify that all street and Sewer assessments on the property shown on the annexed map are paid.

L D Lathrop
Superintendent of Streets

COUNTY AUDITOR

I hereby certify that all taxes on the property delineated on the annexed map appearing on record in the books of the office of the County Assessor are paid except Taxes not yet payable.

V Hall
County Auditor San Bernardino County
By Michel Dep

Map approved J P Kimmerer County Surveyor
Map approved City Engineer

ENGINEER'S CERTIFICATE

I, C E Johnson, hereby certify that I am a Licensed Land Surveyor of the State of California and that this map consisting of one sheet correctly represent a survey made under my supervision in _____ 1925 and that all monuments shown actually exist and that their positions are correctly shown.

Licensed Land Surveyor

NOTARY'S CERTIFICATE

State of California } SS
County of San Bernardino }
On this 20th day of July 1925 before me S C Lawrence a Notary Public, in and for the County of San Bernardino, State of California residing therein duly commissioned and sworn personally appeared H T McGinnis and Ellen McGinnis

Known to me to be the persons whose names are subscribed to the annexed instrument and acknowledged to me that they executed the same.

In witness, where of, I have hereunto set my hand and affixed my official seal in day and year in this certificate first above mentioned.

S C Lawrence
Notary Public, in and for said County and State.

My commission expires June 23 - 1928

SUPERVISOR'S CERTIFICATE

On motion of Supervisor Crain Seconded by Supervisor Gee and carried, it is ordered that the map of FIFTH STREET PLACE SUBDIVISION be and the same is hereby approved and the bond filed in the office of the Board of Supervisors as security for the payment of taxes in the sum of 200.00 dollars which is hereby fixed as the required amount of said bond to insure the payment of all taxes which, are at the time of filing of Said map alien against said tract subdivision, or part thereof, but not payable, is hereby approved and the Clerk of the Board of Supervisors is hereby directed to endorse this certificate on this map showing that said bond has been filed as required by law and that the foregoing order was adopted at a meeting held Sep 14, 1925

Harry L Allison
County Clerk and Ex-Officio Clerk of the Board of Supervisors
San Bernardino County.
By J J Atkinson Deputy

INDEXED

Recorded at Request of
Pioneer Title Ins Co
Apr 6 1926
at 55 Min. past 2 P. M.
in Book 30 of Maps
Page 52
Records San Bernardino County,
FULTON G. FERAUD,
County Recorder,
By Ezra Clemmer
Deputy Recorder.
Fee 5.00

File 350

MAP OF
TRACT NO. 2121
BASE-LINE-GARDENS No 3

BEING A PORTION OF LOTS 4 AND 5 BLOCK 52 RANCHO
SAN BERNARDINO SAN BERNARDINO COUNTY CALIF.
SURVEYED MARCH 1926 BY CHAS. L. FOULKE
SCALE 1" = 200'

We the undersigned hereby certify that we are the owners of the land included within this subdivision shown on the annexed map and that we are the only persons whose consent is necessary to convey a clear title to said land and we hereby consent to the making of said map and subdivision and here by dedicate to public use all streets shown on said map within said subdivision.

Pioneer Abstract and Title Guaranty Company.
J. L. Mack Pres. M. Hancock Sec'ty.

State of California
County of San Bernardino
On this 3rd day of April 1926 before me C. L. Cooper a notary public in and for said County of San Bernardino, State of California, appeared J. L. Mack, known to me to be the president and M. Hancock known to me to be the Secretary of the Pioneer Abstract and Title Guaranty Company, the corporation that executed the within and foregoing instrument known to me to be the persons who executed the within instrument on behalf of the corporation therein named and acknowledged to me that said corporation executed the same.

In witness whereof I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

C. L. Cooper
Notary Public.

I, Chas. L. Foulke hereby certify that I am a licensed Land Surveyor in the State of California and that this map consisting of one (1) sheet correctly represents a survey made under my supervision in March 1926 and that all monuments shown actually exist and their positions are correctly shown. All lot corners are marked by 2x2 stakes.

Chas. L. Foulke
Licensed Land Surveyor.

I hereby certify that all taxes on the property delineated on the annexed map appearing on records in the books of the office of County Auditor are paid.

V. Fort
County Auditor
Michels
Dep.

We the undersigned, County Surveyor and County Assessor, in and for the County of San Bernardino, State of California, do hereby certify that we have examined each and every lot delineated on this map as to its value for residential and commercial purposes, and do hereby recommend its acceptance and approval by the Board of Supervisors.

J. P. Kommerer by H. W. Way Deputy
County Surveyor.
H. E. Allen
County Assessor.

On motion of Supervisor Bertram seconded by Supervisor Cram and carried, it is ordered that the map of Tract No. 2121 be and the same is hereby approved and the bond filed in the office of the Board of Supervisors as security for payment of taxes in the sum of $200 which is hereby fixed as the required amount of said bond to insure payment of all taxes which at the time of filing said map a lien against said tract, subdivision or part thereof, but not payable, is hereby approved and the Clerk of the Board of Supervisors is hereby directed to endorse this certificate on this map showing that said bond has been filed as required by law and that the foregoing order was adopted by the Board of Supervisors at a meeting held Apr 5, 1926

Harry L. Allison
County Clerk and Ex Officio Clerk
of the Board of Supervisors San Bernardino Co.
By J. P. Altimus Deputy

Map Approved
City Engineer City San Bernardino

Map Approved
J. P. Kommerer by H. W. Way Dep.
County Surveyor San Bernardino Co.

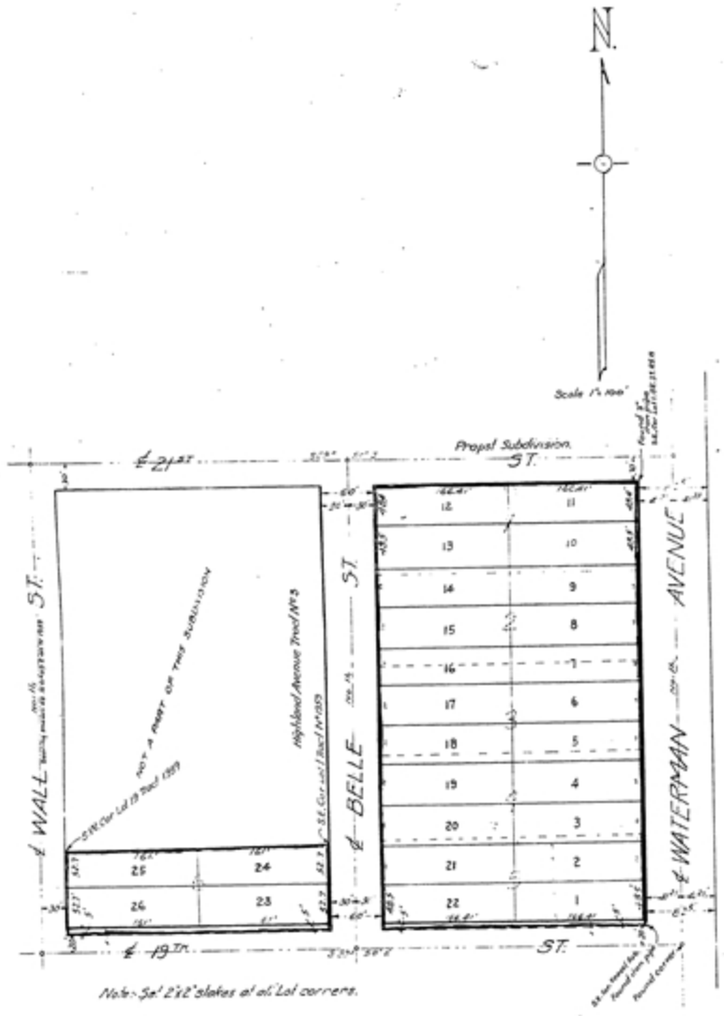
INDEXED

Recorded at Request of
C.E. Johnson
April 13, 1926
at 50 Min. past 10 A.M.
in Book 30 of Maps
Page 59
Records San Bernardino County
S.G. Ferrand
County Recorder
By S. O. R. Schultz

File # 353

TRACT Nº 2105
MAP OF
FEAVEL SUBDIVISION Nº2

Being a re-subdivision of Lots 1, 2, 3, 4, 5 & 6
of Feavel's Subdivision as recorded in book 20 of Maps page 10.
CITY SAN BERNARDINO, SAN BERNARDINO COUNTY CALIFORNIA



SURVEYOR'S AND ASSESSOR'S CERTIFICATE

We the undersigned County Surveyor and County Assessor in and for the County of San Bernardino State of California do hereby certify that we have examined each and every [illegible] and find the same to be in proper form for residential and commercial use and submit the maps to the board of supervisors and approval by the board of supervisors is commended for acceptance and approval by the board of supervisors.

J.P. Kemmerer
by M. Way Deputy
County Surveyor

A. E. Allen
By Mildred E. Johnson Chief Deputy
County Assessor

COUNTY AUDITOR

I hereby certify that all the taxes on the property delineated on the annexed map appearing on record in the books of the office of the County Auditor are paid and no taxes not yet payable.

V. Foot
Ex-Officio Auditor San Bernardino County

Map Approved J.P. Kemmerer by M. Way Deputy, County Surveyor

Map Approved _____ City Engineer

SUPERVISOR'S CERTIFICATE

On motion of Supervisor Biggin seconded by Supervisor Dan and duly carried it is ordered that the map of TRACT No 2105 be and the same is hereby approved and the bond filed in the office of the Board of Supervisors as a security for the payment of taxes in the sum of 200 dollars which is hereby fixed as the required amount of said bond to insure the payment of all taxes which are at the time of filing said map a lien against said tract subdivision or part thereof but not yet payable is hereby approved and the clerk of the Board of Supervisors is hereby directed to endorse this certificate on this map showing that said bond has been filed as required by law and that the foregoing order was adopted by the Board of Supervisors at a meeting held on the 12th day of April 1926

Harry L. Allison
County Clerk and ex-officio Clerk of the Board of Supervisors
San Bernardino County, California
By J. Y. Atkinson Deputy

CITY OFFICIALS CERTIFICATE

Resolved by the Mayor and Common Council of the City of San Bernardino that the map of TRACT No 2105 be and the same is hereby accepted and the streets and alleys thereon shown are hereby accepted as public streets and alleys

Ayes Hanford, Rogers, Rouse, Combs _____ Noes None _____ Absent Stroman _____

Dated this 5th day of April 1926

Attested John Nolan City Clerk

I hereby approve the foregoing resolution Lynn Dickson Mayor

SUPERINTENDENT OF STREETS

I hereby certify that all street and sewer assessments on the property shown on the annexed map are paid.

A. R. Lactaup
Superintendent of Streets

OWNER'S CERTIFICATE

We the undersigned hereby certify that we the owners of the land included within the subdivision shown on the annexed map and that we are the only persons whose consent is necessary to convey clear title to the said land and we hereby consent to the making of said map and subdivision and hereby dedicate to Public Use the streets and alleys shown on the annexed map of said subdivision

Ida H Feavel
Geo. Pommer

NOTARY'S CERTIFICATE

State of California }
County of San Bernardino } ss

On this 1st day of March 1926 before me S. C. Lawrence a Notary Public in and for the said County of San Bernardino and State of California, residing therein, duly commissioned and sworn, personally appeared Ida H Feavel and George Pommer known to me to be the persons whose names are subscribed to the annexed instrument and acknowledged to me that they executed the same.

In witness whereof I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

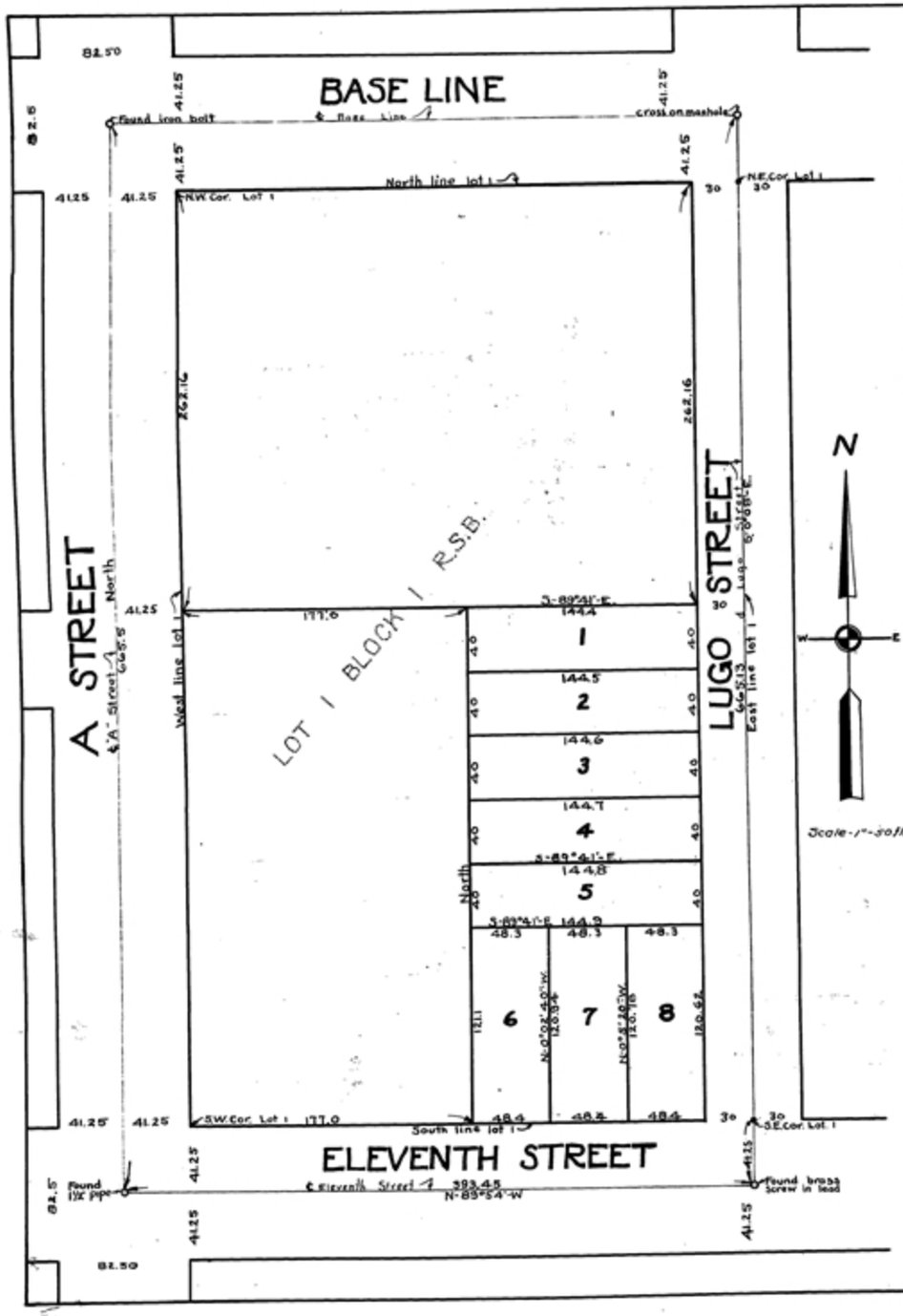
S. C. Lawrence
Notary Public in and for San Bernardino Co. Cal.

My commission expires June 25 1928

ENGINEER'S CERTIFICATE

I, C. E. Johnson, hereby certify that I am a Licensed Land Surveyor of the State of California and that this map consisting of one sheet correctly represents a survey made under my supervision during March 1926 and that all monuments shown actually exist and their positions are correctly shown.

Licensed Land Surveyor



TRACT NO. 1918
GOFORTH TRACT.

Being a subdivision of that portion of Lot 1 Block 1 – Rancho San Bernardino, described as follows, – Beginning at a point on the North line of 11th Street 177 feet East of the southwest corner of said lot 1; thence east 145.5 feet more or less, to Lugo Street; thence North 322.01 feet more or less to a point 262.16 feet South of the north line of said lot; thence West 145.5 feet more or less to a point 177 feet East of the West line of said lot; thence South to the point of beginning.

OWNER'S CERTIFICATE
We the undersigned hereby certify that we are owners of the land included within the subdivision shown on the annexed map and that we are the only persons whose consent is necessary to convey a clear title to said land and we hereby consent to the making of said map and subdivision.
F. W. Goforth
Bettie Goforth

CITY OFFICIAL CERTIFICATE
Resolved by the Mayor and Common Council of the City of San Bernardino that the map of Tract No. 1918 be and the same is hereby accepted and the streets and alleys thereon shown are hereby accepted as public streets and alleys.
Ayes: Pillman, Rogers, Rouse, Stramer, Combs.
Noes: None.
Dated this 8th day of October
Attest: [illegible] City Clerk.
I hereby approve the foregoing resolution.
A. B. W. McNally
Mayor

SURVEYOR'S AND ASSESSOR'S CERTIFICATE
We the undersigned County Surveyor and County Assessor, in and for the County of San Bernardino, State of California do hereby certify that we have examined each and every lot delineated on this map as to its value for residential or commercial uses and do hereby recommend its acceptance and approval by the Board of Supervisors.
J. P. Kennedy
County Surveyor.
[illegible]
County Assessor.

SUPERINTENDENT OF STREETS
I hereby certify that all street and sewer assessments on the property shown on the annexed map are paid.
[illegible]
Superintendent of Streets.

COUNTY AUDITOR
I hereby certify that all taxes on the property delineated on the annexed map appearing on record in the books of the office of the County Auditor are paid, except taxes not yet payable.
[illegible]
County Auditor - San Bernardino County.

Map Approved -
J. P. Kennedy
County Surveyor.

Recorded at Request of
Edgar Harn
Oct 28 1924
at 45 9 a
27
69 Maps
W. J. Guthrie
Sec

File 175

NOTARY'S CERTIFICATE
State of California,
County of San Bernardino } ss.
On this 2 day of Sept. 1924 before me a Notary Public in and for the County of San Bernardino, State of California, residing therein, duly commissioned and sworn, personally appeared F. W. Goforth and Bettie Goforth, husband and wife known to me to be the persons whose names are subscribed to the annexed instrument and acknowledged to me that they executed the same. In witness whereof I have hereunto set my hand and affixed my seal the day and year in this certificate first above mentioned.
[illegible]
Notary Public in and for said County & State.
My Commission expires, Feb 20-1927

SUPERVISOR'S CERTIFICATE
On motion of Supervisor Stram seconded by Supervisor Cross and carried, it is ordered that the map of Tract 1918 be and the same is hereby approved and the bond filed in the office of the Board of Supervisors as security for the payment of taxes in the sum of 500 dollars which is hereby fixed as the required amount of said bond to insure payment of all taxes which are at the time of filing of said map a lien against said tract, subdivision, or part thereof, but not yet payable, is hereby approved and the clerk of the Board of Supervisors is hereby directed to endorse this certificate on this map showing that said bond has been filed as required by law, and that the foregoing order was adopted by the Board of Supervisors at a meeting held Oct. 27th 1924.
Thos. R. Allison
County Clerk and Ex Officio Clerk of the Board of Supervisors, San Bernardino County, Calif.
By [illegible] Deputy.

SURVEYOR'S CERTIFICATE
I Edgar T. Harn hereby certify that I am a Licensed Land Surveyor of the State of California and that this map consisting of one sheet correctly represents a survey made by me in September 1924 and that all monuments shown actually exist and their positions are correctly shown.
Edgar T. Harn
Licensed Land Surveyor.

Map Approved -
[illegible]
City Engineer.

Note - 2"x2" pine stakes are set on all lot corners.

TRACT NO. 2297

BEING A SUB. OF A PORT. OF LOT 3, BLK. 40 R.S.B.

HIGH SCHOOL ADDITION

SHEET. 1

OWNER'S CERTIFICATE.

We the undersigned hereby certify that we are the owners of the land included within the subdivision shown on the annexed map or are interested in the title thereto, and that we are the only persons whose consent is necessary to convey a clear title to said land and we hereby consent to the making of said map and subdivision and hereby dedicate to public use all Streets and alleys shown on said map within said Subdivision and we hereby convey to the City of San Bernardino, a municipal Corporation of the State of California an easement and right of way over and along the rear five feet of each lot, for the construction thereon and therein of sewers and connections water mains and connections, gas mains and connections, telephone, telegraph, and electric energy poles, wires, and conduits, and for the construction thereon and therein of any and all appliances necessary or convenient for use in connection with the aforesaid utilities.

This grant shall inure to the benefit of any person firm or corporation now holding a franchise for the operation of, or may in the future acquire such franchise for the operation of, or for supplying to the said City of San Bernardino, State of California or its inhabitants, of gas, eletrical energy, telephone or telegraph service.

Pioneer Abstract and Title Guaranty Company
By J. L. Mack — President.
By [illegible] — Secretary.

Pioneer Title Insurance and Trust Company.
By J. L. Mack — President.
By [illegible] — Secretary.

Louis H. Williams — M. Hart
Mary R. Williams — Emma Hart

NOTARY'S CERTIFICATE

State of California } SS
County of San Bernardino

On this 10 day of February A.D. 1928 before me C. K. Cooper a notary Public in and for the County of San Bernardino State of California, residing therein, duly Commissioned and Sworn personally appeared M. Hart & Emma Hart Known to me to be the persons whose names are subscribed to the annexed instrument and acknowledged to me that they executed the same.

In witness whereof I have hereunto set my hand and affixed my official seal, the day and year in this certificate first above written. C. K. Cooper

Notary Public in and for Said County

My Commission expires. Feb 3-1929

SUPERINTENDENT OF STREETS.

I hereby certify that all Street and Sewer assessments on the property shown on the annexed Map are paid

[illegible]
Street Superintendent.

CORPORATION ACKNOWLEDGMENT

State of California } SS
County of San Bernardino

On this 10 day of February in the year 1928 A.D. before me, [illegible] a Notary Public, in and for the said County of San Bernardino State of California, Residing therein, duly commissioned and sworn personally appeared J. L. Mack Known to me to be the president and W. N. Glasscock Known to me to be the Secretary of the Pioneer Abstract and Title Guaranty Company, and J. L. Mack Known to me to be the president and W. N. Glasscock Known to me to be the Secretary of the Pioneer Title Insurance and Trust Company, the Corporations which executed the within instrument, and acknowledged to me that such Corporations executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official Seal in said County the day and year in this certificate first above written.

[illegible]
Notary Public in and for San Bernardino County

My Commission expires. June 15, 1931

SURVEYOR'S AND ASSESSOR'S CERTIFICATE.

We the undersigned County Surveyor and County Assessor of San Bernardino County, State of California, do hereby certify that He have examined each and every lot delineated on this map as to its value for residential or commercial uses, and do hereby reccommend its acceptance and approval by the Board of Supervisors.

H. H. Way — County Surveyor
H. E. Allen — County Assessor.

SURVEYOR'S CERTIFICATE

I, Edgar T. Ham hereby certify that I am a licensed Land Surveyor of the State of California and that this map consisting of two Sheets correctly represents a Survey made under my Supervision in August 1927 and that all monuments Shown actually exist and their position is correctly shown.

Edgar Ham
Licensed Land Surveyor.

COUNTY AUDITOR

I hereby certify that all taxes on the property delineated on the annexed map appearing on record in the books of the office of the County Auditor, are paid.

J. Hart — County Auditor.
By [illegible] — Deputy.

Map Approved: H. H. Way — County Surveyor
Map Approved: W. P. Burnett — City Engineer.

SUPERVISOR'S CERTIFICATE (Sheet 2)

~~It satisfactorily appearing that all taxes which have been or might now be a lien against the property included in the herein described Tract subdivision or part thereof, and which are now due and payable, have been paid, and good and sufficient cause appearing therefore, it is hereby ordered, upon motion of Supervisor Gray seconded by Supervisor Beaquin and Carried that the herein map of Tract No. 2297 be and the same is hereby approved and the Clerk of the Board of Supervisors is hereby directed to endorse this certificate upon this map, pursuant to an order adopted by the said Board of Supervisors at a meeting held Apr. 23, 1928.~~

~~Harry L. Allison~~
~~County Clerk and ex-officio Clerk of the Board of Supervisors~~
~~By [illegible] Deputy~~

CITY OFFICIALS' CERTIFICATE

Resolved by the Mayor and Common Council of the City of San Bernardino that the Map of Tract No. 2297 be and the same is hereby accepted and the Streets and Alleys thereon shown are hereby accepted as Public Streets and Alleys

Ayes Hanford - Rogers - Rouse - Wolf - Combs.
Noes None. Absent: None

Dated this 20th day of February A.D. 1928

Attest John [illegible]
City Clerk

I hereby Approve the foregoing Resolution
[illegible]
Mayor.

NOTARY'S CERTIFICATE

State of California } SS
County of Sonoma

On this 31st day of January A.D. 1928 before me a Notary Public in and for the County of Sonoma State of California, residing therein duly commissioned and Sworn personally Appeared Louis H. Williams and Mary R. Williams Known to me to be the persons whose names are subscribed to the annexed instrument and acknowledged to me that they executed the same.

IN WITNESS WHEREOF, I have hereunto set my Hand and affixed my official seal, the day and year first above written. B. A. Miller

Notary Public

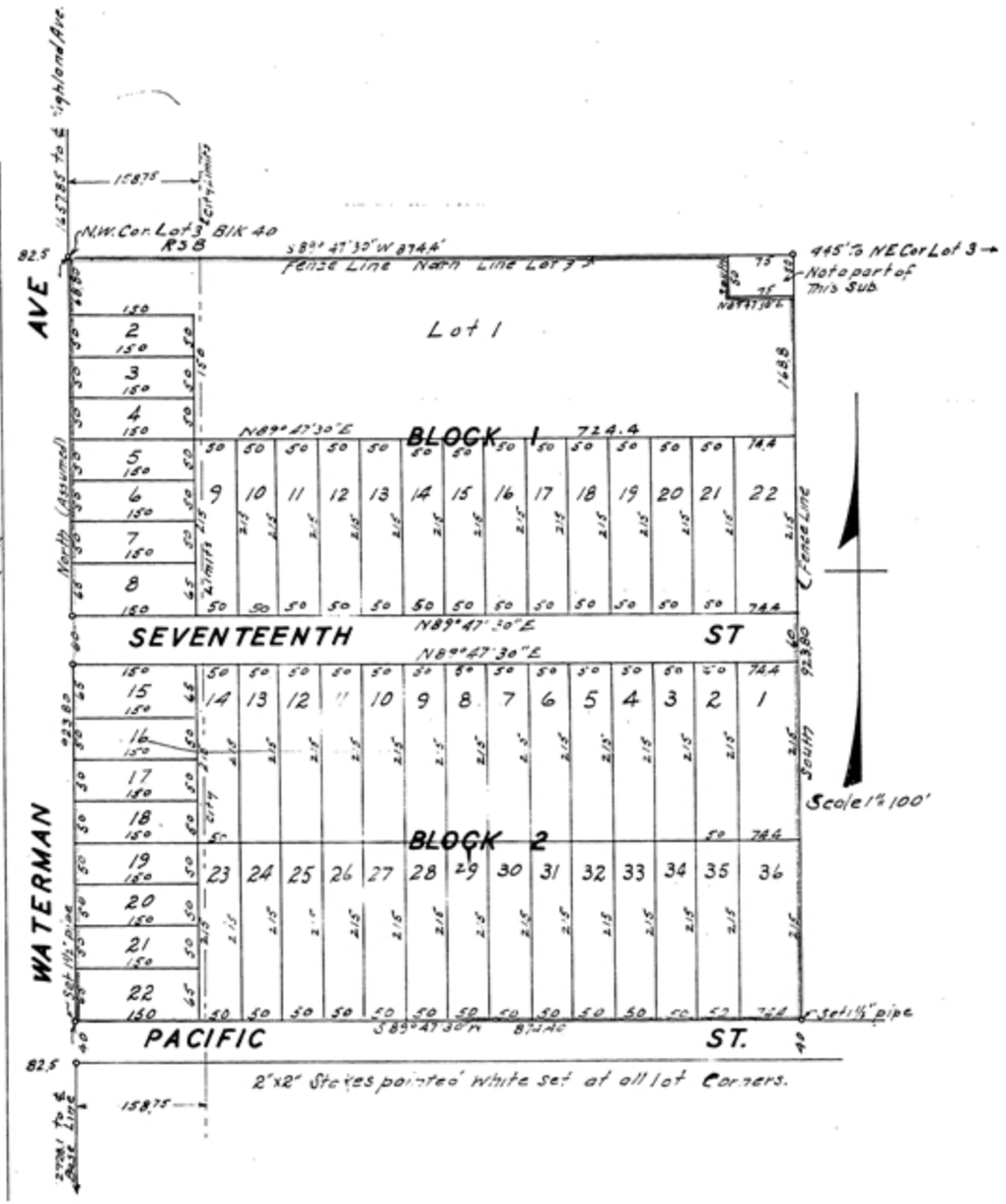
Recorded at Request of Pioneer Title Ins. & Trust Co.
APR 24 1928 at 9 Min. past 4 P. M. in Book 33 of Maps Page 53-59 Records San Bernardino County
FULTON G. FERAUD County Recorder
By [illegible] Deputy Recorder
Fee $6.00

Sht. 5 of 5

148

TRACT NO. 2297

SHEET 2



SUPERVISORS' CERTIFICATE

On motion of Supervisor Gray seconded by Supervisor Duggan and carried it is ordered that the map of Tract 2297 be and the same is hereby approved and the bond filed in the office of the Board of Supervisors as security for the payment of taxes in the sum of 500 dollars which is hereby fixed as the required amount of said bond to insure payment of all taxes which are at the time of filing of said map a lien upon said Tract Subdivision, or portion of said but not yet payable, is hereby approved, and the Clerk of the Board of Supervisors is hereby directed to endorse this certificate on this map showing that said bond has been filed a required by law, and that the foregoing order was adopted by the Board of Supervisors at a meeting held Apr. 23, 1928

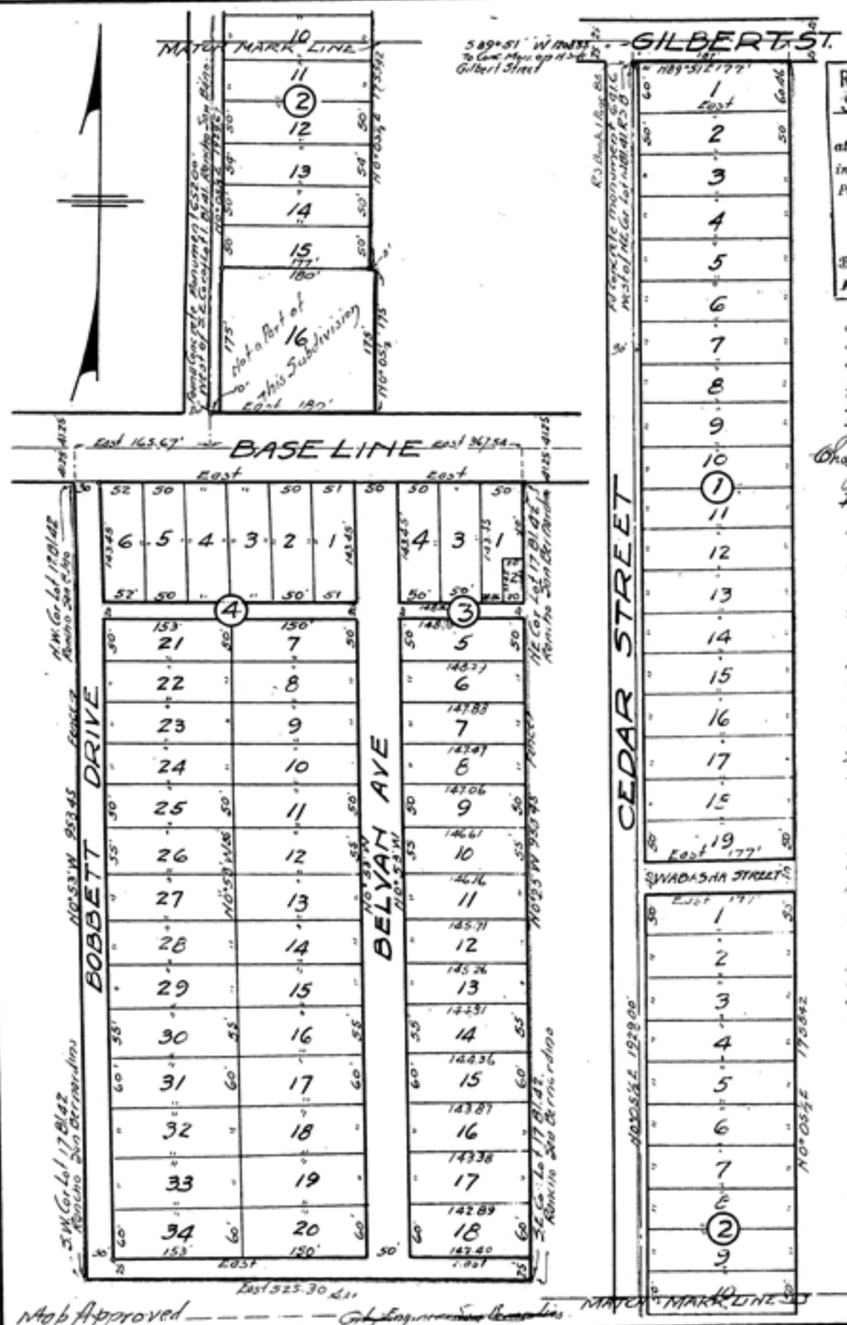
Harry L. Allen
County Clerk and Ex. Officio
Clerk of the Board of Supervisors
By E. J. Atkinson Deputy

TRACT 2307
VAN LOON SUBDIVISION

BEING A SUBDIVISION OF LOT 17 BLOCK 42 AND PORTIONS OF LOTS 1-2-13 & 14 BLOCK 41 RANCHO SAN BERNARDINO

SAN BERNARDINO COUNTY CALIF.

SCALE 1 in = 100 ft. SURVEYED BY CHAS. L. FOULKE.



Recorded at Request of Security Title Ins. & Gty Co. Feb 8 1928 at 9 A.M. in Book 33 of Maps Page 49 Records San Bernardino County FULTON G. FERGUD County Recorder By Fulton G. Ferguson Deputy Recorder Fee 5.00

File 536

We the undersigned, hereby certify that we are the owners of the land included within the Subdivision shown on the annexed map and that we are the only persons whose consent is necessary to convey a clear title to said land and we hereby dedicate to public use all streets shown on said map within said subdivision and it is hereby agreed that any sidewalks built on the east side of Cedar Street will be built on the lots and not inside the street line.

Charles V. Van Loon Emma C. Van Loon R. J. Webster Lillian D. Webster
A. W. Galbraith Emma Galbraith Albert F. Hawes Dorothy J. Hawes
Pioneer Title Insurance and Trust Company First Bank of Highland
Pres. Sec'y. H. T. Humphreys

I hereby certify that all taxes on the property delineated on the annexed map appearing on record in the books of the office of County Auditor are paid

V. Pete
County Auditor

We the undersigned County Surveyor and County Assessor in and for the County of San Bernardino State of California, do hereby certify that we have examined each and every lot delineated on this map as to its value for residential and commercial purposes and do hereby recommend its acceptance and approval by the Board of Supervisors

J. H. Way County Surveyor — H. E. Nelles County Assessor

It satisfactorily appearing that all taxes which have been or might be a lien against the property included the herein described tract, subdivision or any part thereof and which are now due and payable, have been paid and good cause appearing therefor, it is ordered upon motion of Supervisor Rittenhouse seconded by Supervisor Chenney and carried, that the herein map of Tract No 2307 be and the same is hereby approved and the Clerk of the Board of Supervisors is hereby directed to endorse this certificate upon this map, pursuant to an order adopted by said Board of Supervisors at a meeting held Feb 6, 1928.

Harry K. Allison
County Clerk and Ex-Officio Clerk of the Board of Supervisors San Bernardino County
By [illegible] Deputy

I, Chas. L. Foulke, hereby certify that I am a licensed land Surveyor in the State of California and this map consisting of (1) one sheet correctly represents a survey made under my supervision in November 1927 and that all monuments shown actually exist and their positions are correctly shown. All lot corners are marked by 3/4" x 2 stakes.

Chas. L. Foulke
License Land Surveyor

Map Approved J. H. Way County Surveyor

State of California
County of San Bernardino } SSS.

On this 14th day of November 1927, before me, a Notary Public in and for the County of San Bernardino, State of California, residing therein, duly commissioned and sworn, personally appeared Chas. Van Loon, Emma C. Van Loon, R. J. Webster and Lillian D. Webster known to me to be the persons whose names are subscribed to the annexed instrument and acknowledged to me that they executed the same.

In witness whereof I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

Nettie G. Geeser
Notary Public in and for said County & State

State of California
County of San Bernardino } SSS.

On this 14th day of November 1927 before me, a Notary Public in and for the County San Bernardino State of California, residing therein, duly commissioned and sworn, personally appeared A. W. Galbraith, Emma Galbraith, Albert F. Hawes, Dorothy J. Hawes, known to me to be the persons whose names are subscribed to the annexed instrument and acknowledged to me that they executed the same.

In witness whereof I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written

Nettie G. Geeser
Notary Public in and for said County and State

~~State of California~~
~~County of San Bernardino~~ SSS

~~In the year of November 1927 before me, a Notary Public in and for said County of San Bernardino State of California, Appeared H. Muck & known to me to be President and H. H. Gibb each known to me to be the Secretary of the Pioneer Title Insurance and Trust Company the Corporation that executed the within instrument known to me to be the persons who executed the within instrument on behalf of the Corporation therein named and acknowledged to me that said Corporation executed the same.~~

~~In witness whereof I have hereunto set my hand and affixed my seal the day and year in this certificate first above written~~

~~Notary Public~~

State of California
County of San Bernardino } SSS.

On this 14th day of Nov. 1927 before me, a Notary Public in and for the County of San Bernardino State of California, Appeared J. T. Humphreys known to me to be President and [illegible] known to me to be Secretary of the First Bank of Highland the Corporation that executed the within and foregoing instrument known to me to be the persons who executed the within instrument on behalf of the Corporation therein named and acknowledged to me that said Corporation executed the same.

In witness whereof I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

Nettie G. Geeser
Notary Public

Map Approved W. P. Burnett City Engineer San Bernardino

Recorded at Request of C. L. Foulke
JAN 20 1929
at 55 Min. past 10 A M.
in Book 34 of Maps
Page 9
Records San Bernardino County
FULTON G. FERAUD
County Recorder
By A.R. Schultz
Deputy Recorder
Fee 5.00

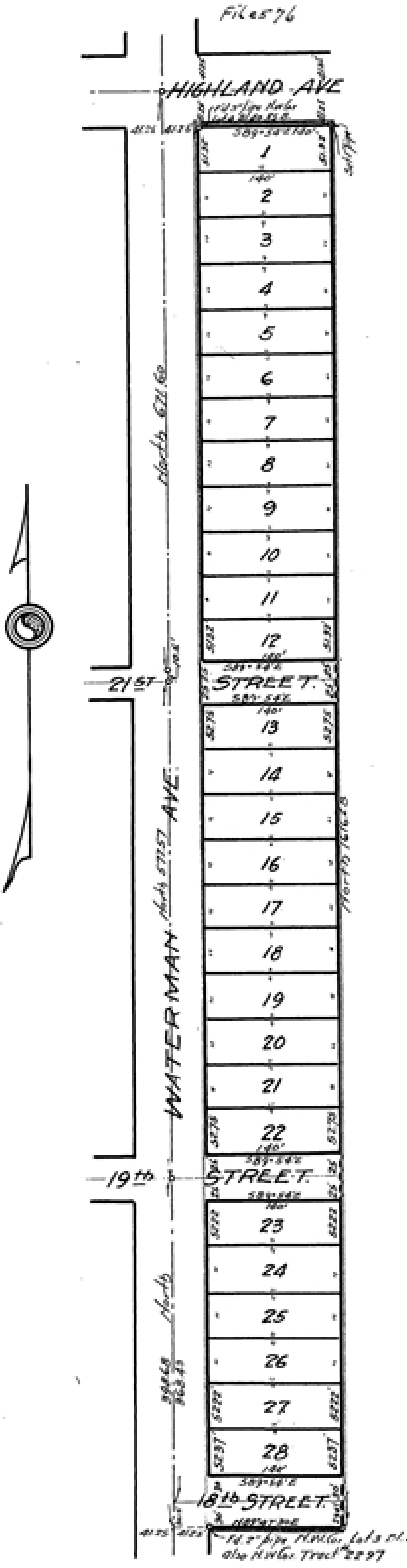
File 576

TRACT No 2376

HIGHLAND-WATERMAN SUBDIVISION

BEING A SUBDIVISION OF THE WEST 140 FEET OF LOT 4, BLOCK 40 RANCHO SAN BERNARDINO

SURVEYED BY CHAS. L. FOULKE   SCALE 1" = 100'



We the undersigned hereby certify that we are the owners of the land included within the subdivision shown on the annexed map and that we are the only persons whose consent is necessary to convey a clear title to said land and we hereby consent to the making of said map and subdivision and hereby dedicate to public use all streets shown on said map within said subdivision and we hereby convey to the city of San Bernardino a municipal Corporation of the State of California, an easement and right of way over and along the east five feet of Lots 1-28 for the construction thereon and therein of water mains and connections gas mains and connections, telephone, telegraph and electric energy poles, wires and conduits and for the construction thereon and therein of any and all appliances necessary or convenient for use in connection with aforesaid utilities.
This grant shall inure to the benefit of any person firm or corporation now holding a franchise or who may in the future acquire any franchise for the operation of or for the supplying to the said city of San Bernardino or its inhabitants gas, electrical energy, telephone or telegraph Service.

C. Engleking C. Engleking
E. C. Miner

State of California
County of San Bernardino
On this 8th day of October 1928, before me R. L. Morine a notary Public in and for the County of San Bernardino, State of California, residing therein duly commissioned and sworn, personally appeared C. Engleking and E. C. Miner, known to me to be the persons whose names are subscribed to the annexed instrument and acknowledged to me that they executed the same.
In witness whereof I have hereunto set my hand and affixed my official Seal the day and year in this certificate first above written.

R. L. Morine
Notary Public in and for said County & State

It satisfactorily appearing that all taxes which have been or might now be a lien against the property included in the herein described tract, Subdivision or any part thereof, and which are now due and payable have been paid and good cause appearing therefor, it is hereby ordered, upon motion of Supervisor Hinkson Seconded by Supervisor Cullen and carried that the herein map of Tract No 2376 be and the same is hereby approved and the Clerk of the Board of Supervisors is hereby directed to endorse this certificate upon this map. Pursuant to an order adopted by said Board of Supervisors at a meeting held, Nov. 13, 1928.

Harry L. Allison
County Clerk and Ex Officio Clerk of the Board of Supervisors San Bernardino County Calif.
By D. J. Atkinson Deputy.

I Chas. L. Foulke hereby certify that I am a Licensed land Surveyor in the State of California and this map consisting of one sheet correctly represents a Survey made under my Supervision in October 1928 and that all monuments shown actually exist and their positions are correctly shown. All lot corners are marked by 2x2 stakes.

Chas. L. Foulke
Licensed Land Surveyor.

I hereby certify that all taxes on the property delineated on the annexed map appearing on record in the books of the office of County Auditor are paid

V. Root
County Auditor.
[illegible] Dy

We the undersigned County Surveyor and County Assessor in and for the County of San Bernardino, State of California do hereby certify that we have examined each and every lot delineated on this map as to its value for residential and commercial purposes and do hereby recommend its acceptance and approval by the Board of Supervisors.

H. L. Way County Surveyor
A. E. Allen County Assessor.
By Mildred Johnson Chief Deputy.

Resolved by the Mayor and Common Council of the City of San Bernardino that the map of Tract #2376, be and the same is hereby accepted and the Streets thereon shown are hereby accepted as public Streets.
Ayes Hanford, Rogers, Rowe, Wolf, Combs. Noes: None. Absent: None.
Dated this 5th day of November, 1928

Attest [illegible] City Clerk.

I hereby approve the foregoing resolution [illegible] Gilbert Mayor.

I hereby certify that all street and sewer assessments on the property shown on the annexed map are paid

[illegible]
Superintendent of Streets

Map Approved Gordon Hemsted City Engineer.
Map Approved H. L. Way County Surveyor.

TRACT NO 2207

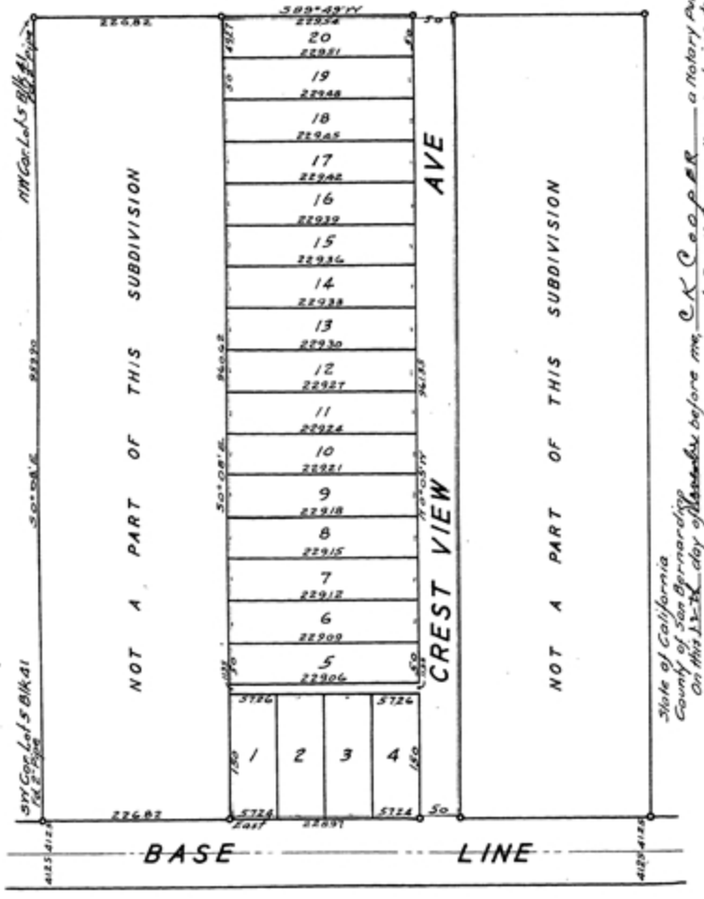
BEING A SUBDIVISION OF A PART OF LOT 5 BLOCK 41 SAN BERNARDINO RANCHO

E. T. HAM SURVEYOR

SCALE 1 IN. 100 FT.

Recorded at Request of
Pioneer Title Ins Co
Nov. 15. 1926
at 10 Min. past 4 P. M.
in Book 31 of Maps
Page 74
Records San Bernardino County
FULTON G. FERAUD,
County Recorder,
By Geneva Dennis
Deputy Recorder.
Fee 5.00

File 424



Note 2X2 Stakes set at all lot corners

State of California
County of San Bernardino
On this 13th day of November before me, C K Cooper a Notary Public in and for said County, personally appeared Geo H Seager known to me to be the President, and C. V. Kelly known to me to be the Secretary of the City of San Bernardino School District, that executed the within and foregoing instrument, and known to me to be the persons who executed the same on behalf of the said School Dist. and acknowledged to me that such School District executed the same.
Witness my hand and official seal
C K Cooper
Notary Public in and for the County of San Bernardino State of California
My commission expires Feb. 3, 1929

BASE LINE TRACT

OWNERS CERTIFICATE

We, the undersigned, hereby certify that we are the owners of the land included within the subdivision shown on the annexed map and that we are the only persons whose consent is necessary to convey a clear title to said land and we hereby consent to the making of said map and subdivision and hereby dedicate to public use all streets shown on said map within said subdivision.

PIONEER TITLE INSURANCE AND TRUST Co.
By J. L. Mack President
By W. H. Glasscock Secretary

Arthur Johnson
Lillie Johnson
L. B. Ferdinger
Vivian B. Ferdinger
Administrators with Will Annexed of the estate of James Bessant, deceased.

CITY OF SAN BERNARDINO SCHOOL DIST.
By Geo. H. Seager President
By C. V. Kelly Secretary

NOTARY'S CERTIFICATE

State of California
County of San Bernardino

On this 13th day of November 1926 before me C K Cooper a Notary Public in and for the County of San Bernardino, State of California residing therein, duly commissioned and sworn, personally appeared Arthur Johnson, Lillie Johnson, L. B. Ferdinger, Vivian B. Ferdinger and George Bessant and Grover Cooley as Administrators with Will Annexed of the estate of James Bessant, deceased known to me to be the persons whose names are subscribed to the annexed instrument and acknowledged to me that they executed the same. In witness whereof, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above mentioned.

C K Cooper
Notary Public in and for said County and State

My commission expires Feb. 3, 1929

CORPORATION ACKNOWLEDGEMENT

State of California
County of San Bernardino

On this 13th day of November, in the year of our Lord One Thousand, Nine Hundred and Twenty Six, before me C K Cooper, a Notary Public in and for said County of San Bernardino, State of California residing therein, duly commissioned and sworn, personally appeared J. L. Mack, known to me to be the President, and W. H. Glasscock, known to me to be the Secretary of the Pioneer Title Insurance and Trust Co., the corporation that executed the within and foregoing instrument, known to me to be the persons who executed the within instrument on behalf of the Corporation therein named, and acknowledged to me that such corporation executed the same. In witness whereof, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above mentioned.

C K Cooper Notary Public

My commission expires Feb. 3, 1929.

SUPERVISORS CERTIFICATE

On motion of Supervisor Cram seconded by Supervisor Cherry and carried, it is ordered that the map of Tract No 2207 be and the same is hereby approved and the bond filed in the office of the Board of Supervisors as security for the payment of taxes in the sum of 350.00 dollars which is hereby fixed as the required amount of said bond to insure payment of all taxes which are at the time of filing said map a lien against said tract, subdivision or part thereof, but not payable, is hereby approved and the Clerk of the Board of Supervisors is hereby directed to endorse this certificate on this map showing that said bond has been filed as required by law and that the foregoing order was adopted by the Board of Supervisors at a meeting held Nov. 15, 1926

Harry L. Allison
County Clerk and Ex Officio Clerk of the Board of Supervisors of San Bernardino County

By J. J. Atkinson Deputy

SURVEYORS CERTIFICATE

I, Edgar T. Ham hereby certify that I am a Licensed Land Surveyor of the State of California and that this map consisting of one sheet correctly represents a survey made under my supervision in Nov 1926 and that all monuments shown actually exist, and their positions are correctly shown.

Edgar Ham
Licensed Land Surveyor

SURVEYOR'S AND ASSESSOR'S CERTIFICATE

We the undersigned, County Surveyor and County Assessor, in and for the County of San Bernardino State of California do hereby certify that we have examined each and every lot delineated on this map as to its value for residential or commercial uses and do hereby recommend its acceptance and approval by the Board of Supervisors

H. L. Way
County Surveyor

H. E. Helm
County Assessor

COUNTY AUDITOR

I hereby certify that all the taxes on the property delineated on the annexed map appearing on record in the books of the office of the County Auditor are paid

V. I. Pratt
County Auditor San Bernardino County

Map approved H. L. Way County Surveyor
Map approved City Engineer of San Bernardino

TRACT Nº 2275

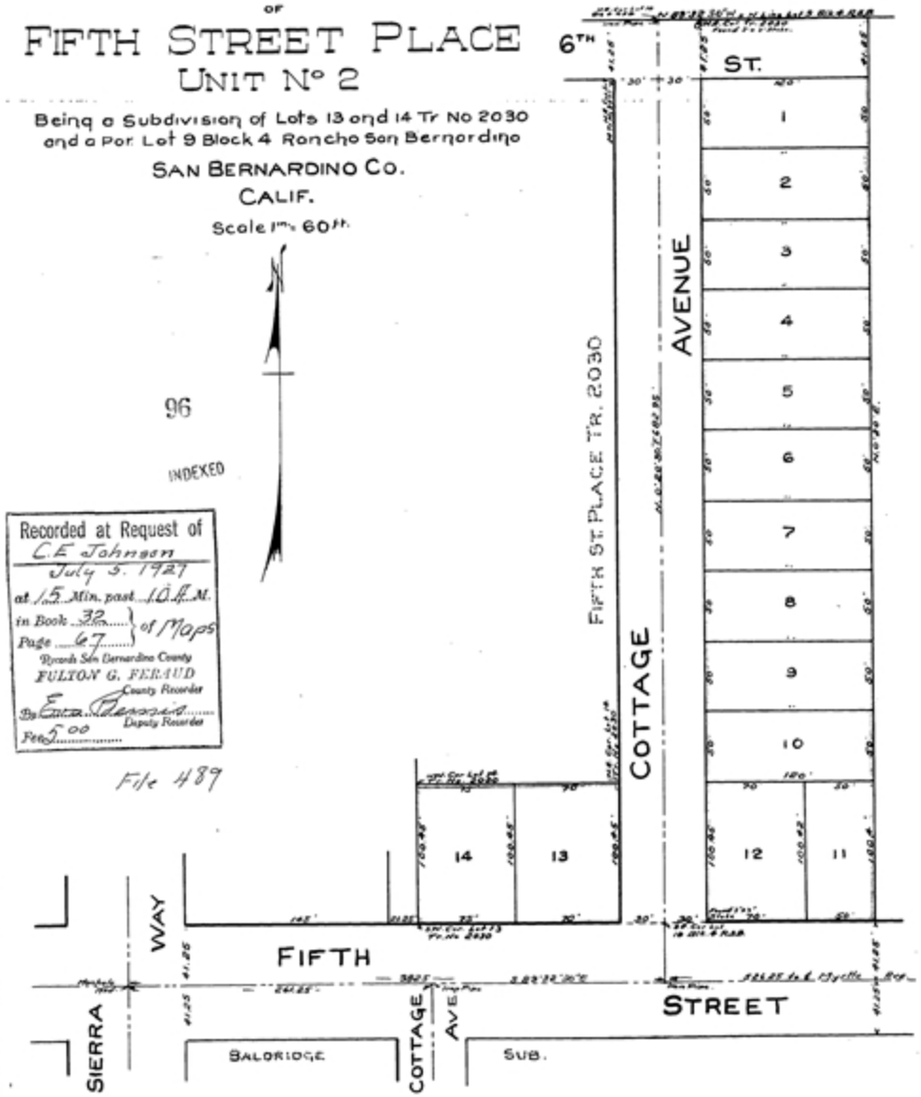
MAP
OF

FIFTH STREET PLACE
UNIT Nº 2

Being a Subdivision of Lots 13 and 14 Tr No 2030
and a Por. Lot 9 Block 4 Rancho San Bernardino

SAN BERNARDINO CO.
CALIF.

Scale 1" = 60 ft.



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INDEXED

Recorded at Request of
C.E. Johnson
July 5. 1927
at 15 Min. past 10 A.M.
in Book 32 of Maps
Page 67
Records San Bernardino County
FULTON G. FERAUD
County Recorder
By Ezra Pearson
Deputy Recorder
Fee $5.00

File 489

OWNER'S CERTIFICATE

We the undersigned hereby certify that we are the owners of the land included within the subdivision shown on the annexed map or are interested in the title thereto and that we are the only persons whose consent is necessary to convey a clear title to said land and we hereby consent to the making of said map and subdivision and hereby dedicate to public all streets shown on said map within said subdivision, and we hereby convey to the City of San Bernardino a municipal corporation of the State of California an easement and right of way over and along the rear five feet of all lots in this subdivision for the construction thereon and therein of sewers and connections water mains and connections gas mains and connections telephone telegraph and electric energy poles wires and conduits and for the construction thereon and therein of any and all appliances necessary or convenient for use in connection with the afore said utilities

This Grant shall inure to the benefit of any firm person or corporation now holding a franchise or who may in the future acquire any franchise for the operation or for the supplying of the said City of San Bernardino or its inhabitants of gas electric energy telephone and telegraph service

R. H. Lonsdale Noel Lonsdale

NOTARY'S CERTIFICATE

State of California }ss.
County of San Bernardino }

On this __ day of June 1927 before me Phil H. Shinn a Notary Public in and for the County of San Bernardino State of California residing therein duly Commissioned and sworn personally appeared R. H. Lonsdale and Noel Lonsdale known to me to be the persons whose names are subscribed to the annexed instrument and acknowledged to me that they executed the same

In Witness whereof I have hereunto set my hand and affixed my official seal the day and year in this certificate first above mentioned

Phil H. Shinn
Notary Public in and for said Co. & State

My Commission Expires May 26, 1930

SUPERVISOR'S CERTIFICATE

On motion of Supervisor Stoddard, Seconded by Supervisor Hardy and carried it is ordered that the map of Tract No. 2275 be and the same is hereby approved and the bond filed in the office of the Board of Supervisors as security for the payment of taxes in the sum of 140 dollars which is hereby fixed as the required amount of said bond to insure payment of all taxes which are at the time of filing said map a lien against said tract subdivision or part thereof but not payable is hereby approved and the Clerk of the Board of Supervisors is hereby directed to endorse this certificate on this map showing that said bond has been filed as required by law and that the foregoing order was adopted by the board of Supervisors at a meeting held June 7, 1927

Harry L. Allison
County Clerk and Ex-officio Clerk of the Board of Supervisors of San Bernardino County
by J. Johnson Deputy

SURVEYOR'S AND ASSESSOR'S CERTIFICATE

We the undersigned County Surveyor and County Assessor in and for the County of San Bernardino, State of California do hereby Certify that we have examined each and every Lot delineated on this map as to its value for residential or commercial uses and do hereby recommend its acceptance and approval by the Board of Supervisors

N. E. Way
County Surveyor

Ira E. Allen
County Assessor
By Mildred E. Johnson

COUNTY AUDITOR

I hereby certify that all the taxes on the property delineated on the annexed map appearing on record in the books of the office of the County Auditor are paid

County Auditor San Bernardino Co.
by ____ Deputy

SURVEYOR'S CERTIFICATE

I C.E. Johnson hereby certify that I am a Licensed Land Surveyor of the State of California and that this map consisting of one sheet correctly represents a survey made under my supervision in June 1927 and that all monuments shown actually exist and their positions are correctly shown

Licensed Land Surveyor

CITY OFFICIAL CERTIFICATE

Resolved by the mayor and Common Council of the City of San Bernardino that the map of Tract 2275 be and same is hereby accepted and the Streets and alleys thereon shown are hereby accepted as public streets and alleys

Ayes Hanford-Rouse-Rogers-Wolf
Noes None. Absent Combs
Dated this 20th day of June 1927
I hereby approve the foregoing resolution

Attest John F. Allen City Clerk
D. N. Gilbert Mayor

SUPERINTENDENT OF STREETS

I hereby Certify that all Street and Sewer Assessments on the property shown on the annexed map are Paid

Superintendent of Streets

Map approved N. E. Way
County Surveyor

Map approved W. F. Burnett
City Engineer

Note
Set 2"x2" Stakes at all Corners

TRACT No. 2416

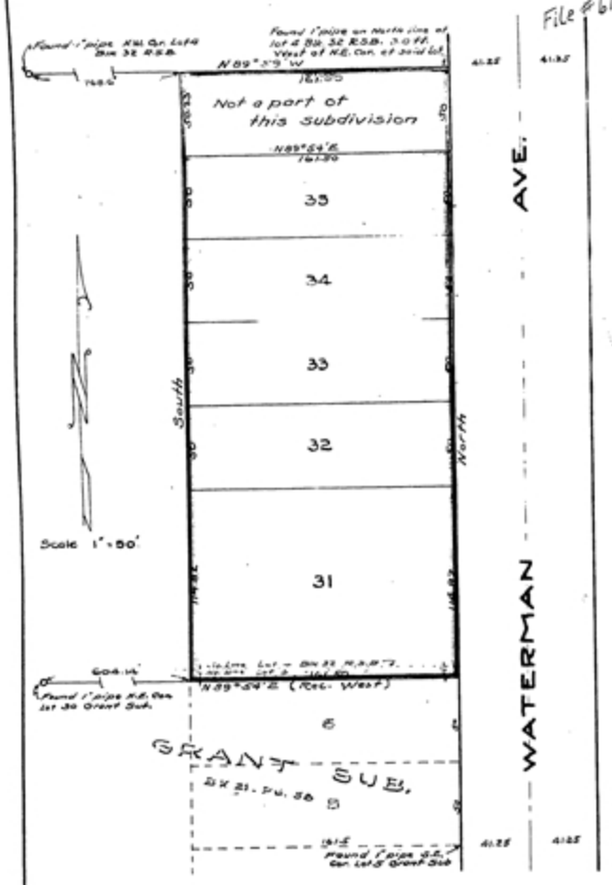
GRANT SUBDIVISION No. 2

A PORTION OF

BEING A SUBDIVISION OF THE EAST 161.50 FT. OF LOT 4, AND A PORTION OF THE EAST 161.50 FT. OF LOT 5 ALL IN BLK 32 R.S.B. AS RECORDED IN MAP BK. 7. PG. 2 RECORDS OF SAN BERNARDINO COUNTY, CALIFORNIA

Recorded at Request of
Grant McIntyre
DEC 20 1929
at 36 Min. past 10 A. M.
in Book 3W of Maps
Page 59
Records San Bernardino County
FULTON G. FERAUD
County Recorder
By A. R. Schultz Deputy Recorder
Fee $5.00

File #611.



OWNERS CERTIFICATE

We, the undersigned hereby certify that we are the owners of the land included within the subdivision shown on the annexed map, or are interested in the title thereto, and that we are the only persons whose consent is necessary to convey a clear title to said land, and we hereby consent to the making of said map and subdivision and we hereby convey to the City of San Bernardino, a Municipal Corporation of the State of California, an easement and right of way over and along the rear five feet of each and every lot, for the construction thereon and therein of sewers mains and connections, telephone, telegraph, and electric energy poles, wires and conduits, and for the construction thereon and therein, of any and all appliances necessary or convenient for use in connection with the aforesaid utilities.

This grant shall inure to the benefit of any person, firm or corporation now holding a franchise or who may in the future acquire any franchise for the operation or for the supplying, to the said City of San Bernardino, State of California, or its inhabitants, of gas, electrical energy, telephone and telegraph service.

Grant McIntyre
Laura McIntyre

NOTARY'S CERTIFICATE

State of California
County of San Bernardino } ss

On this 5th day of August before me Jas. R. Austin a Notary Public, in and for the County of San Bernardino, State of California residing therein, duly commissioned and sworn personally appeared Grant McIntyre and Laura McIntyre, his wife known to me to be the person whose names are subscribed to the annexed instrument and acknowledged to me that they executed the same.

In witness whereof I have hereunto set my hand and affixed my official seal the day and year in this certificate first above mentioned.

Jas. R. Austin
Notary Public in and for said Co. & State

My Commission expires. 12-22-32

CITY OFFICIAL CERTIFICATE

Resolved by the Mayor and Common Council of the City of San Bernardino that the map of Tract No 2416 be and the same is hereby accepted and the streets and alleys thereon shown are hereby accepted as public streets and alleys.

Ayes Reeg, Combs, Cline, Martin, Sifer
Noes None
Absent None

Dated this third day of September 1929
Attest City Clerk
I hereby approve the foregoing Resolution
Mayor

Set 1/2" pipes at all lot corners.

SUPERVISORS CERTIFICATE

On motion of Supervisor Andyeson seconded by Supervisor Crensy and carried, it is ordered that the map of Tract No. 2416 (Grant Sub. No 2) be and the same is hereby approved and the bond filed in the office of the Board of Supervisors as security for the payment of taxes in the sum of 2500 dollars which is hereby fixed as the required amount of said bond to insure payment of all taxes which are at the time of filing said map a lien against said tract, subdivision or part thereof but not payable, is hereby approved and the Clerk of the Board of Supervisors is hereby directed to endorse this certificate on this map, showing that said bond has been filed as required by law and that the foregoing order was adopted by the Board of Supervisors at a meeting held Sept. 10, 1929

Harry L. Allen
County Clerk and Ex-Officio Clerk of the Board of Supervisors, San Bernardino, Co.
By Deputy

SURVEYOR'S CERTIFICATE

I, Carl A. Youngquist hereby certify that I am a Licensed Land Surveyor of the State of California and that this map consisting of one sheet correctly represents a survey made under my supervision in May 1929 and that all monuments shown actually exist and their positions are correctly shown.

Carl A. Youngquist
Licensed Land Surveyor

SURVEYORS AND ASSESSOR'S CERTIFICATE

We, the undersigned County Surveyor and County Assessor in and for the County of San Bernardino State of Calif. do hereby certify that we have examined each and every lot delineated on this map as to its value for residential or commercial uses and do hereby recommend its acceptance and approval by the Board of Supervisors.

H. L. Way
County Surveyor

H. L. Allen
County Assessor

COUNTY AUDITOR

I hereby certify that all taxes on the property delineated on the annexed map appearing on record in the books of the office of the County Auditor are paid.

County Auditor San Bernardino Co.

Map approved H. L. Way County Surveyor
Map approved City Engineer

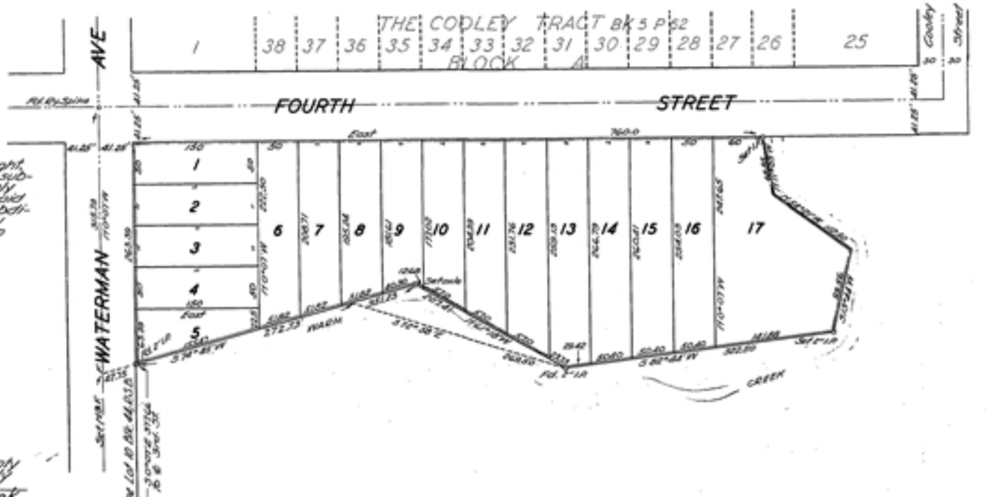
SUPERINTENDENT OF STREETS

I hereby certify that all street and sewer assessments on the property shown on annexed map are paid.

Superintendent of Streets

TRACT 2503

BEING A SUBDIVISION OF A PORTION OF LOTS 9 & 10 BLOCK 44 R.S.B.



OWNERS CERTIFICATE

We hereby certify that we are the owners of or have some right, title or interest in and to the real property included within the subdivision shown upon the annexed map and that we are the only persons whose consent is necessary to pass a clear title to said property, and we consent to the making of said map and subdivision as shown within the colored border lines, and hereby dedicate to the public use all of the streets shown upon said map within said subdivision.

Pioneer Title Insurance and Trust Company.
By _____ President.
By _____ Secretary.

NOTARY CERTIFICATE

State of California
County of San Bernardino } ss.

On this 25th day of February 1935, before me G. D. Snider a Notary Public in and for the County of San Bernardino, State of California residing therein duly commissioned and sworn personally appeared W. F. Mack known to me to be the President and W. N. Glasscock known to me to be the Secretary of the Pioneer Title Insurance and Trust Company, the corporation that executed the within instrument and known to me to be the persons who executed the same upon behalf of the corporations named therein and acknowledged to me that such corporations executed the same.

In witness whereof, I have hereunto set my hand and affixed my official seal, the day and year in this certificate first above written.

G. D. Snider
Notary Public in and for County of San Bernardino, State of California.

ACCEPTANCE

The County of San Bernardino, State of California, by and through its duly authorized officers hereby accepts the foregoing dedication.

County of San Bernardino, State of California.
By A. L. Doran Chairman of the Board of Supervisors.

Attest:

Harry L. Allison
County Clerk and Ex-Officio
Clerk of the Board of Supervisors.
By _____ Deputy.

CERTIFICATE OF CLERK OF BOARD OF SUPERVISORS

I hereby certify that a bond in the sum of $50.00 has been executed and filed with the Board of Supervisors of the County of San Bernardino, State of California, conditioned upon the payment of all taxes, state, county, municipal or local and all special assessments collected as taxes, which at the time of filing of the annexed map with the County Recorder are a lien against said property, but not yet payable and said bond has been duly approved by the said Board of Supervisors.

Harry L. Allison
County Clerk and Ex-Officio
Clerk of the Board of Supervisors.
By _____ Deputy.

SURVEYORS CERTIFICATE

I, Edgar T. Ham, do hereby certify that I am a registered civil engineer of the State of California and that this map, consisting of one sheet correctly represents a survey made under my supervision in December 1934, and that all of the monuments shown thereon actually exist and their positions are correctly shown.
Dated this 16th day of March 1935.

Edgar T. Ham

AUDITORS CERTIFICATE

I hereby certify that according to the records of this office as of this date, there are no liens against the real property shown upon the annexed map for state, county, municipal or local taxes yet unpaid or special assessments collected as taxes, except taxes or special assessments not yet payable which are estimated at $ _____.
Dated this 16 day of March 1935.

Vincent L. Roth County Auditor
County of San Bernardino,
State of California
By _____ Deputy.

CERTIFICATE IN RE SPECIAL ASSESSMENT

I hereby certify that according to the records of this office the property shown upon the herein map is not subject to any special assessments which have not been paid in full. This certificate does not include any special assessment district the bonds of which have not yet become a lien upon the said property.
Dated this 16 day of March 1935.

Vincent L. Roth County Auditor
County of San Bernardino,
State of California
By _____ Deputy.

Map approved _____ County Surveyor.

Map approved _____ City Engineer.

32

Recorded at Request of
Co Rud
at 12 Min. past 9 A.M.
in Book 36 of Maps
Page 4
Records San Bernardino County
Ted R. Carpenter
County Recorder
By A. Rodeschultz Deputy
Fee 5.00

File 686

686

36-4

686

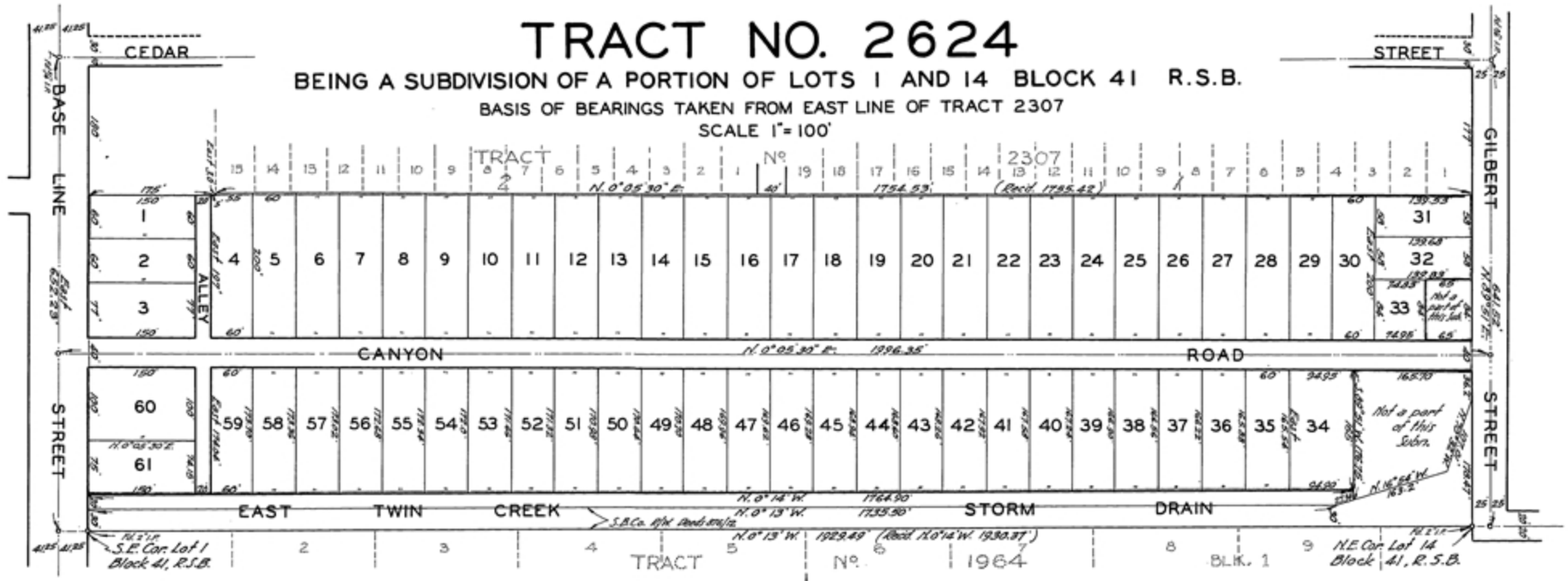
E-261

TRACT NO. 2624

BEING A SUBDIVISION OF A PORTION OF LOTS 1 AND 14 BLOCK 41 R.S.B.

BASIS OF BEARINGS TAKEN FROM EAST LINE OF TRACT 2307

SCALE 1" = 100'



OWNER'S CERTIFICATE

We hereby certify that we are the owners of, or have some right title or interest in and to, the real property included within the Subdivision shown upon the annexed map and that we are the only persons whose consent is necessary to pass a clear title to said property, and we consent to the making of said map and subdivision as shown within the colored border lines and hereby dedicate to the public use all the streets and alleys shown upon said map within said subdivision.

Forest E. Page
Myrtle A. Page
W H Pattillo

NOTARY ACKNOWLEDGMENT

State of California
County of San Bernardino } ss

On this 10th day of April 1940, before me, C. K. Cooper a Notary Public in and for the County of San Bernardino, State of California, residing therein, duly commissioned and sworn, personally appeared, Forest E. Page and Myrtle A. Page, husband and wife, and W. H. Pattillo, known to me to be the persons whose names are subscribed to the within instrument and acknowledged to me that they executed the same.

In witness whereof I have hereunto subscribed my name and affixed my official seal the day and year in this certificate first above written.

C K Cooper
Notary Public in and for the County of San Bernardino, State of California.

SURVEYOR'S CERTIFICATE

I, Edgar T. Ham, hereby certify that I am a Licensed Land Surveyor of the State of California and that this map consisting of one sheet, correctly represents a survey made under my supervision in March 1940 and that all of the monuments shown actually exist and their positions are correctly shown.

Dated this 10th day of April 1940

Edgar T Ham

AUDITOR'S CERTIFICATE

I hereby certify that according to the records of this office, as of this date, there are no liens against the real property shown upon the annexed map, for unpaid state, county, municipal or local taxes or special assessments collected as taxes except taxes or special assessments not yet payable, which are estimate at.

Vincent L. Roth County Auditor of the County of San Bernardino, State of California.

By _____ Deputy

Map Approved H. Way
County Surveyor.

Map Approved _____
City Engineer.

CERTIFICATE OF CLERK OF BOARD OF SUPERVISORS

I hereby certify that a bond in the sum of 100.00 has been executed and filed with the Board of Supervisors of the County of San Bernardino, State of California, conditioned upon the payment of all taxes, state, county municipal or local, and all special assessments collected as taxes which at the time of filing of the annexed map with the county Recorder are a lien against said property but not yet payable, and said bond has been duly approved by the said Board of Supervisors.

Harry L. Allison, County Clerk and Ex-Officio Clerk of the Board of Supervisors

By _____ Deputy

ACCEPTANCE

The County of San Bernardino, State of California, by and through its duly authorized officers hereby accepts the foregoing dedication.

County of San Bernardino, State of California

By _____
Chairman of the Board of Supervisors

ATTEST

Harry L. Allison
County Clerk and Ex-Officio Clerk of the Board of Supervisors.

By _____ Deputy

County Auditor
Apr. 16 1940
11:08 A
37 Maps
30

Note: 2x2 Stakes set at all lot corners.

5.00

7.76

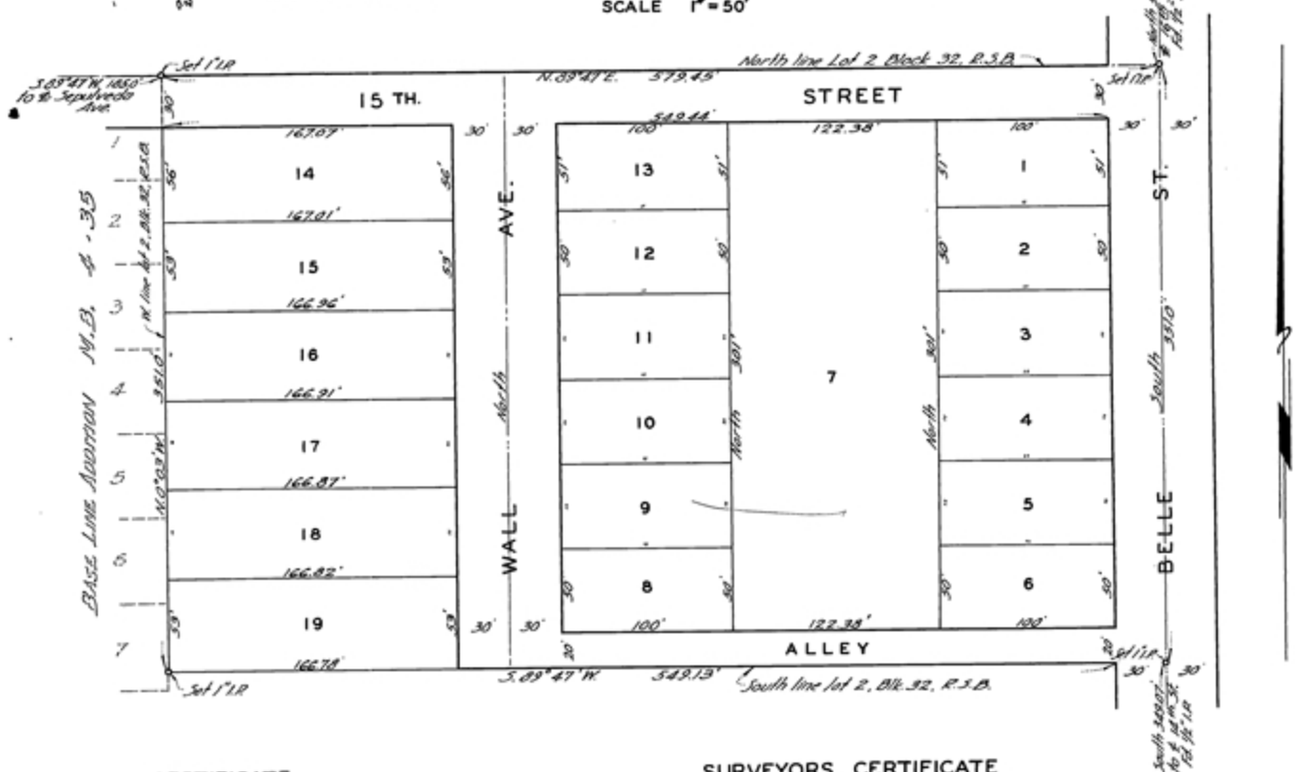
37-30

E-262

TRACT NO. 2862

BEING A SUBDIVISION OF A PORTION OF LOT 2, BLOCK 32, RANCHO SAN BERNARDINO, RECORDED IN MAP BOOK 7 PAGE 2, RECORDS OF SAN BERNARDINO COUNTY, CALIFORNIA.

W.J. STRANGE. SURVEYOR. SCALE 1" = 50' JAN. 1946



OWNER CERTIFICATE

We hereby certify that we are the owners of or have some right title or interest in and to the real property included within the subdivision shown upon the annexed map, and that we are the only persons whose consent is necessary to convey a clear title to said property, and we hereby consent to the making of said map and subdivision as shown within the colored border lines, and hereby dedicate to the public use, Wall Ave., Belle St. 15TH St. and Alley, as shown upon said map within said Subdivision.

We hereby convey to the City of San Bernardino, a municipal corporation, an easement and right of way over and along the rear 5 feet of each lot for the construction, use and maintenance of all public utilities of every kind and their systems, equipment and appurtenances thereto.

This grant shall be for the benifit of said City, or any department thereof, and shall be inure to the benefit of any person, firm or Corporation now holding a franchise or who may in the future acquire any franchise for the operation of or for the supplying to said City of San Bernardino, State of California, or its inhabitants, of water, sewer, gas, electrical energy, telephone and telegraph service.

Gus C. Kroenke Myrtle Kroenke

John Hile Trustee.

AUDITORS CERTIFICATE

I hereby certify that according to the records of this office as of this date, there are no liens against the real property shown upon the annexed map, for unpaid State, County, Municipal, or local taxes or special assessments collected as taxes.

Dated this 5th day of Jan. 1946.

VINCENT L. ROTH, County Auditor of the County of San Bernardino, State of California.

By _____ Deputy.

CITY COUNCIL

I hereby certify that the Council of the City of San Bernardino by resolution adopted February 18, 1946, approved the attached map, accepted as public all streets and Alleys shown upon said map within said Subdivision, and all easements given.

Dated this 19th day of Feb. 1946.

John H. Osborn

City Clerk City of San Bernardino, State of California.

I hereby approve the foregoing Map. Patton Secombe

Mayor, City of San Bernardino.

Map approved Edgar Kaun

City Engineer, City of San Bernardino.

I hereby certify that all Streets and Sewer assessments on the property shown on the annexed map are paid.

Edgar Kaun

Superintendent of Streets.

SURVEYORS CERTIFICATE

I, W. J. Strange hereby certify that I am a licensed Land Surveyor of the State of California, and that this map consisting of one sheet correctly represents a survey made under my supervision in January, 1945 and that all of the monuments shown thereon actually exist and their positions are correctly shown.

Dated this 18th day of Jan. 1946.

W. J. Strange
L.S. No. 2109

Basis of Bearings center line, Belle Street.
2"x2" Stakes set at all lot corners, unless otherwise shown.

NOTARY ACKNOWLEDGMENT

State of California
County of San Bernardino } ss.

On this 31 day of Jan. 1946, before me Mildred Grant a Notary Public in and for said County personally appeared Gus C. Kroenke and Myrtle Kroenke known to me to be the persons whose names are subscribed to the within instrument, and acknowledged to me that they executed the same.

In Witness Whereof, I have hereunto subscribed my name and affixed my official seal the day and year in this certificate first above written.

Mildred Grant

Notary Public in and for the County of San Bernardino, State of California.

NOTARY ACKNOWLEDGMENT

State of California
County of San Bernardino } ss.

On this 28 day of January 1946, before me MILDRED GRANT a Notary Public in and for the County of San Bernardino, State of California, residing therein, duly commissioned and sworn, personally appeared John Hile, as trustee known to me to be the person, whose name is subscribed to the within instrument, and acknowledged to me that he executed the same.

In Witness Whereof, I have hereunto subscribed my name and affixed my official seal the day and year in this certificate first above written.

Mildred Grant

Notary Public in and for the County of San Bernardino, State of California.

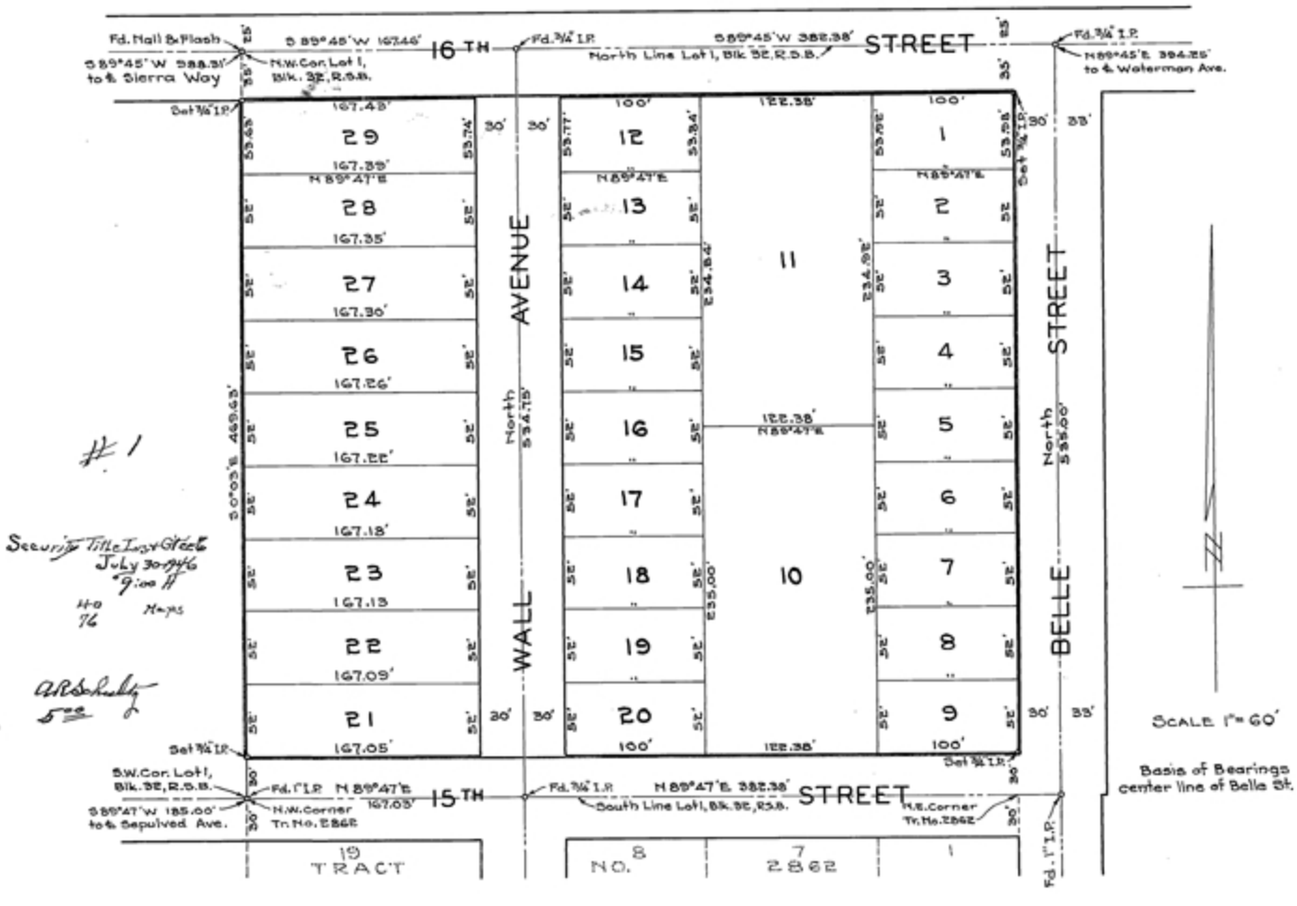
Note:- This Subdivision is registered under the Torrens Land Act of California.

929 39-34

TRACT NO. 2969

BEING A SUBDIVISION OF A PORTION OF LOT 1, BLOCK 32, RANCHO SAN BERNARDINO, RECORDED IN MAP BOOK 7 PAGE 2, RECORDS OF SAN BERNARDINO COUNTY, CALIFORNIA.

R.D. FORSYTHE, ENGINEER. SCALE 1" = 60' MAY, 1946.



OWNERS CERTIFICATE

We hereby certify that we are the owners of or have some right, title or interest in and to the real property included within the subdivision shown upon the annexed map and that we are the only persons whose consent is necessary to convey a clear title to said property, and we hereby consent to the making of said map and subdivision as shown within the colored border lines and we hereby dedicate to the public use all streets and avenues shown upon said map within said subdivision.

We hereby convey to the City of San Bernardino, a municipal corporation, an easement and right of way over and along the rear 5 feet of each lot for the construction, use and maintenance of all public utilities of every kind and their systems, equipment and appurtenances thereto.

Geo. C. Kroenke Myrtle Kroenke

NOTARY ACKNOWLEDGMENT

State of California } ss.
County of San Bernardino }

On this 5th day of July, 1946, before me J. W. Berry a Notary Public in and for said County personally appeared Geo. C. Kroenke and Myrtle Kroenke known to me to be the persons whose names are subscribed to the within instrument, and acknowledged to me that they executed the same.

In Witness Whereof, I have hereunto subscribed my name and affixed my official seal the day and year in this certificate first above written.

J. W. Berry
Notary Public in and for the County of San Bernardino, State of California

CITY COUNCIL

I hereby certify that the Common Council of the City of San Bernardino by Resolution adopted July 15, 1946, approved the attached map, accepted as public all Streets and Avenues shown upon said map within said subdivision, and all easements given.

John H. Wilson
City Clerk, City of San Bernardino, State of California

I hereby approve the foregoing resolution.

W. G. Lacombe
Mayor, City of San Bernardino.

I hereby certify that all street and sewer assessments on the property shown on the annexed map are paid.

Edgar Mann
Superintendent of Streets.

AUDITORS CERTIFICATE

I hereby certify that according to the records of this office, as of this date, there are no liens against the real property shown on the annexed map, for unpaid State, County, Municipal or local taxes or other special assessments collected as taxes, except taxes or special assessments not yet payable, which are estimated at _____

Dated this 26th day of July 1946.

P. W. Nichols
P. W. NICHOLS, County Auditor of the County of San Bernardino, State of California

CERTIFICATE OF THE CLERK OF THE BOARD OF SUPERVISORS

I hereby certify that a bond in the sum of $125.00 ~~dollars~~ has been executed and filed with the Board of Supervisors of the County of San Bernardino, State of California, conditioned upon the payment of all taxes, State, County, Municipal or local and all special assessments collected as taxes, which at the time of filing of the annexed map with the County Recorder are a lien against said property, but not yet payable and said bond has been duly approved by the said Board of Supervisors.

Dated this 29 day of July 1946

Harry L. Allison
County Clerk and Ex Officio Clerk of the Board of Supervisors.

By [illegible] Deputy

ENGINEERS CERTIFICATE

I, R. D. Forsythe, do hereby certify that I am a Registered Civil Engineer of the State of California, and that this map consisting of one sheet correctly represents a survey made under my supervision in May 1946 and that all of the monuments shown thereon actually exist and their positions are correctly shown.

Dated this 5th day of June, 1946.

R. D. Forsythe
R.C.E. No. 3102

Map approved Edgar Mann
City Engineer, of the City of San Bernardino.

2"x2" Stakes painted white set at all lot corners, unless otherwise shown.

1215

INDEXED

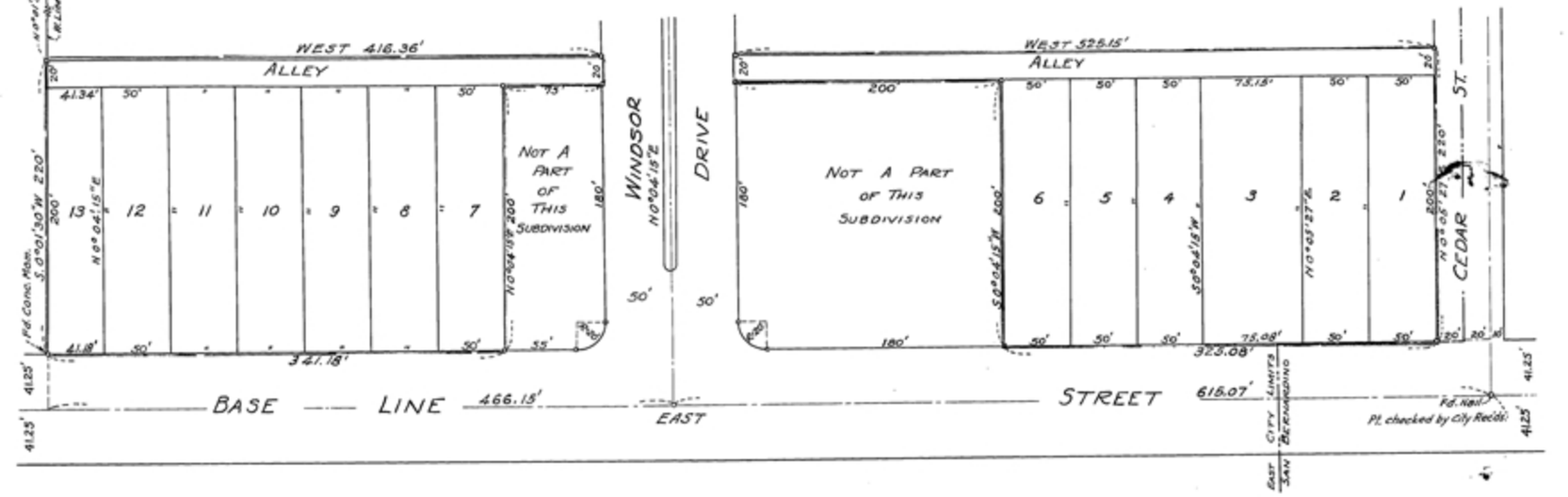
283

Recorded at Request of
Wynne A. Savage
Date March 9-1948
at 4.03 P. M.
in Book 43 of Maps
Page 89
Records San Bernardino County
TED R. CARPENTER
County Recorder
By L. L. Atwood
Deputy Recorder
Fee $5.00

TRACT NO. 3123

BEING A SUBDIVISION OF A PORTION OF LOTS 2 & 3 BLK. 41 R.S.B.

Recorded in Book 7 of Maps, Page 2 Records San Bernardino Co.



OWNERS CERTIFICATE

We, hereby certify that we are the owners of or have some right, title or interest in and to the real property included within the subdivision shown upon the annexed map, and that we are the only persons whose consent is necessary to convey a clear title to said property and we hereby consent to the making of said map and subdivision as shown within the colored border lines, and hereby dedicate to public use all the streets and alleys shown upon said map within said subdivision. Pioneer Company

Wynne A. Savage By W. A. Savage ..... PRESIDENT

Lucille C. Savage By E. E. Stidham ..... SECRETARY

NOTARY ACKNOWLEDGMENT

State of California } S.S.
County of San Bernardino

On this 8 day of March 1948, before me W. N. VAUGHAN a Notary Public in and for said County personally appeared WYNNE A. SAVAGE AND LUCILLE C. SAVAGE known to me to be the persons whose names are subscribed to the within instrument and acknowledged to me that they executed the same.

In Witness Whereof, I have hereunto subscribed my name and affixed my official seal the day and year in this certificate first above written.

W. N. Vaughan
Notary Public in and for the County of San Bernardino, State of California

ENGINEERS CERTIFICATE

I, J. R. McWethy do hereby certify that I am a registered civil engineer of the State of California, and that this map consisting of one sheet, correctly represents a survey made under my supervision in Feb. 1947, and that monuments shown thereon actually exist and their positions are correctly shown.

Dated this 8th day of March 1947

J. R. McWethy
Civil Engnr. No. 1591

CITY COUNCIL

I hereby certify that the council of the City of San Bernardino by resolution adopted March 8, 1948 approved the attached map, accepted as public all streets and alleys shown on said map within said subdivision, and all easements given.

Dated this 8th day of March 1948

J. M. Allison
City Clerk, City of San Bernardino
State of California

I hereby approve the foregoing resolution.

James E. Cunningham
Mayor, City of San Bernardino

Map Approved

Acting City Engineer, City of San Bernardino

I hereby certify that all street and sewer assessments on the property shown on the annexed map are paid.

John B. Lenter
Superintendent of Streets

CORPORATION ACKNOWLEDGEMENT

State of California } S.S.
County of San Bernardino

On this 1 day of March 1948 before me H. R. Taylor a Notary Public in and for the County of San Bernardino State of California residing therein duly comissioned and sworn personally appeared W. A. Glassock known to me to be the President and E. E. Stidham known to me to be the Secretary of the Pioneer ~~Mortgage and Title Guaranty~~ Company, the Corporation that executed the within instrument and known to me to be the persons who executed the same upon behalf of the Corporation named therein, and acknowledged to me that such Corporation executed the same.

In Witness Whereof, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written

H. R. Taylor
Notary Public in and for the County of San Bernardino State of California

AUDITORS CERTIFICATE

I hereby certify that according to the records of this office as of this date, there are no liens against the real property shown on the annexed map for unpaid State, County, Municipal, or local taxes or special assessments collected as taxes, except taxes or special assessments not yet payable, which are estimated at

Dated this ___ day of May 1947

P. W. Nichols
County Auditor of the County of San Bernardino, State of California

CERTIFICATE OF CLERK OF BOARD OF SUPERVISORS

I hereby certify that a bond in the sum of Two Hundred dollars has been excuted and filed with the board of supervisors of the County of San Bernardino, State of California conditioned upon the payment of all taxes, State, County, Municipal or local and all special assessments collected as taxes, which at the time of filing of the annexed map with the County Recorder are a lien against said property, but not yet payable, and said bond has been duly approved by the Said Board of Supervisors.

Dated this 8th day of March 1948

HARRY L. ALLISON
County Clerk and Ex-Officio
Clerk of the Board of Supervisors
By W. J. Gilbert Deputy

NOTE:- Except as noted on map, set 2½" stake over ¾" Pipe at angle points of subdivision shown thus, ----o
Set 2"x2" Stake at all other lot corners.

1215 43-89

E-265

1

1216

INDEXED

SHEET NO. 1 OF 3 SHEETS

TRACT NO. 3198
WINDSOR SQUARE

BEING A SUBDIVISION OF A PORTION OF LOTS 2, 3, 12, & 13, BLOCK 41, RANCHO SAN BERNARDINO AS RECORDED IN BOOK 7 OF MAPS, PAGE 2 RECORDS OF SAN BERNARDINO COUNTY, CALIFORNIA

SCALE: 1 INCH = 50 FEET

284

Recorded at Request of
Wynne A. Savage
Date March 9-1948
at 4:04 P. M.
in Book 43 of Maps
Page 90-92
Records San Bernardino County
TED R. CARPENTER
County Recorder
By L L Atwood Deputy Recorder
Fee $5.00

AUDITOR'S CERTIFICATE

I hereby certify that according to the records of this office, as of this date, there are no liens against the real property shown upon the annexed map, for unpaid State, County, Municipal, or local taxes or special assessments collected as taxes, except taxes or special assessments not yet payable which are estimated at $------

P.W. NICHOLS
County Auditor of the County of
San Bernardino, State of California

Dated this 8th day of Mar 1948.

CERTIFICATE OF CLERK OF BOARD OF SUPERVISORS

I hereby certify that a cash Bond in the sum of $500.00 has been executed and filed with the Board of Supervisors of the County of San Bernardino, State of California, conditioned upon payment of all taxes; State, County, Municipal, or local and all special assessments collected as taxes which at the time of filing of the annexed map with the County Recorder are a lien against said property, but not yet payable, and Bond has been approved by the said Board of Supervisors.

HARRY L. ALLISON, County Clerk and
Ex-officio Clerk of the Board of Supervisors

Dated this 8th day of March 1948. By [illegible] Deputy

SURVEYOR'S CERTIFICATE

I, L.R. MYERS, hereby certify that I am a licensed land surveyor of the State of California, and that this map consisting of three sheets, correctly represents a survey made under my supervision in February, 1948, and that all the monuments shown thereon actually exist and their positions are correctly shown.

Dated this 1st day of March 1948.

L.R. Myers
Licensed Land Surveyor #2294

NOTE

2"x2"x18" redwood stakes, painted white, set at all lot corners and curve points.
5/8" I.P. set at all angle points marked thus ●, on streets pipe are buried; all pipe are tagged L.S.2294.
Distances are measured in feet and decimals thereof.
Bearings are shown in degrees, minutes, and seconds. Basis of Bearings taken from the ℄ of Base Line Street as per Tract No. 2507 M.B. 33/49, and Tract No. 5125.

OWNER'S CERTIFICATE

We hereby certify that we are the owners of, or have some right, title or interest, in and to the real property included within the subdivision shown upon this annexed maps and that we are the only persons whose consent is necessary to pass a clear title to said property, and we consent to the making of said maps and subdivision as shown within the colored lines, and hereby dedicate to the public use all the streets and alleys, as each is designated upon said maps within said subdivision.

Wynne A. Savage Lucille C. Savage

NOTARY ACKNOWLEDGEMENT

State of California
County of San Bernardino } S.S.

On this 1st day of March, 1948, before me, W.N. Vaughan, a Notary Public in and for the County of San Bernardino, State of California, residing therein, duly commissioned and sworn, personally appeared Wynne A. Savage and Lucille C. Savage known to me to be the persons whose names are subscribed to the within instrument and acknowledged to me that they executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and the year in the certificate first written above.

W. Vaughan
Notary Public in and for the County of
San Bernardino, State of California.

My commission expires September 25-1949

CITY COUNCIL

I hereby certify that the Council of the City of San Bernardino by resolution adopted March 8, 1948 approved the attached map, accepted as public all streets and alleys shown upon said map within said subdivision and all easements given.

Dated this 8th day of March 1948

John H. Olson
City Clerk, City of San Bernardino,
State of California

I hereby approve the foregoing resolution.

James E. Cummingham
Mayor, City of San Bernardino

Map approved

[illegible]
Acting City Engineer, City of San Bernardino.

I hereby certify that all Street and Sewer assessments on the property shown on the annexed map are paid.

John S. Lenter
Superintendent of Streets

1216 43-90

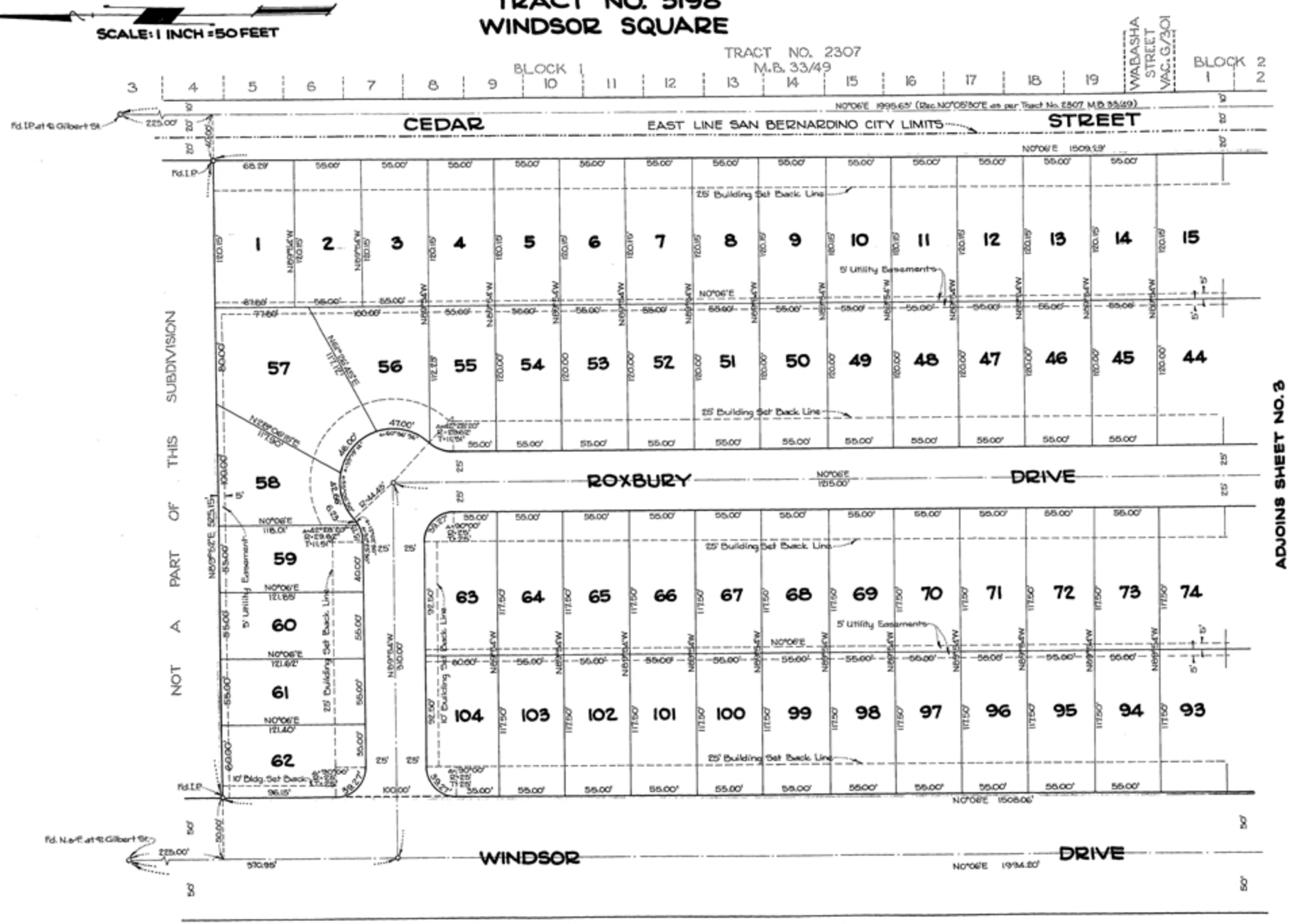
E-266

12/6

SHEET NO. 2 OF 3 SHEETS

TRACT NO. 3198
WINDSOR SQUARE

SCALE: 1 INCH = 50 FEET



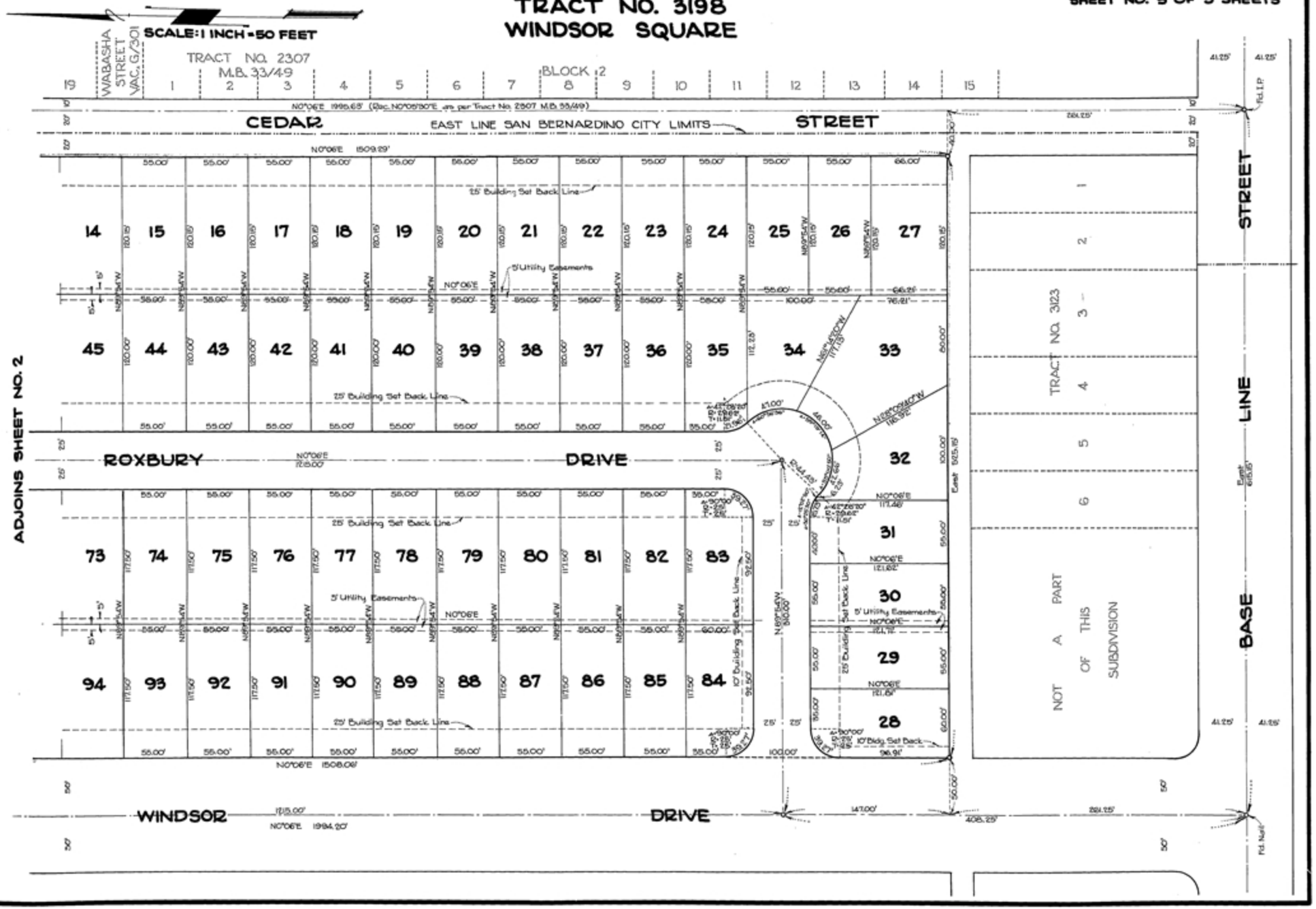
1216 43-91

E-267

1216

TRACT NO. 3198
WINDSOR SQUARE

SHEET NO. 3 OF 3 SHEETS



12 16 43-92

0441

SHEET 1 OF 3 SHEETS

TRACT NO. 3183
WINDSOR SQUARE UNIT NO. 2

BEING A SUBDIVISION OF A PORTION OF LOTS 3 & 12, BLOCK 41, RANCHO SAN BERNARDINO AS RECORDED IN BOOK 7 OF MAPS, PAGE 2, RECORDS OF SAN BERNARDINO COUNTY, CALIFORNIA

SCALE: 1 INCH = 50 FEET

#343

Recorded at Request of
W.A. Savage
Date July 3-1950
at 2:41 P.M.
in Book 47 of Maps
Pages 39-40-41
Records San Bernardino County
TED R. CARPENTER
County Recorder
By L.L. Atwood
Deputy Recorder
Fee $5.00

AUDITOR'S CERTIFICATE

I hereby certify that according to the records of this office, as of this date, there are no liens against the real property shown upon the annexed map, for unpaid State, County, Municipal, or local taxes or special assessments collected as taxes, except taxes or special assessments not yet payable which are estimated at $--------

Dated this 19th day of June 1950

P.W. NICHOLS
County Auditor of the County of San Bernardino, State of California.

CERTIFICATE OF CLERK OF BOARD OF SUPERVISORS

I hereby certify that a cash Bond in the sum of $350.00 has been executed and filed with the Board of Supervisors of the County of San Bernardino, State of California, conditioned upon the payment of all taxes, State, County, Municipal, or local and all special assessments collected as taxes which at the time of filing of the annexed map with the County Recorder are a lien against said property, but not yet payable, and Bond has been approved by said Board of Supervisors.

HARRY L. ALLISON, County Clerk and Ex-officio Clerk of the Board of Supervisors.

Dated this 19th day of June 1950.

By Lucille Parrish Deputy.

SURVEYOR'S CERTIFICATE

I, L. R. MYERS, hereby certify that I am a Licensed Land Surveyor of the State of California, and that this map consisting of three sheets, correctly represents a survey made under my supervision in April 1948, and that all the monuments shown thereon actually exist and their positions are correctly shown.

Dated this 24th day of June 1948.

L. R. Myers
Licensed Land Surveyor #2294.

NOTES

2"x2"x16" redwood stakes, painted white and branded L.S. 2294, set at all lot corners and curve points.
3/4" I.P. set at all angle points marked thus ●, on streets pipe are buried; all pipe are tagged L.S. 2294.
Distances are measured in feet and decimals thereof.
Bearings are shown in degrees, minutes, and seconds. Basis of Bearings taken from the ℄ of Windsor Drive as per Tract No. 3198 recorded in Book 45 of Maps, pages 90, 91, 92, Records of San Bernardino County, California.

NOTARY ACKNOWLEDGEMENT

State of California ss.
County of San Bernardino

On this 19th day of June, 1950, before me R.A. Taylor, a Notary Public in and for said County and State personally appeared, V.E. Marks, known to me to be the Vice-President, and E.E. Stillman known to me to be the Secretary of the Pioneer Title Insurance and Trust Company, the corporation that executed the within instrument on behalf of the corporation herein named, and acknowledged to me that such corporation executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal the day and the year in this certificate first written above.

R. A. Taylor
Notary Public in and for the County of San Bernardino, State of California.

My commission expires Feb. 8, 1954

OWNER'S CERTIFICATE

We hereby certify that we are the owners of, or have some right, title or interest, in and to the real property included within the subdivision shown upon the annexed maps and that we are the only persons whose consent is necessary to pass a clear title to said property, and we consent to the making of said maps and subdivision as shown within the colored lines, and hereby dedicate to the public use all the streets and alleys, as each is designated upon said maps within said subdivision.

Wynne A. Savage Lucille C. Savage

Pioneer Title Insurance and Trust Company
by V.E. Marks Vice-President
by E.E. Stillman Secretary

NOTARY ACKNOWLEDGEMENT

State of California ss.
County of San Bernardino

On this 24th day of June 1948, before me W.N. Vaughan, a Notary Public in and for the County of San Bernardino, State of California, residing therein, duly commissioned and sworn, personally appeared Wynne A. Savage and Lucille C. Savage known to me to be the persons whose names are subscribed to the within instrument and acknowledged to me that they executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and the year in the certificate first written above.

W.N. Vaughan
Notary Public in and for the County of San Bernardino, State of California.

My commission expires September 25-1949

CITY COUNCIL

I hereby certify that the Council of the City of San Bernardino by resolution adopted June 30, 1950 approved the attached map, accepted as public all streets and alleys shown upon said map within said subdivision and all easements given.

Dated this 3rd day of July, 1950.

John H. Wilson
City Clerk, City of San Bernardino, State of California.

I hereby approve the foregoing resolution.

Mayor, City of San Bernardino

Map approved

Acting City Engineer, City of San Bernardino

I hereby certify that all Street and Sewer assessments on the property shown on the annexed map are paid.

John B. Benter
Superintendent of Streets

E-269

1440

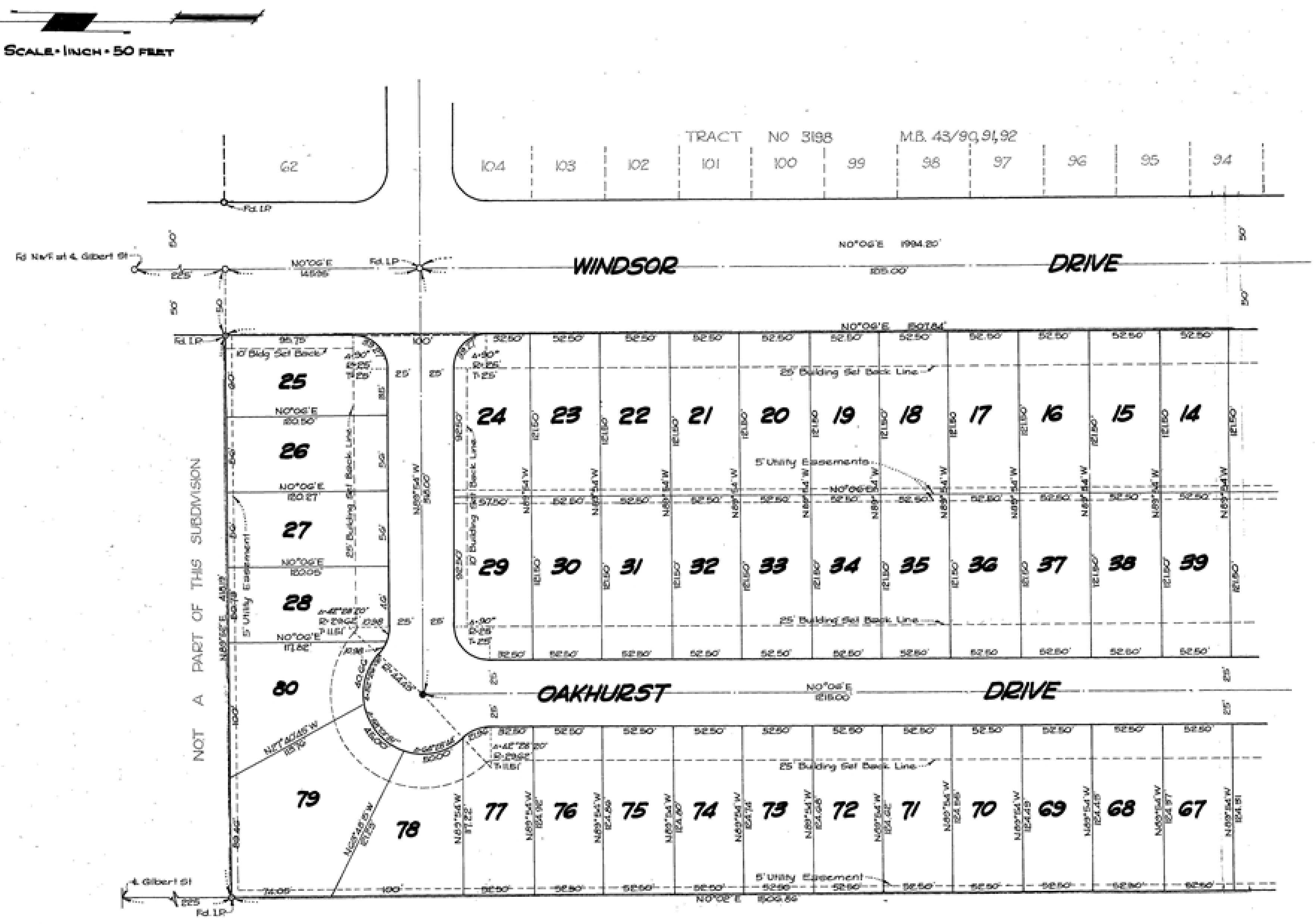
47-39

1440

SHEET 2 OF 3 SHEETS

TRACT NO. 3183
WINDSOR SQUARE UNIT NO. 2

SCALE: 1 INCH = 50 FEET



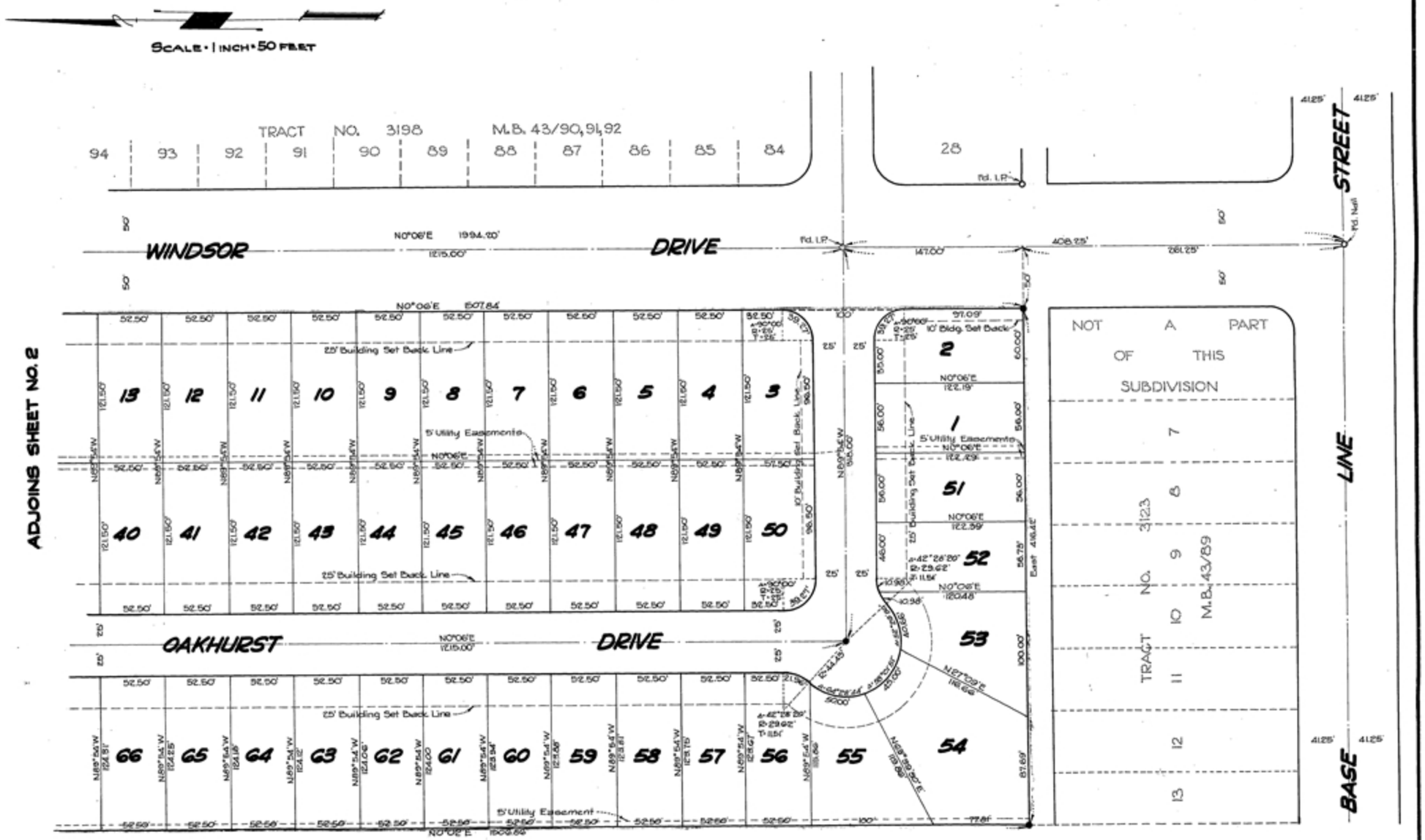
L.R.MYERS-SURVEYOR

1440 47-40

0441

SHEET NO. 3 OF 3 SHEETS

TRACT NO. 3183
WINDSOR SQUARE UNIT NO. 2



1440 47-41

48/68

TRACT Nº 3599

BEING A SUBDIVISION OF ALL OF LOT 14, TRACT 2920 AS PER MAP RECORDED IN BOOK 39, PAGE 65 OF MAPS, AND PORTIONS OF LOTS 5,6,7,9 & 10, BLOCK 41, SAN BERNARDINO RANCHO, AS PER MAP RECORDED IN BOOK 7, PAGE 2 OF MAPS, RECORDS OF SAN BERNARDINO COUNTY, CALIFORNIA

1523

ENGINEER'S CERTIFICATE

I, Karl F. Tuttle, hereby certify that I am a Registered Civil Engineer of the State of California; that this map, consisting of two sheets correctly represents a true and complete survey made under my supervision in August, 1950; that the monuments shown hereon are in place or will be in place not later than May, 1952; that their position and character are correctly shown, and that said monuments are sufficient to enable the entire survey to be retraced.

Dated this 16th day of May, 1951.

Karl F. Tuttle
Registered Engineer Nº 2000

AUDITOR'S CERTIFICATE

I hereby certify that according to the records of this office, as of this date, there are no liens against the real property shown upon the annexed map for unpaid State, County, Municipal or local taxes or special assessments collected as taxes.

Dated this 13th day of June, 1951.

P.W. NICHOLS,
County Auditor for the County of San Bernardino, State of California

By: Effie Costner
Deputy

CITY OFFICIALS' CERTIFICATE

I hereby certify that the City Council of the City of San Bernardino by resolution adopted June 4, 1951, approved the attached map, accepted as public the Avenues, Lane and Street shown on said map within said subdivision.

Dated this 11th day of June, 1951.

John K. Nelson
City Clerk for the City of San Bernardino, State of California.

I hereby approve the foregoing resolution.

Dated this 11th day of June, 1951.

George S. Blair
Mayor of the City of San Bernardino, State of California.

SUPERINTENDENT OF STREETS

I hereby certify that all street and sewer assessments on the property shown on the annexed map have been paid.

Dated this 11th day of June, 1951.

John B. Carter
Superintendent of Streets for the City of San Bernardino, State of California.

MAP APPROVED

Map approved.

Dated this 11th day of June, 1951.

City Engineer for the City of San Bernardino, State of California.

OWNERS CERTIFICATE

We hereby certify that we are the owners of or have some right, title or interest in and to the real property included within the subdivision shown upon the annexed map and that we are the only persons whose consent is necessary to pass a clear title to said property, and we consent to the making of said map and subdivision as shown within the colored border lines and hereby dedicate to the public use the Avenue, Lane and Street shown upon said map within said subdivision. We hereby convey to the City of San Bernardino, a Municipal Corporation, the easements and rights-of-way as shown upon the attached map for the construction, use and maintenance of all public utilities of every kind and their systems, equipment and appurtenances thereto, said easements being the rear five (5) feet of each and every lot.

DEL AMO GARDENS, INC.

President

Secretary

State of California } ss.
County of San Bernardino }

On this 7th day of June, 1951, before me, the Undersigned a Notary Public in and for said County and State, personally appeared, known to me to be the President, and, known to me to be the Secretary of DEL AMO GARDENS, INC., a corporation, the corporation that executed the within instrument, and known to me to be the persons who executed the within instrument on behalf of the corporation therein named, and acknowledged to me that such corporation executed the same.

Notary Public.
My Commission Expires May 25, 1954

#3

Recorded at Request of
Security Title Ins. & Gtee Co.
Date June 14-1951
at 8:00 A.M.
in Book 48 of Maps
Pages 68-69
Records San Bernardino County
TED R. CARPENTER
County Recorder
By L. L. Atwood
Deputy Recorder
Fee $15.00

Set 2½" stake, painted white, with tag "R.E. 2000", at all lot corners unless otherwise shown.
Set 2" iron pipe with tag "R.E. 2000", six inches down, where shown.
After construction, leads and tacks are to be set in curb at all B.C.'s and E.C.'s on radials.
The bearing, N.89°53'00"E. of the centerline of Gilbert Street, as shown on map of tract Nº 2920, M.B. 39-65, was used as a basis of bearings on this map.

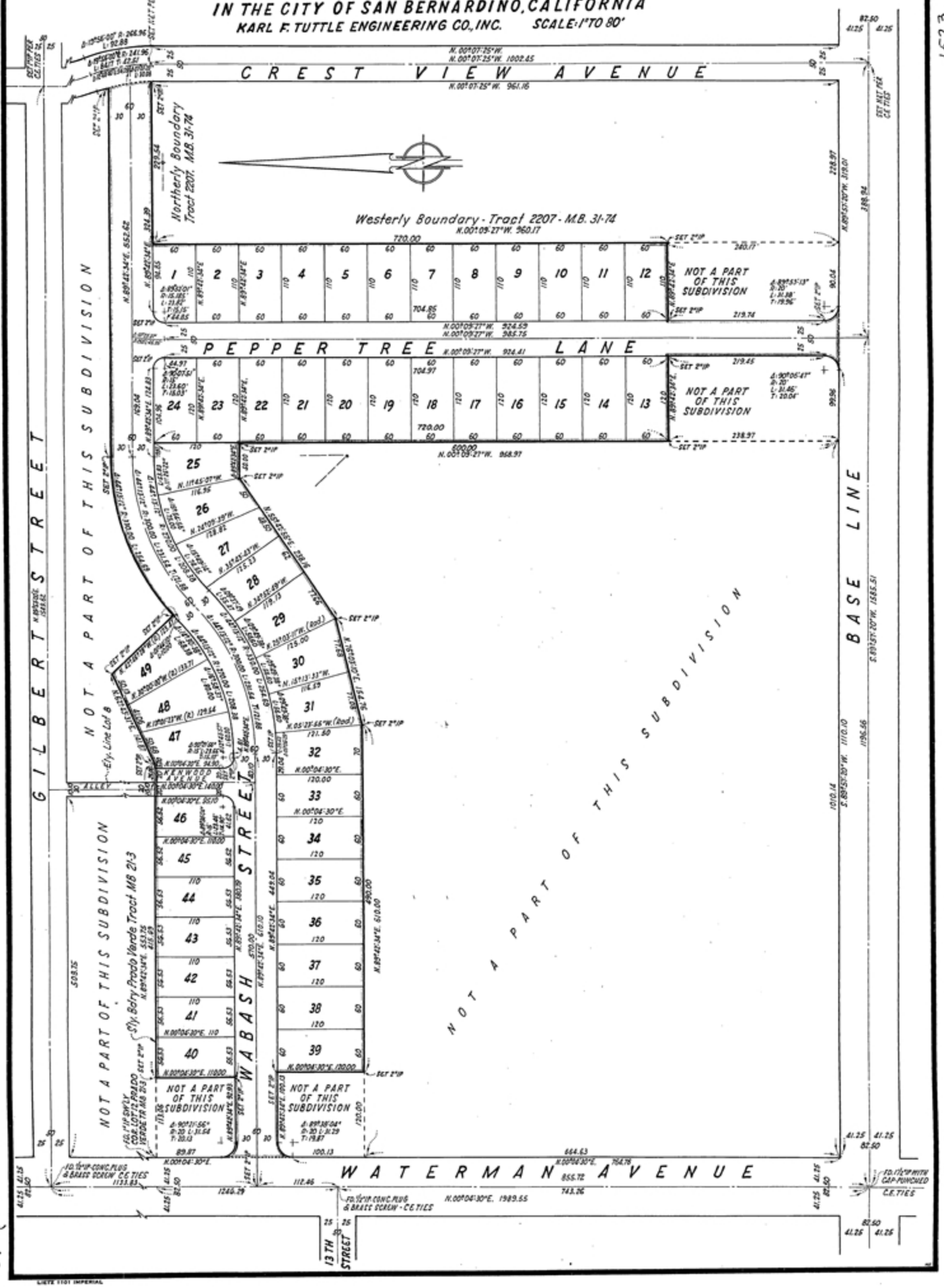
1523 48-68

SHEET NO. 2
OF 2 SHEETS

TRACT Nº 3599

IN THE CITY OF SAN BERNARDINO, CALIFORNIA

KARL F. TUTTLE ENGINEERING CO., INC. SCALE: 1" TO 80'



6041

MAP OF TRACT Nº 3895

BEING A SUBDIVISION OF A PORTION OF LOT 3 BLOCK 39 RANCHO SAN BERNARDINO AS RECORDED IN BOOK 7 OF MAPS AT PAGE 2 RECORDS OF SAN BERNARDINO COUNTY

CITY OF SAN BERNARDINO
CALIFORNIA

Scale 1"=60'

OWNERS CERTIFICATE

We hereby certify that we are the owners of or have some right title or interest in and to the real property included within the subdivision shown on the annexed map and that we are the only persons whose consent is necessary to convey a clear title to said property and we hereby consent to the making of said map and subdivision as shown within the colored border lines and we hereby dedicate to public use all streets shown upon said map within said subdivision

We hereby convey to the City of San Bernardino a municipal corporation an easement and right of way for the use and maintenance and construction of all public utilities of every kind and their systems equipment and appurtenances thereto delineated on said map as easements for public utilities

This grant shall be for the benefit of any person firm or Corporation now holding a franchise or who may in the future acquire any franchise for the operation of or for the supplying to said City of San Bernardino state of California or its inhabitants of water, sewer gas, electrical energy telephone and telegraph service

V. Borden Fields
Linda W. Fields

NOTARY ACKNOWLEDGMENT

STATE OF CALIFORNIA } ss
COUNTY OF SAN BERNARDINO }

On this 10 day of Nov. 1952 before me JOHN C. OLIVER a Notary Public in and for said County and State personally appeared Linda W Fields, and Borden V. Fields known to me to be the persons whose names are subscribed to the within instrument and acknowledged to me that they executed the same

In witness WHEREOF I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written

My commission expires 3-6-55

John C. Oliver
Notary Public in and for said County and State

CITY OFFICIALS CERTIFICATE

I hereby certify that the Council of the City of San Bernardino by resolution adopted Sept 22 1952 approved the attached map accepted as Public all streets shown on said map within said subdivision and all easements given

Dated Nov 5 1952

Mack A. Walters
City Clerk City of San Bernardino California

I hereby approve the foregoing resolution

George C. Shaw
Mayor City of San Bernardino California

SUPERINTENDENT OF STREETS

I hereby certify that all street and sewer assessments on the property shown on the annexed map are paid

John H. Hunter
Superintendent of Streets

CITY ENGINEER

Map approved Nov. 6, 1952

City Engineer City of San Bernardino California

Note
Set 2"x2" Redwood stakes at all Lot corners unless otherwise shown
Basis of Bearings ℄ 18th St. as per TRACT 2134

COUNTY AUDITORS CERTIFICATE

I hereby certify that according to the records of this office as of this date there are no liens against the real property shown on the annexed map for unpaid State, County Municipal or Local taxes or special assessments collected as taxes. ~~except those not yet payable~~

Dated Nov. 10, 1952

Art. Nichols County Auditor
County of San Bernardino California
By Effie Rustus Deputy

BOARD OF SUPERVISORS CERTIFICATE

~~I hereby certify that a bond in the sum of $ — has been executed and filed with the Board of Supervisors of the County of San Bernardino State of California conditioned upon the payment of all taxes, State, County Municipal or Local, and all special assessments collected as taxes which at the time of the filing of the annexed map with the County Recorder are a lien against said property but not yet payable and said bond has been duly approved by said Board of Supervisors~~

~~Dated — — — —~~

~~HARRY L. ALLISON COUNTY CLERK and Ex-Officio Clerk of the Board of Supervisors~~

~~By — — Deputy~~

ENGINEERS CERTIFICATE

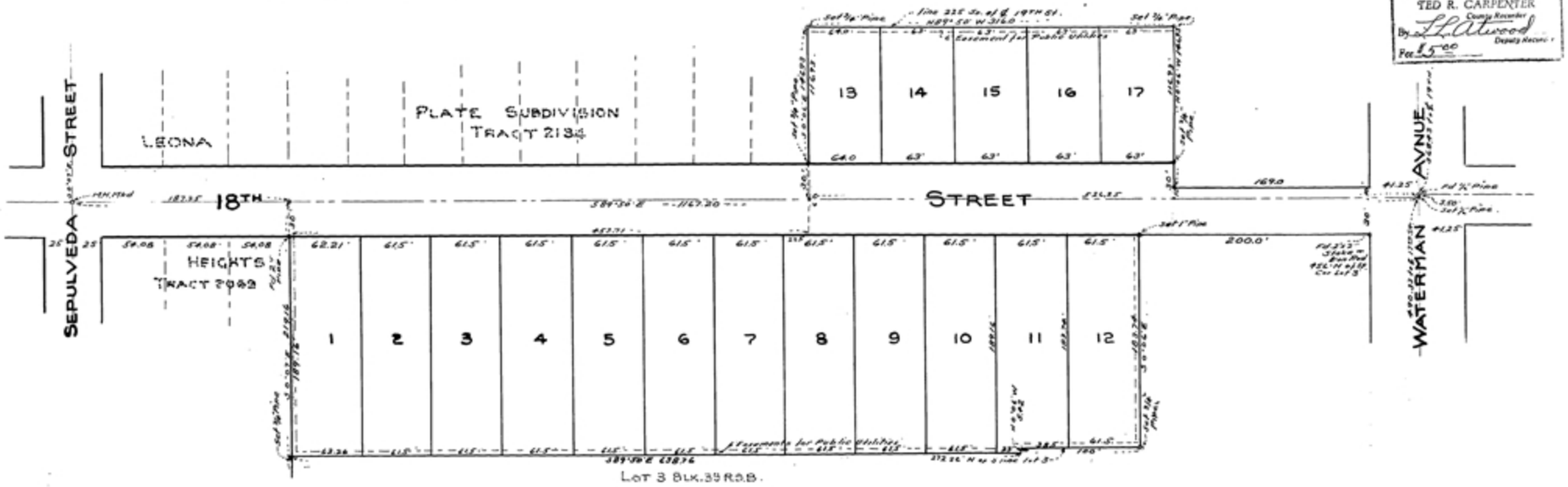
I C.E. Johnson hereby certify that I am a Registered Civil Engineer of the State of California and that this map consisting of one sheet correctly represents a survey made by me in August 1952 and that all the Monuments shown hereon actually exist and their positions are correctly shown

Dated 9/28/52

Registered Civil Engineer Nº 2479

#383

Recorded at Request of Pioneer Title Ins. & Tr. Co.
Date Nov. 17, 1952
at 2:46 P.M.
in Book 51 of Maps
Page 47
Records San Bernardino County
TED R. CARPENTER County Recorder
By L. L. Alwood Deputy Recorder
Fee $5.00



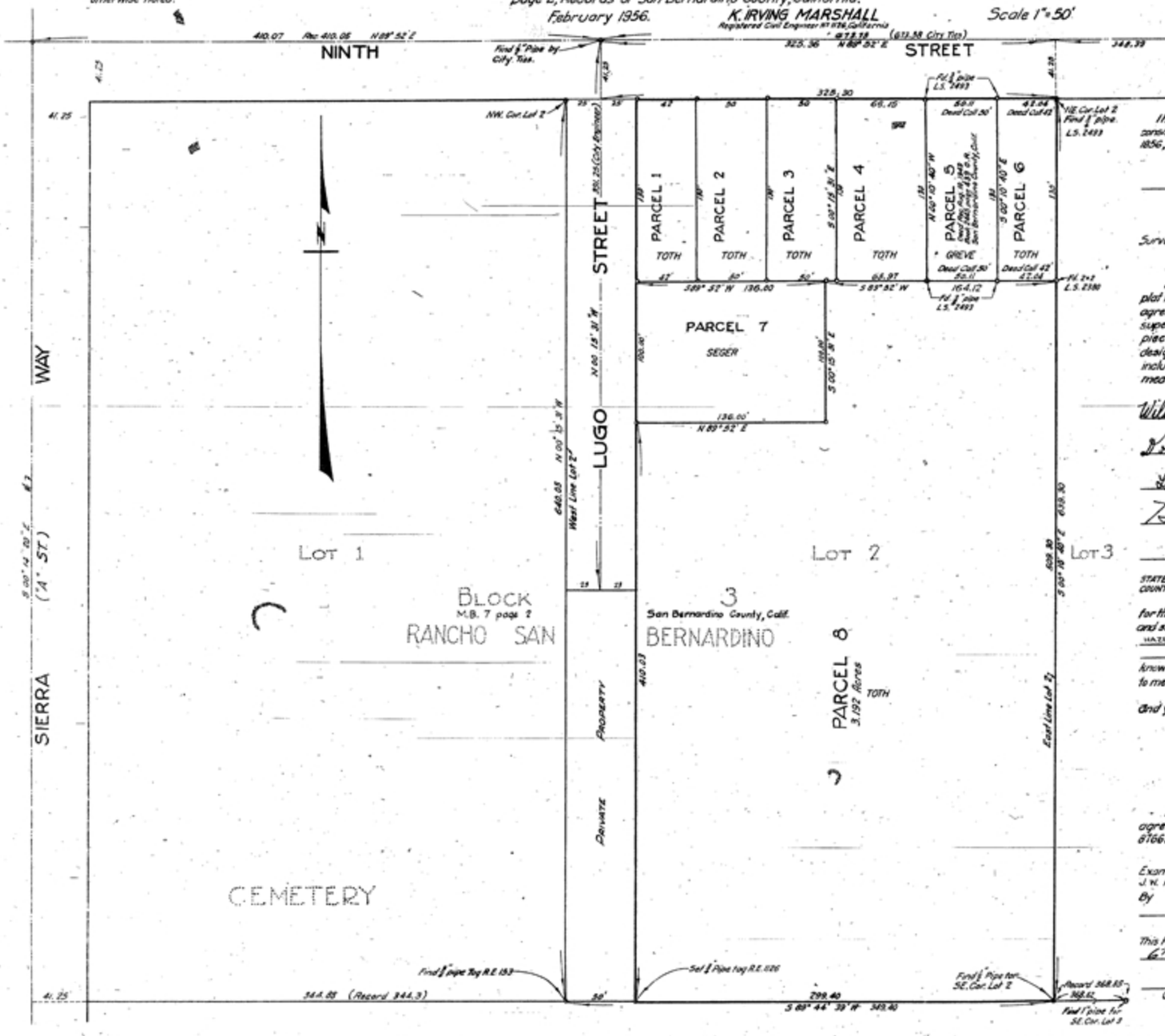
1709 51-47

RECORD OF SURVEY

Of Lot 2 Block 3 Rancho San Bernardino as shown on a Plat recorded in Book 7 of Maps page 2, Records of San Bernardino County, California.

February 1956. K. IRVING MARSHALL Registered Civil Engineer Nº 1126, California Scale 1" = 50'

NOTE: The bearing shown by City of center line of 9th St, used as basis of bearings shown on this map.
2"x2" redwood stakes tagged RE 1126 set at all points shown thus ⊕ unless otherwise noted.



Recorded at Request of Lucille Title Guarantee Co. Date May 23 1957 Time 3:10 P.M. Book 14 Page 44 of R/S Records San Bernardino County Ted H. Carpenter Recorder By Era Barnes Deputy Fee 5.00

I hereby certify that I am a Registered Civil Engineer of the State of California, that this map consisting of one sheet correctly represents a survey made under my supervision in February 1956, that all the monuments shown hereon actually exist and their positions are correctly shown.

K. Irving Marshall
Registered Civil Engineer Nº 1126 State of California

Surveyed at the request of Fullerton & Morris, Attorneys

We the undersigned owners of Lot 2 Block 3 of the Rancho San Bernardino as per plat thereof recorded in Book 7 of Maps page 2, Records of San Bernardino County Calif. agree by and between ourselves that this survey and map thereof made under the supervision of K. Irving Marshall, Registered Civil Engineer correctly designates the place or parcel owned by each of the undersigned by our names as thereon designated and we agree to the boundary lines as shown on the annexed map including the location of the boundary lines of said Lot 2 with the distances and measurements shown on said map.

William P. Seger — Joseph Emil Toth
Dorothy K. Seger — as Executor of Estate
Lloyd E. Greve — of Mary Lisa Toth
Hazel Mae Greve — deceased

STATE OF CALIFORNIA
COUNTY OF SAN BERNARDINO } ss
On this 27th day of March 1957 before me the undersigned a Notary Public in and for the County of San Bernardino, State of California residing therein and duly commissioned and sworn, personally appeared WILLIAM P. SEGER, DOROTHY K. SEGER, LLOYD E. GREVE, HAZEL MAE GREVE and JOSEPH EMIL TOTH as Executor of Estate of Mary Lisa Toth deceased

known to me to be the persons who executed the within instrument and they acknowledged to me that they executed the same.

IN WITNESS WHEREOF, I have set my hand and affixed my official seal on this the day and year first above written.

John L. Cooke
Notary Public in and for the County of San Bernardino State of California My Commission Expires 1/9/1958

The purpose of this record of Survey is to place of record the partition of an estate as agreed to by the heirs thereof and is not a subdivision within the meaning of Section 8766.5 of the California Business and Professions Code.

Examined May 22, 1957.
J. W. ABBEY, County Surveyor of San Bernardino County, California
By F. M. Marsso
Assistant

This Record of Survey was approved by the City Council of the City of San Bernardino on the 6th day of May 1957.

Jack D. Holder
City Clerk of the City of San Bernardino State of California

Job Nº 1500
FB 59-77

RS 14-44

RS 14-44

RECORD OF SURVEY

OF PORTIONS OF LOTS 3 & 4, BLOCK 39 OF THE RANCHO SAN BERNARDINO, AS PER PLAT RECORDED IN BOOK 7 OF MAPS, PAGE 2; AND LOT 34, TRACT NO. 2589, AS PER PLAT RECORDED IN BOOK 42 OF MAPS, PAGE 68, RECORDS OF SAN BERNARDINO COUNTY, CALIFORNIA.

Recorded at the Request of Donald W. Jordan

Scale: 1" = 100'

SURVEYOR'S CERTIFICATE

I, Arthur J. Sullivan, hereby certify that I am a Licensed Land Surveyor of the State of California, and that this map consisting of one sheet correctly represents a survey made by me in August 1952, and that all the monuments shown hereon actually exist, and their positions are correctly shown.

Dated this 9th day of January 1953

Arthur J. Sullivan
Licensed Land Surveyor #2980

NOTE

Set Iron Pipe Tagged L.S. 2980 as noted on map where shown thusly. •
Found monuments are noted on map where shown thusly. ◦
Basis of Bearings ℄ Waterman Avenue as per Tract No. 2197 M.B. 31/58-59 being North

COUNTY SURVEYOR'S CERTIFICATE

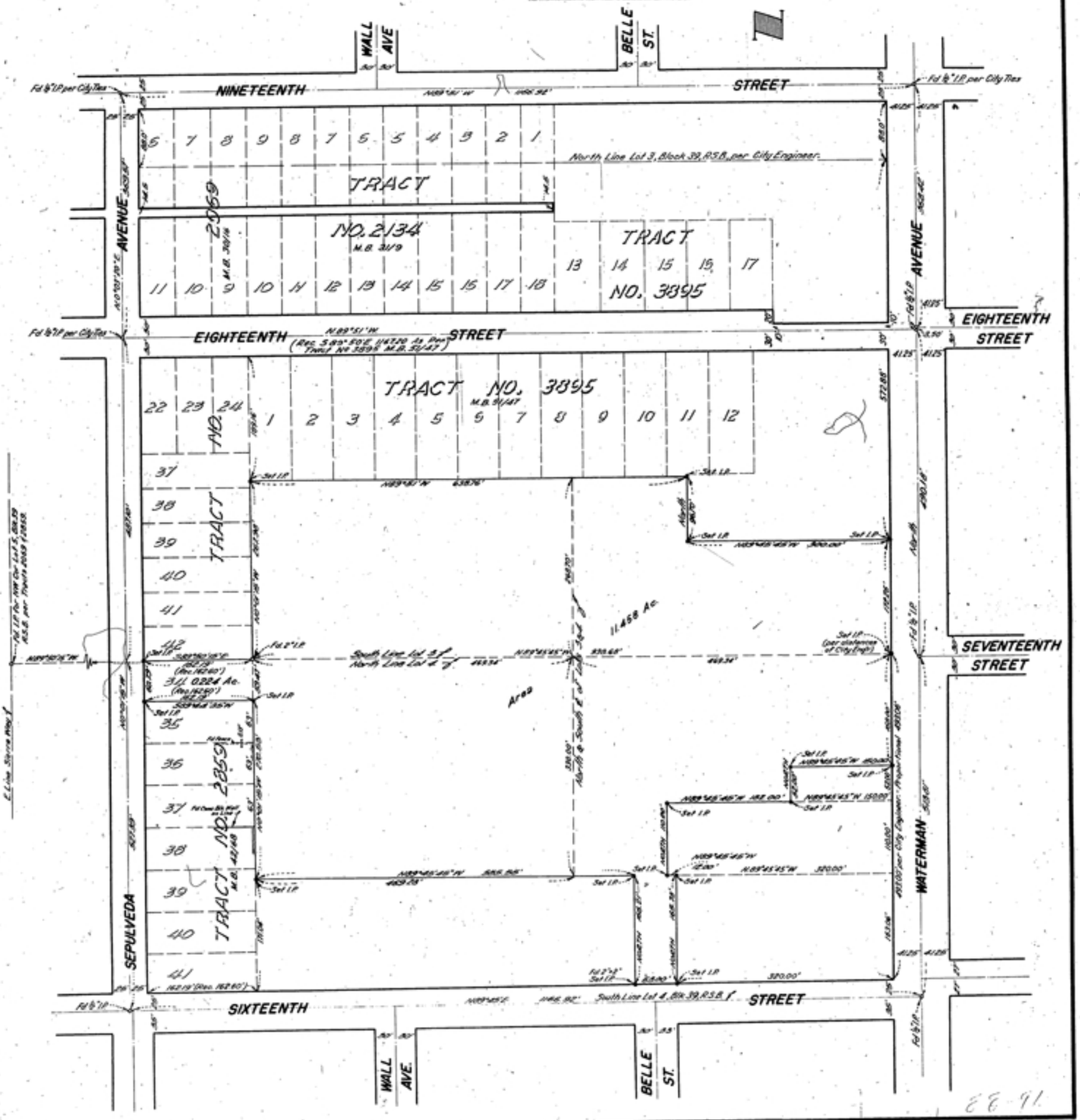
Map Examined Jan. 12, 1953

Leonard P. Wikoff, County Surveyor, County of San Bernardino, State of Calif.

By F. M. Moss Deputy

Recorded at Request of County Surveyor Jan. 12, 1952 3:22 P.M. 9 68 R.S.

L.L. Atwood $1.00



8/221

IN THE CITY OF SAN BERNARDINO

TRACT NO. 8914

FOR CONDOMINIUM PURPOSES

BEING A SUBDIVISION OF LOTS 6, 7, 16 AND 17 OF TRACT NO. 2105, PER PLAT RECORDED IN BOOK 30 OF MAPS, PAGE 59, RECORDS OF SAN BERNARDINO COUNTY, STATE OF CALIFORNIA.

GARNER, TRACADAS & TROY, INC. FEBRUARY · 1974 CIVIL ENGINEERING · LAND SURVEYING

AUDITOR'S CERTIFICATE

I hereby certify that according to the records of this office as of this date there are no liens against the real property shown upon the annexed map for unpaid State, County, Municipal, or Local taxes, or special assessments collected as taxes, except taxes or special assessments not yet payable, estimated to be $200.00

JOHN H. BULMER, COUNTY AUDITOR
County of San Bernardino, California.
BY Doreen Lee DEPUTY

Dated June 6, 1974 1974.

BOARD OF SUPERVISOR'S CERTIFICATE

I hereby certify that a bond in the sum of $12,200.00 has been executed and filed with the Board of Supervisors of the County of San Bernardino, State of California, conditioned upon the payment of all taxes, State, County, Municipal or Local, and all special assessments collected as taxes, which at the time of the annexed map with the County Recorder, are a lien against said property but not yet payable, and the subdivider has filed with me a certificate by the proper officer giving his estimate of the amount of said taxes and assessments and said bond has been duly approved by the said Board of Supervisors.

LEONA RAPOPORT, CLERK OF THE BOARD
OF SUPERVISORS of the County of San
Bernardino, State of California.
BY Andree Delaroon DEPUTY

Dated June 6 1974.

CITY ENGINEER'S CERTIFICATE

I hereby certify that I have examined the annexed map, that the subdivision shown hereon is substantially the same as it appeared on the tentative map and any approved alterations thereof and that all provisions of the Subdivision Map Act of the State of California and Ordinance No. 1984 of the City of San Bernardino have been complied with and I am satisfied that this map is technically correct.

David L. Hecker R.C.E. 13653
CITY ENGINEER, City of San Bernardino,
State of California.

Dated 6-6-74 1974

CITY COUNCIL'S CERTIFICATE

I hereby certify that the Mayor and Common Council of the City of San Bernardino by resolution adopted 11787 1974, approved the the annexed map.

6-6-74
CITY CLERK, City of San Bernardino,
State of California. By Rosalie Lorenzo, Chief Deputy

I hereby approve the foregoing resolution.

6-6-74
MAYOR, City of San Bernardino, California.

SUPERINTENDENT OF STREETS CERTIFICATE

I hereby certify that all street and sewer assessments on the property shown on the annexed map are paid.

Merle Lorenzen 6-6-74
SUPERINTENDENT OF STREETS,
City of San Bernardino, State of California.

NOTES

1. Basis of Bearing was taken from the centerline of Waterman Avenue shown as NORTH per Tract No. 2105, M. B. 30/53.
2. This Tract contains One (1) Lot.
3. ● Indicates Monuments found as noted.

OWNER'S CERTIFICATE

We hereby certify that we are all and the only parties having any record title interest in the land subdivided as shown on the annexed map and we consent to the preparation and recordation of this final map.

20-20 WATERMAN CORPORATION, A CALIFORNIA CORPORATION
FORMERLY NULL-BLENDING CORPORATION, A CALIFORNIA CORPORATION

PRESIDENT Sister Mary Stephanie Ryan SECRETARY Oscar Pablos

INDEPENDENT ENCUMBRANCE SERVICE, A CORPORATION, AS TRUSTEE

BY Joe Lopez VICE PRESIDENT BY Yolanda M. Sanchez SECRETARY

SURVEYOR'S CERTIFICATE

I, Russell H. Garner hereby certify that I am a Licenced Land Surveyor in the State of California, and that this map consisting of Two (2) Sheets, is a true and complete representation of a survey made under my supervision in April, 1974, and that all monuments shown hereon are of the character and occupy the positions indicated, in compliance with Section 11556 of the Business and Professions Code and are or will be sufficient to enable the survey to be retraced.

Russell H. Garner
RUSSELL H. GARNER L. S. 3039

Dated APRIL 24 1974.

NOTARY ACKNOWLEDGMENT

STATE OF CALIFORNIA
COUNTY OF SAN BERNARDINO } S. S.

On this 6th day of May, 1974, before me, Virginia S. Camp a Notary Public in and for said County and State, personally appeared Sister Mary Stephanie Ryan known to me to be the President and Oscar Pablos known to me to be the Secretary of 20-20 WATERMAN CORPORATION, a California Corporation, the corporation that executed the within instrument and known to me to be the persons who executed the within instrument on behalf of the corporation therein named and acknowledged to me that such corporation executed the within instrument pursuant to its by-laws or a resolution of its Board of Directors.

Witness my hand and official seal.

OFFICIAL SEAL
VIRGINIA S. CAMP
NOTARY PUBLIC - CALIFORNIA
PRINCIPAL OFFICE IN
SAN BERNARDINO COUNTY
My Commission Expires January 31, 1977

Virginia S. Camp
VIRGINIA S. CAMP
Notary Public in and for said County and State
My Commission expires January 31, 1977

SIGNATURE OMISSIONS

The signature of the CITY OF SAN BERNARDINO, the owner of a right of way for public utilities as recorded April 17, 1926 in Book 34, Page 28, Official Records, and the owner of an easement for street and highway purposes as recorded March 23, 1968 in Book 7000, Page 531, Official Records, has been omitted under the provisions of Section 11582, Sub Section A, of the Subdivision Map Act. Its interest cannot ripen into a fee.

NOTARY ACKNOWLEDGMENT

STATE OF CALIFORNIA
COUNTY OF SAN BERNARDINO } S. S.

On this 22nd day of May, 1974, before me Katherine L. Bergstrom a Notary Public in and for said County and State, personally appeared [illegible] known to me to be the Vice President and [illegible] known to me to be the Secretary of INDEPENDENT ENCUMBRANCE SERVICE, a Corporation, the corporation that executed the within instrument as TRUSTEE and known to me to be the persons who executed the within instrument on behalf of the corporation therein named and acknowledged to me that such corporation executed the within instrument pursuant to its by-laws or a resolution of its Board of Directors.

Witness my hand and official seal.

OFFICIAL SEAL
KATHERINE L. BERGSTROM
NOTARY PUBLIC
SAN BERNARDINO COUNTY
CALIFORNIA
My Commission Expires Jan. 30, 1978

Katherine L. Bergstrom
KATHERINE L. BERGSTROM
Notary Public in and for said County and State.
My commission expires January 30, 1978

461

FILED REQUEST OF
SAFECO TITLE INS. CO.
ON JUNE 11, 1974
AT 10:12 A.M. IN
BOOK 122 PAGE 3-4
OF MAPS
SAN BERNARDINO COUNTY
V. Dennis Wardle, Clerk-Recorder
FEE $ 7.00

122/3

E-277

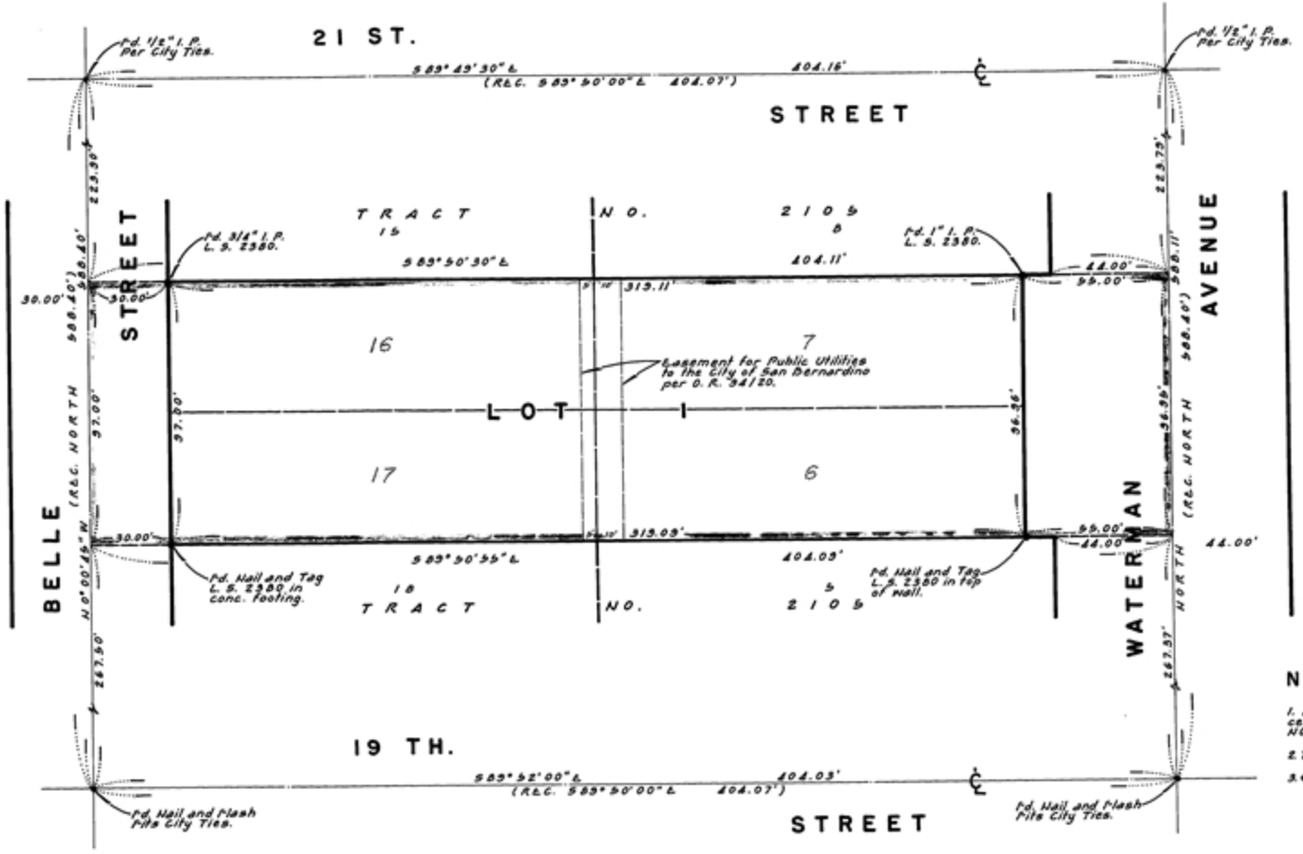
IN THE CITY OF SAN BERNARDINO

TRACT NO. 8914

FOR CONDOMINIUM PURPOSES

BEING A SUBDIVISION OF LOTS 6, 7, 16 AND 17 OF TRACT NO. 2105, PER PLAT RECORDED IN BOOK 30 OF MAPS, PAGE 59, RECORDS OF SAN BERNARDINO COUNTY, STATE OF CALIFORNIA.

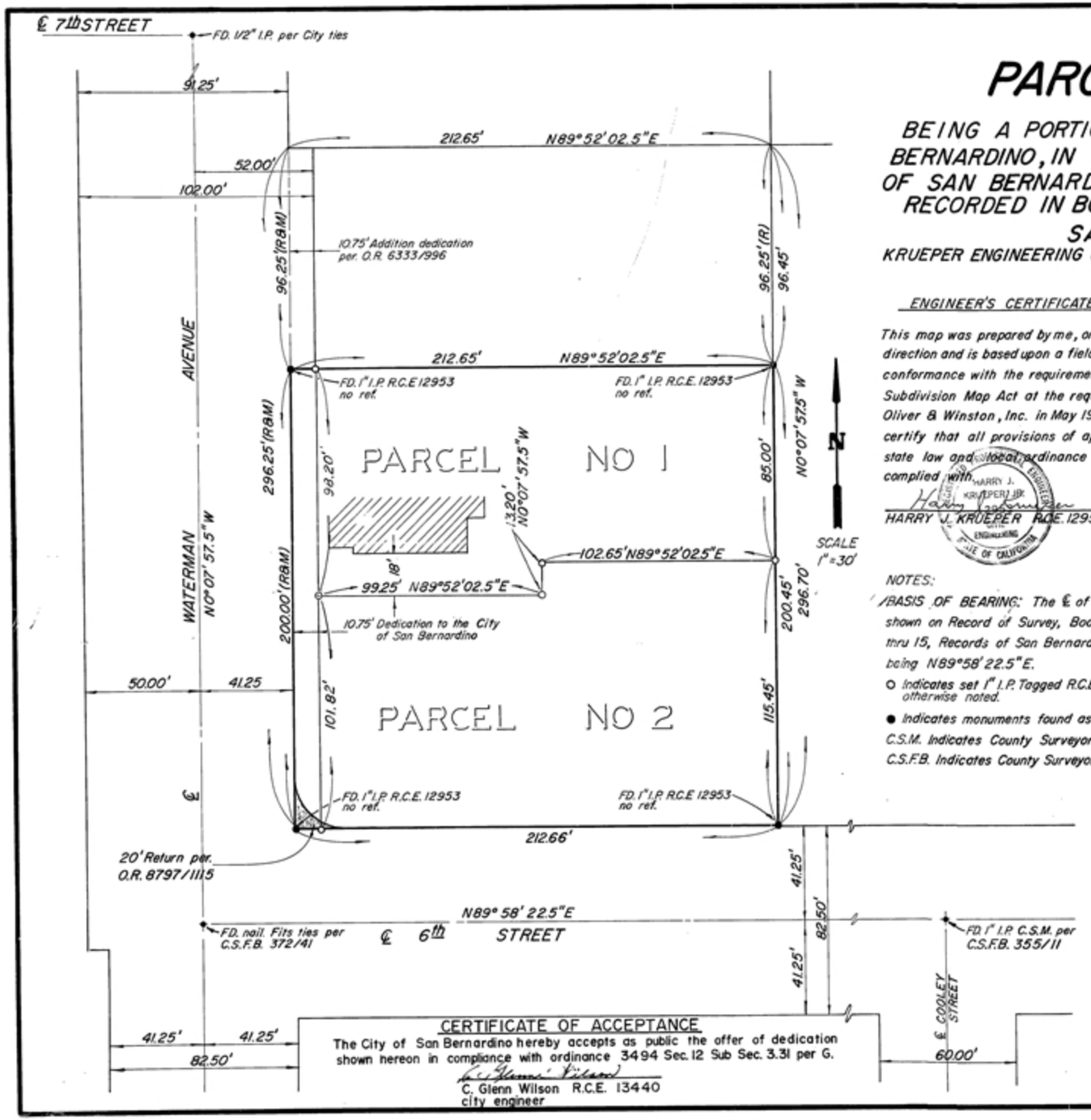
GARNER, TRACADAS & TROY, INC. FEBRUARY · 1974 CIVIL ENGINEERING · LAND SURVEYING



NOTES

1. Basis of Bearing was taken from the centerline of Waterman Avenue shown as NORTH per Tract No. 2105, M.B. 30/59.
2. This Tract contains One (1) Lot.
3. ● Indicates Monuments found as noted.

98/82



PARCEL MAP NO. 3197

BEING A PORTION OF LOT 10, BLOCK 43, RANCHO SAN BERNARDINO, IN THE CITY OF SAN BERNARDINO, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 7, PAGE 2 OF MAPS, RECORDS OF SAN BERNARDINO COUNTY

KRUEPER ENGINEERING & ASSOCIATES — MAY, 1976

ENGINEER'S CERTIFICATE:

This map was prepared by me, or under my direction and is based upon a field survey in conformance with the requirements of the Subdivision Map Act at the request of Oliver & Winston, Inc. in May 1976. I hereby certify that all provisions of applicable state law and local ordinance have been complied with.

HARRY J. KRUEPER R.C.E. 12953 — DATE 5/27/76

OWNER'S CERTIFICATE

We hereby certify that we are all and the only parties having any record title interest in the land subdivided as shown on the annexed map and we consent to the preparation and recordation of this parcel map and we hereby dedicate to the City of San Bernardino an easement for highway and road purposes as shown on the annexed map.

OLIVER AND WINSTON, INC.

BY SAM WINSTON, PRESIDENT

NOTES:

BASIS OF BEARING: The ℄ of 6th Street as shown on Record of Survey, Book 9, pages 13 thru 15, Records of San Bernardino County, being N89°58' 22.5"E.

○ Indicates set 1" I.P. Tagged R.C.E. 12953 unless otherwise noted.

● Indicates monuments found as noted.

C.S.M. Indicates County Surveyor's Monument.

C.S.F.B. Indicates County Surveyor's Field Book.

NOTARY ACKNOWLEDGEMENT

STATE OF CALIFORNIA
COUNTY OF LOS ANGELES S.S.

On this 13th day of MAY, 1976, before me, R. MARIANO a NOTARY PUBLIC in and for said County and State, personally appeared SAM M. WINSTON known to me to be the President of Oliver and Winston, Inc., the corporation that executed the within instrument, and known to me to be the person who executed the within instrument on behalf of the corporation therein named, and acknowledged to me that such corporation executed the within instrument pursuant to its by-laws or a resolution of its board of directors.

Witness my hand and Official seal

Signature R. Mariano

R. MARIANO
name printed

Notary Public in and for said County and State

My commission expires 8-15-77

OFFICIAL SEAL
R. MARIANO
NOTARY PUBLIC - CALIFORNIA
PRINCIPAL OFFICE IN
LOS ANGELES COUNTY
My Commission Expires August 15, 1977

CITY ENGINEER'S CERTIFICATE

This map has been examined this 23rd day of June 1976, for conformance with the requirements of section 11575 of the Subdivision Map Act.

C. Glenn Wilson

CERTIFICATE OF ACCEPTANCE

The City of San Bernardino hereby accepts as public the offer of dedication shown hereon in compliance with ordinance 3494 Sec. 12 Sub Sec. 3.31 per G.

C. Glenn Wilson R.C.E. 13440
city engineer

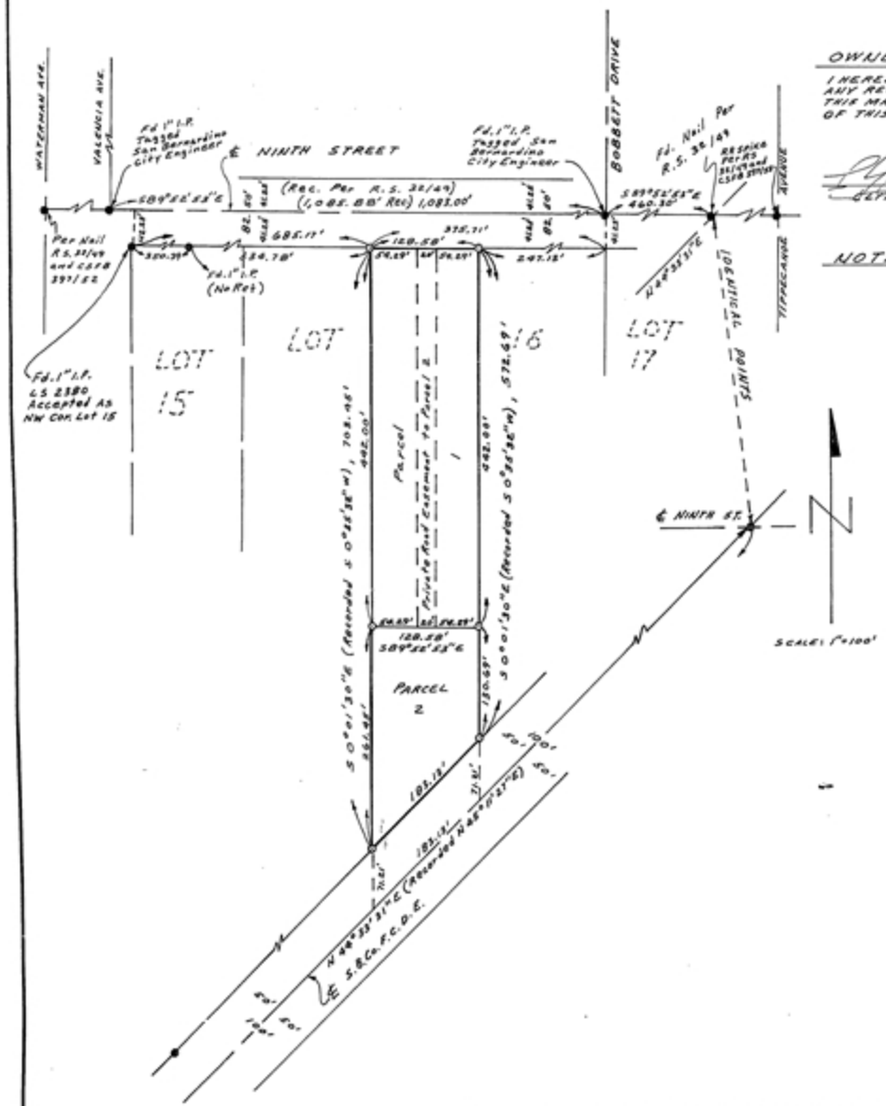
1049
FILED REQUEST OF
TITLE INSURANCE & TRUST CO
ON JULY 2, 1976
AT 3:30 P.M. IN
BOOK 28 PAGE 86
OF PARCEL MAPS
SAN BERNARDINO COUNTY
V. Dennis Wardle, Clerk-Recorder
FEE $5.00

E-279

28/86

PARCEL MAP 3442

IN THE CITY OF SAN BERNARDINO, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA AND BEING A DIVISION OF A PORTION OF LOT 16, BLOCK 43, OF RANCHO SAN BERNARDINO, AS PER PLAT RECORDED IN BOOK 7 OF MAPS, PAGE 2, RECORDS OF SAN BERNARDINO COUNTY.



OWNER'S CERTIFICATE

I HEREBY CERTIFY THAT I AM THE ONLY PARTY HAVING ANY RECORD TITLE INTEREST IN THE LAND SUBDIVIDED SHOWN ON THIS MAP, AND I CONSENT TO THE PREPARATION AND RECORDATION OF THIS PARCEL MAP.

Clifford Langley — 2-25-77
CLIFFORD LANGLEY — DATE

NOTARY ACKNOWLEDGEMENT

STATE OF CALIFORNIA
COUNTY OF SAN BERNARDINO } S.S.

ON THIS 25 DAY OF February 1977 BEFORE ME Robert J. Myler A NOTARY PUBLIC IN AND FOR SAID COUNTY AND STATE, PERSONALLY APPEARED CLIFFORD LANGLEY KNOWN TO ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE WITHIN INSTRUMENT, AND ACKNOWLEDGED TO ME THAT HE IS THE SAME

WITNESS MY HAND AND OFFICIAL SEAL

Robert J. Myler
Robert J. Myler

NOTARY PUBLIC IN AND FOR SAID COUNTY AND STATE
MY COMISSION EXPIRES

OFFICIAL SEAL
ROBERT J. MYLER
NOTARY PUBLIC - CALIFORNIA
SAN BERNARDINO COUNTY
My Commission Expires April 30, 1977

BASIS OF BEARINGS

S 89°52'53"E FOR THE CENTERLINE OF NINTH STREET AS PER RECORD OF SURVEY BOOK 32, PAGE 49, RECORDS OF SAN BERNARDINO COUNTY.

NOTES:

1. ○ SET 1" IRON PIPE TAGGED L.S. 3584 UNLESS OTHERWISE NOTED
2. ● MONUMENTS FOUND AS NOTED
3. SBCFCD SAN BERNARDINO COUNTY FLOOD CONTROL DISTRICT

SURVEYOR'S CERTIFICATE

THIS MAP WAS PREPARED BY ME OR UNDER MY DIRECTION AND IS BASED UPON A FIELD SURVEY IN CONFORMANCE WITH THE REQUIREMENTS OF THE SUBDIVISION MAP ACT AT THE REQUEST OF CLIFFORD LANGLEY JANUARY, 1977.

Carlos Guzman
CARLOS F. GUZMAN
L.S. 3584

CITY ENGINEER'S CERTIFICATE

THIS MAP HAS BEEN EXAMINED THIS 1st DAY OF June, 1977 FOR CONFORMANCE WITH THE REQUIREMENTS OF THE SUBDIVISION MAP ACT AND LOCAL ORDINANCES.

C. Glenn Wilson
C. GLENN WILSON, R.C.E. 13440
SAN BERNARDINO CITY ENGINEER

1150
FILED REQUEST OF
TRANSAMERICA TITLE INS. CO.
ON July 13, 1977
AT 3:30 P.M. IN
BOOK 34 PAGE 80
OF PARCEL MAPS
SAN BERNARDINO COUNTY
V. Dennis Wardle, Clerk-Recorder
FEE $5.00

Sheet 1 of 1 Sheet

PARCEL MAP NO. 4586

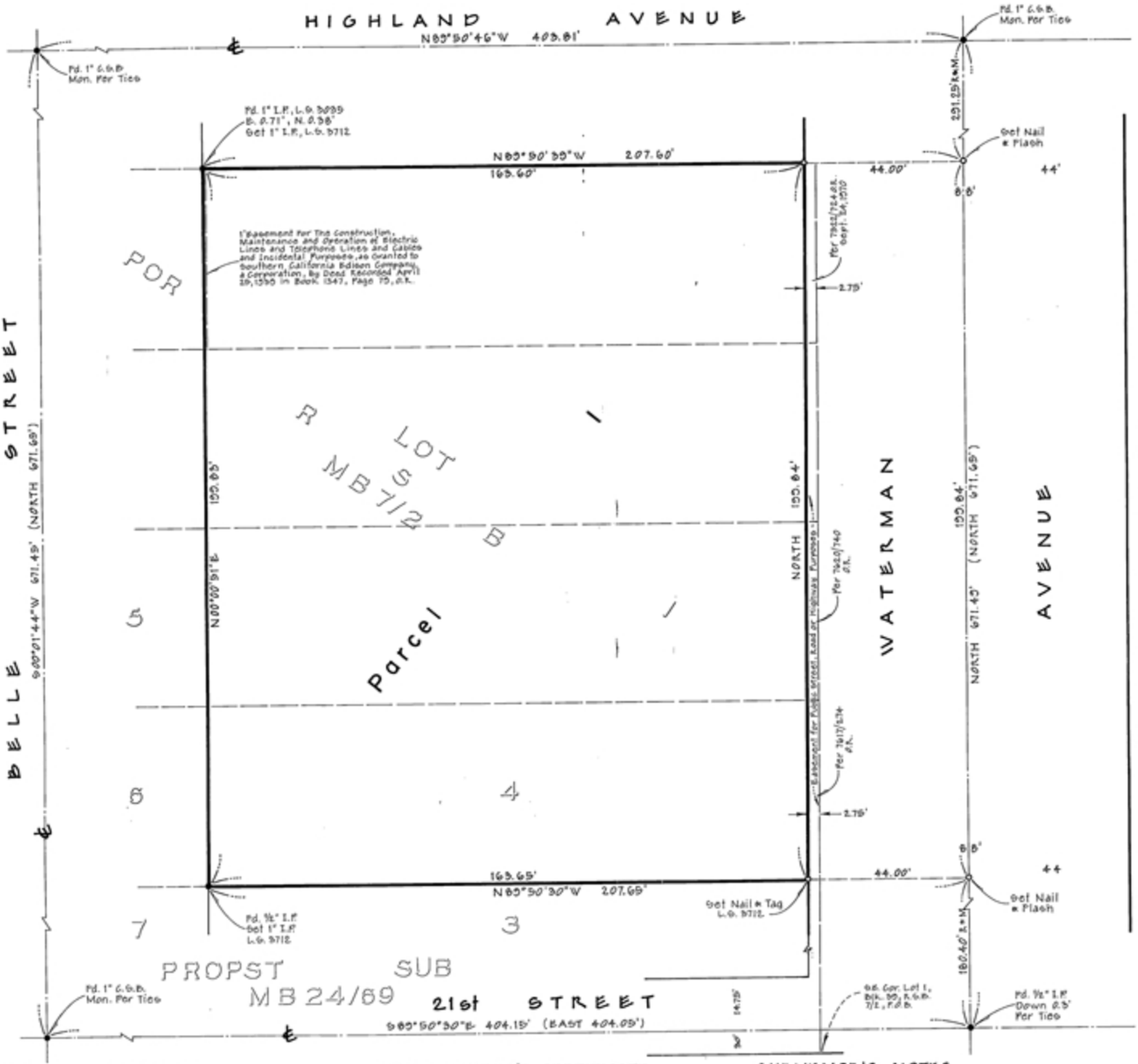
IN THE CITY OF SAN BERNARDINO

BEING A DIVISION OF A PORTION OF LOT 1, BLOCK 39, RANCHO SAN BERNARDINO, M.B. 7/2 AND LOT 4 OF PROPST SUBDIVISION, M.B. 24/69, RECORDS OF SAN BERNARDINO COUNTY, CALIFORIA.

Scale 1"=20'

BROWN & MULLINS, INC.
Engineers, Surveyors
San Bernardino, Calif.

JUNE, 1978



OWNER'S CERTIFICATE

WE HEREBY CERTIFY THAT WE ARE THE ONLY PARTIES HAVING ANY RECORD TITLE INTEREST IN THE LAND SUBDIVIDED AS SHOWN ON THIS MAP AND WE CONSENT TO THE PREPARATION AND RECORDATION OF THIS PARCEL MAP.

ENTERPRISE I, A CALIFORNIA GENERAL PARTNERSHIP

David O. Reid, General Partner

Robert E. Needham, General Partner

NOTARY ACKNOWLEDGEMENT

STATE OF CALIFORNIA } S.S.
COUNTY OF SAN BERNARDINO }

ON THIS 10 DAY OF OCT. 1978, BEFORE ME RACHEL L. BROWN A NOTARY PUBLIC IN AND FOR SAID COUNTY AND STATE, PERSONALLY APPEARED DAVID O. REID AND ROBERT E. NEEDHAM

KNOWN TO ME TO BE THE PARTNERS OF THE PARTNERSHIP THAT EXECUTED THE WITHIN INSTRUMENT, AND ACKNOWLEDGED TO ME THAT SUCH PARTNERSHIP EXECUTED THE SAME.

WITNESS MY HAND AND OFFICIAL SEAL

SIGNATURE Rachel L. Brown

NAME (TYPED OR PRINTED) RACHEL L. BROWN

NOTARY PUBLIC IN AND FOR SAID COUNTY AND STATE

MY COMMISSION EXPIRES 12/31/81

OFFICIAL SEAL
RACHEL L. BROWN
NOTARY PUBLIC - CALIFORNIA
PRINCIPAL OFFICE IN
SAN BERNARDINO COUNTY
My Commission Expires Dec. 28, 1981

~~CERTIFICATE OF ACCEPTANCE~~

~~THE CITY OF SAN BERNARDINO HEREBY ACCEPTS AS PUBLIC THE OFFER OF DEDICATION SHOWN HEREON IN COMPLIANCE WITH ORDINANCE 2324, SEC. 12, SUB. ORD. 3.01, PAR. G.~~

~~G. GLENN WILSON R.C.E. 15440
DIRECTOR OF PUBLIC WORKS/
CITY ENGINEER~~

CITY ENGINEER'S CERTIFICATE

THIS MAP CONFORMS WITH THE REQUIREMENTS OF THE SUBDIVISION MAP ACT AND LOCAL ORDINANCE.

G. GLENN WILSON, DIRECTOR OF PUBLIC WORKS, CITY OF SAN BERNARDINO, CALIFORNIA

G. GLENN WILSON, R.C.E. 15440

SURVEYOR'S CERTIFICATE

THIS MAP WAS PREPARED BY ME OR UNDER MY DIRECTION AND IS BASED IN A FIELD SURVEY IN CONFORMANCE WITH THE REQUIREMENTS OF THE SUBDIVISION MAP ACT AT THE REQUEST OF ENTERPRISE I IN JUNE 1978. I HEREBY STATE THAT THE PARCEL MAP REQUIRED BY THE LOCAL AGENCY HAVE BEEN COMPLIED WITH AND THAT THIS PARCEL MAP CONFORMS TO THE APPROVED TENTATIVE MAP AND THE CONDITIONS OF APPROVAL THEREOF WHICH WERE REQUIRED TO BE SATISFIED PRIOR TO FILING OF THE PARCEL MAP.

ROBERT J. MULLINS, L.S. 9712

SURVEYOR'S NOTES

BASIS OF BEARINGS: THE CENTERLINE OF WATERMAN AVE. AS SHOWN BY PROPST SUBDIVISION, M.B. 24/69, TAKEN AS "NORTH".

-○- INDICATES SET 1" I.P., TAGGED L.S. 9712, UNLESS NOTED OTHERWISE.

-●- INDICATES FOUND MONUMENTS AS NOTED.

( ) INDICATES RECORD DATA PER PROPST SUBDIVISION, M.B. 24/69, UNLESS NOTED OTHERWISE.

S.B.M. INDICATES RECORD AND MEASURED

G.G.B. INDICATES CITY OF SAN BERNARDINO

1142
FILED REQUEST OF
CALIF. LAND TITLE CO.
DECEMBER 1, 1978
10:37 A.M.
BOOK 43 PAGE 73
OF PARCEL MAPS
SAN BERNARDINO COUNTY
FEE $5.00

1/50

SHEET 1 OF 2 SHEETS

IN THE CITY OF SAN BERNARDINO

PARCEL MAP No. 7140

BEING A SUBDIVISION OF PORTIONS OF BLOCKS A, B, C AND D, WOZENCRAFT PLACE, AS PER PLAT RECORDED IN BOOK 5 OF MAPS, PAGE 47, RECORDS OF THE COUNTY RECORDER OF SAN BERNARDINO COUNTY, STATE OF CALIFORNIA.

OWNERS CERTIFICATE

WE HEREBY CERTIFY THAT WE ARE ALL AND THE ONLY PARTIES HAVING ANY RECORD TITLE INTEREST IN THE LAND SUBDIVIDED AS SHOWN ON THIS MAP AND WE CONSENT TO THE PREPARATION AND RECORDATION OF THIS PARCEL MAP, AND WE HEREBY DEDICATE TO THE CITY OF SAN BERNARDINO FOR PUBLIC USE, THE THOROUGHFARES, SEWERS AND DRAINAGE EASEMENTS SHOWN ON THE ANNEXED MAP. SAID THOROUGHFARES SHALL BE DEEMED TO INCLUDE SEWER AND ALL PUBLIC UTILITY FACILITIES LOCATED ON OR UNDER SUCH REAL PROPERTY.

CITY OF SAN BERNARDINO

W. R. HOLCOMB, MAYOR

SHAUNA CLARK, CITY CLERK

NOTARY ACKNOWLEDGEMENT

STATE OF CALIFORNIA
COUNTY OF SAN BERNARDINO

ON THIS 16 DAY OF October, 1981, BEFORE ME Sandra A. Baxter, A NOTARY PUBLIC IN AND FOR SAID COUNTY AND STATE, PERSONALLY APPEARED W. R. HOLCOMB, KNOWN TO ME TO BE THE MAYOR AND SHAUNA CLARK, KNOWN TO ME TO BE THE CITY CLERK OF THE CITY OF SAN BERNARDINO, THE MUNICIPAL CORPORATION THAT EXECUTED THE WITHIN INSTRUMENT AND ACKNOWLEDGED TO ME THAT THEY EXECUTED THE SAME ON BEHALF OF THE MUNICIPAL CORPORATION.

WITNESS MY HAND AND OFFICIAL SEAL

(OFFICIAL SEAL)
SANDRA A. BAXTER
NOTARY PUBLIC - CALIFORNIA
SAN BERNARDINO COUNTY
My Commission Expires Dec. 7, 1981

NOTARY PUBLIC IN AND FOR SAID COUNTY AND STATE

SURVEYOR'S CERTIFICATE

THIS MAP WAS PREPARED BY ME OR UNDER MY DIRECTION AND IS BASED UPON A FIELD SURVEY IN CONFORMANCE WITH THE REQUIREMENTS OF THE SUBDIVISION MAP ACT AND LOCAL ORDINANCE AT THE REQUEST OF G. GLENN WILSON, DIRECTOR OF PUBLIC WORKS FOR THE CITY OF SAN BERNARDINO ON SEPTEMBER 1981. I HEREBY STATE THAT THIS PARCEL MAP SUBSTANTIALLY CONFORMS TO THE APPROVED OR CONDITIONALLY APPROVED TENTATIVE MAP, IF ANY.

LICENSED LAND SURVEYOR
WILLARD H. PLUMMER
No. 3679
STATE OF CALIFORNIA

October 16, 1981
DATED

WILLARD H. PLUMMER L.S. 3679

3679

CITY ENGINEER'S CERTIFICATE

THIS MAP CONFORMS WITH THE REQUIREMENTS OF THE SUBDIVISION MAP ACT AND LOCAL ORDINANCE.

10-16-81
DATED

G. GLENN WILSON, DIRECTOR OF PUBLIC WORKS/CITY ENGINEER
RCE 13448, CITY OF SAN BERNARDINO

CERTIFICATE OF ACCEPTANCE

THE CITY OF SAN BERNARDINO HEREBY APPROVES THE ANNEXED MAP AND ACCEPTS AS PUBLIC THE DEDICATION FOR PUBLIC USE, THE THOROUGHFARES, DRAINAGE AND SEWER EASEMENTS SHOWN ON THE ANNEXED MAP IN COMPLIANCE WITH TITLE 16 OF THE CITY OF SAN BERNARDINO MUNICIPAL CODE.

10-16-81
DATED

G. GLENN WILSON, DIRECTOR OF PUBLIC WORKS/CITY ENGINEER
RCE 13448, CITY OF SAN BERNARDINO

SIGNATURE OF OMISSIONS

IN ACCORDANCE WITH THE PROVISIONS OF SECTION 66436 (a)(1) OF THE SUBDIVISION MAP ACT, THE FOLLOWING SIGNATURES HAVE BEEN OMITTED AS THEIR INTEREST CANNOT RIPEN INTO FEE TITLE:

1. THE SIGNATURES OF JAMES W. WATERS, JR., MAY BE OMITTED FROM THE RECORDED MAP BY DEED RECORDED MARCH 19, 1909 IN BOOK 49, PAGE 300 OF DEEDS
2. THE SIGNATURES OF THE RIVERSIDE LAND COMPANY, A CORPORATION MAY BE OMITTED FROM THE RECORDED MAP BY VARIOUS AGREEMENTS, CONDITIONS AND RESERVATIONS AS TO WATER AND EASEMENTS AS SET FORTH IN THE DEED RECORDED NOVEMBER 20, 1913 IN BOOK 541, PAGE 392 OF DEEDS AND DEED RECORDED FEBRUARY 11, 1914 IN BOOK 542, PAGE 311 DEEDS.

IMPROVEMENT CERTIFICATE

ALL STREET IMPROVEMENTS SHALL BE REQUIRED AT THE TIME OF DEVELOPMENT AS PER THE CONDITIONS AS APPROVED BY THE PLANNING COMMISSION ON SEPTEMBER 22, 1981. STORM DRAIN IMPROVEMENTS SHALL ALSO BE REQUIRED AT THE TIME OF DEVELOPMENT.

10-16-81
DATED

G. GLENN WILSON, DIRECTOR OF PUBLIC WORKS/CITY ENGINEER
RCE 13448, CITY OF SAN BERNARDINO

81-237673

FILED REQUEST OF First American Title Co.
ON October 27, 1981
AT 3:56 P.M. IN
BOOK 69 PAGE 1/2
OF Parcel Maps
SAN BERNARDINO COUNTY RECORDER
FEE No Fee

69/1

E-282

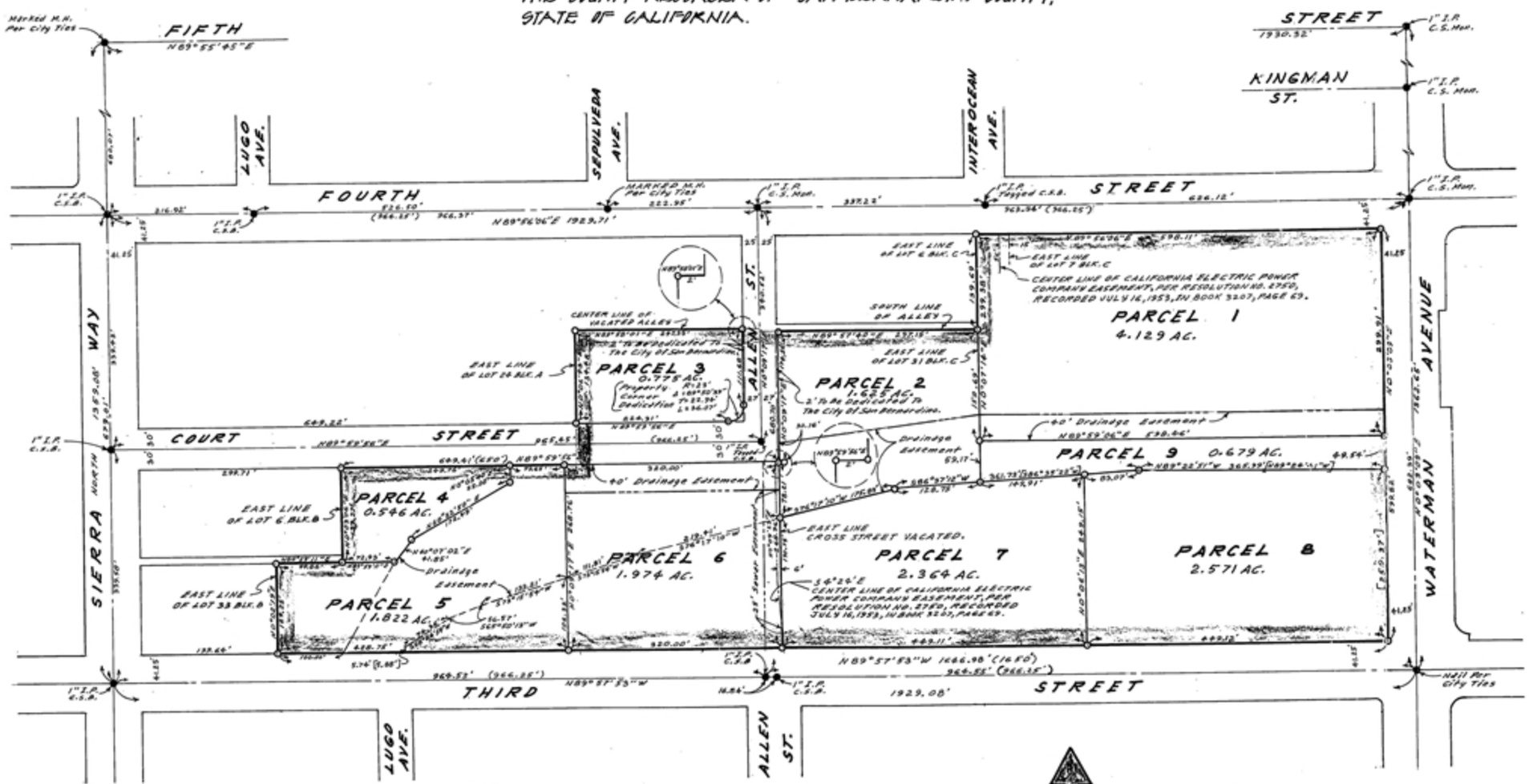
2/69

SHEET 1 OF 2 SHEETS

IN THE CITY OF SAN BERNARDINO

PARCEL MAP No. 7140

BEING A SUBDIVISION OF PORTIONS OF BLOCKS A, B, C AND D, WOZENCRAFT PLACE, AS PER PLAT RECORDED IN BOOK 5 OF MAPS, PAGE 47, RECORDS OF THE COUNTY RECORDER OF SAN BERNARDINO COUNTY, STATE OF CALIFORNIA.



NOTES

1. BASIS OF BEARINGS FOR THIS MAP IS THE CENTERLINE OF SIERRA WAY FROM THIRD STREET TO FIFTH STREET ASSUMED TO BE NORTH.
2. ● INDICATES MONUMENT FOUND AS NOTED.
3. ○ INDICATES SET 1" I.P. TAGGED L.S. 3679.
4. ( ) INDICATES REC. PER M.B. 5/47.
5. [ ] INDICATES PER CITY OF SAN BERNARDINO RESOLUTION NO. 2794.

69/2

E-283

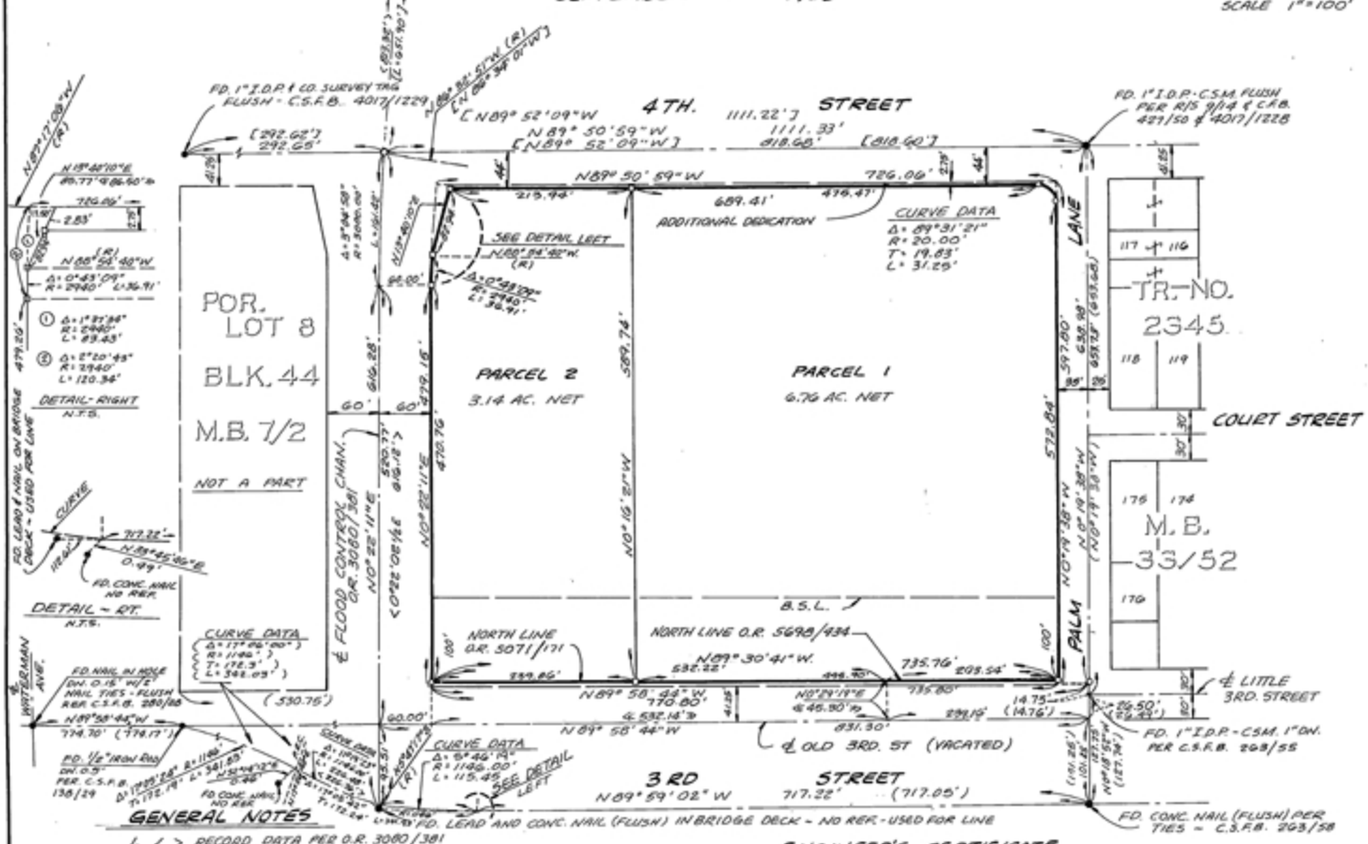
SHEET 1 OF 1 SHEET

PARCEL MAP NO. 8219

A PORTION OF LOTS 7 & 8, BLOCK 44, RANCHO SAN BERNARDINO, IN THE COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, AS PER PLAT RECORDED IN BOOK 7 OF MAPS, PAGE 2, RECORDS OF SAID COUNTY.

NESTE, BRUDIN & STONE, INCORPORATED ~ ENGINEERS - PLANNERS
SEPTEMBER ~ 1983

SCALE 1" = 100'



GENERAL NOTES

1. ( ) RECORD DATA PER O.R. 3080/381
2. « » RECORD DATA PER O.R. 5071/171
3. BASIS OF BEARING IS CENTERLINE OF PALM LANE
4. BEING N. 0°19'38"W. PER R.S. 9/14 S.B. CO. RECORDS.
5. ● INDICATES MONUMENT FOUND AS NOTED.
6. ( ) INDICATES RECORD DATA PER RS. 9/14
7. [ ] RECORD DATA PER R.S. 39/37
8. ○ INDICATES SET 1" I.D.P. 18" LONG TAGGED R.C.E. 15698
9. ○ INDICATES SET 2"X2" REDWOOD HUB 18" LONG PAINTED ORANGE TAGGED R.C.E. 15698.
10. MINOR SUBDIVISION NO. 8-83-0272
11. C.S.F.B INDICATES COUNTY SURVEYOR FIELD BOOK
12. C.S.M. INDICATES COUNTY SURVEYOR MONUMENT
13. B.S.L. INDICATES BUILDING SETBACK LINE

OWNER'S CERTIFICATE

WE HEREBY CERTIFY THAT WE ARE ALL AND THE ONLY PARTIES HAVING ANY RECORD TITLE INTEREST IN THE LAND SUBDIVIDED AS SHOWN ON THE ANNEXED MAP AND WE CONSENT TO THE PREPARATION AND RECORDATION OF THE PARCEL MAP. WE HEREBY IRREVOCABLY OFFER TO DEDICATE TO THE COUNTY OF SAN BERNARDINO, THE PUBLIC IN GENERAL AND TO ANY OF THE SEVERAL PUBLIC UTILITY COMPANIES WHICH ARE AUTHORIZED TO SERVE IN SAID SUBDIVISION an EASEMENT FOR PUBLIC ROADS, COUNTY HIGHWAYS AND PUBLIC UTILITY PURPOSES IN, UNDER, OVER, THROUGH AND ACROSS 4TH. STREET AND PALM LANE AS SHOWN ON THE ANNEXED MAP. THE EXPRESSED RIGHT TO THE PUBLIC IN GENERAL AND TO THE SEVERAL UTILITY COMPANIES SHALL BE AND REMAIN INFERIOR TO THE SUPERIOR RIGHTS OF THE COUNTY OF SAN BERNARDINO.

CITY OF RIVERSIDE, A MUNICIPAL CORPORATION

CITY OF RIVERSIDE, A MUNICIPAL CORPORATION
BY Ab Brown MAYOR
ATTEST Alice A. Hare CITY CLERK

NOTARY ACKNOWLEDGEMENT

DATED February 10, 1984.
STATE OF CALIFORNIA } SS
COUNTY OF RIVERSIDE }

ON THIS 10th DAY OF February, IN THE YEAR 1984, BEFORE ME, Margaret I. Allen A NOTARY PUBLIC IN AND FOR SAID COUNTY AND STATE, PERSONALLY APPEARED Ab Brown and Alice A. Hare PERSONALLY KNOWN TO ME TO BE THE PERSONS WHO EXECUTED THIS INSTRUMENT AS MAYOR AND CITY CLERK OF THE CITY OF RIVERSIDE, A MUNICIPAL CORPORATION, AND ACKNOWLEDGED TO ME THAT THE MUNICIPAL CORPORATION EXECUTED THE SAME.

WITNESS MY HAND AND OFFICIAL SEAL. Margaret I. Allen
NOTARY PUBLIC IN AND FOR SAID STATE

OFFICIAL SEAL
MARGARET I. ALLEN
NOTARY PUBLIC
RIVERSIDE CO., CALIF.
My commission expires 4-29-87

ENGINEER'S CERTIFICATE

THIS MAP WAS PREPARED BY ME OR UNDER MY DIRECTION AND IS BASED UPON A FIELD SURVEY IN CONFORMANCE WITH THE REQUIREMENTS OF THE SUBDIVISION MAP ACT AND LOCAL ORDINANCE AT THE REQUEST OF GOODWILL INDUSTRIES IN SEPTEMBER 1983. I HEREBY STATE THAT THIS PARCEL MAP SUBSTANTIALLY CONFORMS TO THE APPROVED OR CONDITIONALLY APPROVED TENTATIVE MAP, IF ANY.

Jerry M. Dunlap
JERRY M. DUNLAP R.C.E. 15698

COUNTY SURVEYOR'S APPROVAL AND ACCEPTANCE CERTIFICATE

THE UNDERSIGNED OFFICER, ON BEHALF OF THE BOARD OF SUPERVISORS PURSUANT TO AUTHORITY CONFERRED BY SECTION 66.012 (d.) (3) (D) (III) OF THE SAN BERNARDINO COUNTY CODE, HEREBY APPROVES THIS MAP AND ACCEPTS 4TH. STREET AND PALM LANE AS SHOWN ON THIS MAP.

DATED: 2-28-84
EUGENE P. ENE, COUNTY SURVEYOR
BY: Larry L. Allen DEPUTY

COUNTY SURVEYOR'S CERTIFICATE

THIS MAP CONFORMS WITH THE REQUIREMENTS OF THE SUBDIVISION MAP ACT AND LOCAL ORDINANCE.

DATED: 2-28-84
EUGENE P. ENE, COUNTY SURVEYOR
BY: Larry L. Allen DEPUTY

AUDITOR'S CERTIFICATE

I HEREBY CERTIFY THAT ACCORDING TO THE RECORDS OF THIS OFFICE AS OF THIS DATE, THERE ARE NO LIENS AGAINST THE REAL PROPERTY SHOWN UPON THE RANKED MAP FOR UNPAID STATE, COUNTY, MUNICIPAL, OR LOCAL TAXES OR SPECIAL ASSESSMENTS COLLECTED AS TAXES.

DATED: 2/24/84
EARL J. MACKZUM COUNTY AUDITOR
COUNTY OF SAN BERNARDINO
BY: Janet J. Hill DEPUTY

84-047804

FILED REQUEST OF
FIDELITY NATIONAL TITLE
ON FEBRUARY 29, 1984
AT 4:41 PM IN
BOOK 86 PAGE 4
OF PARCEL MAPS
SAN BERNARDINO COUNTY RECORDER
FEE NO FEE

PM. B-122

89/891

IN THE CITY OF SAN BERNARDINO, STATE OF CALIFORNIA

SHEET 1 OF 2 SHEETS

TRACT NO. 12359

BEING A SUBDIVISION OF A PORTION OF LOT 1, BLOCK 39, RANCHO SAN BERNARDINO, AS SHOWN BY MAP ON FILE IN BOOK 7 OF MAPS, PAGE 2, ALSO PARCEL 1 OF P.M. 4586, AS PER PLAT RECORDED IN BOOK 49, PAGE 73 RECORDS OF SAN BERNARDINO COUNTY

FOR COMMERCIAL CONDOMINIUM PURPOSES

W. J. McKEEVER, INC.
CIVIL ENGINEERING

MAY 1983

OWNER'S CERTIFICATE

WE HEREBY CERTIFY THAT WE ARE ALL AND THE ONLY PARTIES HAVING ANY RECORD TITLE INTEREST IN THE LAND SUBDIVIDED AS SHOWN ON THE ANNEXED MAP AND WE CONSENT TO THE PREPARATION AND RECORDATION OF THIS FINAL MAP.

WE HEREBY RESERVE TO OURSELVES, OUR HEIRS, AND ASSIGNS FOR THE USE AND BENEFIT OF THE POLICE, FIRE, REFUSE, SEWER AND SEVERAL PUBLIC UTILITY COMPANIES WHICH ARE AUTHORIZED TO SERVE IN SAID SUBDIVISION AN EASEMENT FOR EMERGENCY USES AS REQUIRED AND FOR PUBLIC UTILITY PURPOSES OVER LOT 1, EXCEPT FOR AREAS REQUIRED FOR THOSE CONDOMINIUM BUILDINGS SHOWN ON PLANS RECORDED PURSUANT TO CIVIL CODE SECTION 1351.

FTU INVESTMENTS, A GENERAL PARTNERSHIP

Edwin Prayer

CALIFORNIA FIRST BANK, A CALIFORNIA BANKING CORP (AS BENEFICIARY)

VICE PRESIDENT — ~~ASSISTANT VICE PRESIDENT~~ REAL ESTATE LOAN OFFICER

SKYLOFT MALL MEDICAL BUILDING, A CALIFORNIA LIMITED PARTNERSHIP (AS BENEFICIARY)

DAVID REID & ASSOC., INC.
GENERAL PARTNER BY: PRES.

LLOYD S. FERRIS AND A. SUE FERRIS, HUSBAND AND WIFE JOINT TENANTS (AS BENEFICIARY)

ANNETTE M. BROCKA, A MARRIED WOMAN, SOLE AND SEPERATE PROPERTY (AS BENEFICIARY)

STATE OF CALIFORNIA
COUNTY OF LOS ANGELES

ON THIS 24 DAY OF May, 1983, BEFORE ME LORI J. ZITO A NOTARY PUBLIC IN AND FOR SAID STATE, PERSONALLY APPEARED EDWIN PRAYER, (PERSONALLY KNOWN TO ME/PROVED TO ME ON THE BASIS OF SATISFACTORY EVIDENCE) TO BE THE PERSON(S) THAT EXECUTED (THE WITHIN/THIS) INSTRUMENT, ON BEHALF OF THE PARTNERSHIP THEREIN NAMED, AND ACKNOWLEDGED TO ME THAT S/I/D PARTHERSHIP EXECUTED (THE SAME/IT).

MY COMMISSION EXPIRES 10-29-84

WITNESS MY HAND AND OFFICIAL SEAL.

OFFICIAL SEAL
LORI J ZITO
NOTARY PUBLIC - CALIFORNIA
VENTURA COUNTY
My comm. expires OCT 29, 1984

STATE OF CALIFORNIA
COUNTY OF ORANGE

ON THIS 24 DAY OF May, 1983, BEFORE ME LORI J. ZITO A NOTARY PUBLIC IN AND FOR SAID STATE, PERSONALLY APPEARED WILLIAM G. PAVNICK AND KANDICE K. KJELGEN (PERSONALLY KNOWN TO ME/PROVED ON THE BASIS OF SATISFACTORY EVIDENCE) TO BE THE PERSON WHO EXECUTED THE WITHIN INSTRUMENT AS VICE PRESIDENT AND ~~ASSISTANT SECRETARY~~ OF CALIFORNIA 1ST BANK A CA. BANKING CORP. CORPORATION, THE CORPORATION THAT EXECUTED THE WITHIN INSTRUMENT, AND KNOWN TO ME TO BE THE PERSONS WHO EXECUTED THE WITHIN INSTRUMENT ON BEHALF OF SAID CORPORATION, AND ACKNOWLEDGED TO ME THAT SAID CORPORATION EXECUTED THE SAME.

MY COMMISSION EXPIRES 10-29-84

WITNESS MY HAND AND OFFICIAL SEAL.

OFFICIAL SEAL
LORI J ZITO
NOTARY PUBLIC - CALIFORNIA
VENTURA COUNTY
My comm. expires OCT 29, 1984

STATE OF CALIFORNIA
COUNTY OF ORANGE

ON MAY 24, 1983, BEFORE ME, LORI J. ZITO, A NOTARY PUBLIC IN AND FOR SAID STATE, PERSONALLY APPEARED DAVID REID (PERSONALLY KNOWN TO ME/PROVED TO ME ON THE BASIS OF SATISFACTORY EVIDENCE) TO BE THE PERSON(S) WHO EXECUTED THE WITHIN INSTRUMENT AS THE GENERAL PARTNER(S) OF SKYLOFT MALL MEDICAL BUILDING, THE CALIFORNIA LIMITED PARTNERSHIP THAT EXECUTED THE WITHIN INSTRUMENT AND ACKNOWLEDGED TO ME THAT SUCH PARTNERSHIP EXECUTED THE SAME.

MY COMMISSION EXPIRES 10-29-84

WITNESS MY HAND AND OFFICIAL SEAL.

OFFICIAL SEAL
LORI J ZITO
NOTARY PUBLIC - CALIFORNIA
VENTURA COUNTY
My comm. expires OCT 29, 1984

BOARD OF SUPERVISORS CERTIFICATE

I HEREBY CERTIFY THAT A BOND IN THE SUM OF $ 7,051.00 HAS BEEN EXECUTED AND FILED WITH THE BOARD OF SUPERVISORS OF THE COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, CONDITIONED UPON THE PAYMENT OF ALL TAXES, STATE, COUNTY, MUNICIPAL, OR LOCAL, AND ALL SPECIAL ASSESSMENTS, COLLECTED AS TAXES, WHICH AT THE TIME OF THE FILING OF THE ANNEXED MAP WITH THE COUNTY RECORDER ARE A LIEN AGAINST SAID PROPERTY, BUT NOT YET PAYABLE AND THAT THE SUBDIVIDER HAS FILED WITH ME A CERTIFICATE BY THE PROPER OFFICER GIVING HIS ESTIMATE OF THE AMOUNT OF SAID TAXES AND ASSESSMENTS, AND SAID BOND HAS BEEN DULY APPROVED BY SAID BOARD OF SUPERVISORS.

DATED: 9/1/83

~~ANNE S. DUNCAN~~ MARTHA M. SEKERAK
CLERK OF THE BOARD OF SUPERVISORS
OF THE COUNTY OF SAN BERNARDINO

BY: DEPUTY

CERTIFICATE OF CITY COUNCIL:

I HEREBY CERTIFY THAT THE MAYOR AND COMMON COUNCIL OF THE CITY OF SAN BERNARDINO BY RESOLUTION ADOPTED ON THE 6TH DAY OF JUNE 1983 APPROVED THE ANNEXED MAP

DATED June 7, 1983

CITY CLERK, CITY OF SAN BERNARDINO

I HEREBY APPROVE THE FOREGOING RESOLUTION

MAYOR, CITY OF SAN BERNARDINO

CITY ENGINEER'S CERTIFICATE:

I HEREBY CERTIFY THAT I HAVE EXAMINED THE ANNEXED MAP, THAT THE SUBDIVISION SHOWN THEREON IS SUBSTANTIALLY THE SAME AS IT APPEARED ON THE TENTATIVE MAP AND ANY APPROVED ALTERATIONS THERETO AND THAT ALL THE PROVISIONS OF THE SUBDIVISION MAP ACT OF THE STATE OF CALIFORNIA AND ~~TITLE 18 MUNICIPAL CODE~~ OF THE CITY OF SAN BERNARDINO HAVE BEEN COMPLIED WITH AND I AM SATISFIED THAT THIS MAP IS TECHNICALLY CORRECT.

DATED 6-9-83

ROGER G. HARPBRAVE R.C.E. NO. 29014
DIRECTOR OF PUBLIC WORKS/CITY ENGINEER
CITY OF SAN BERNARDINO, CALIFORNIA

STATE OF CALIFORNIA
COUNTY OF RIVERSIDE

ON MAY 24, 1983 BEFORE ME LORI J. ZITO A NOTARY PUBLIC IN AND FOR SAID STATE, PERSONALLY APPEARED LLOYD S. FERRIS AND A. SUE FERRIS (PERSONALLY KNOWN TO ME/PROVED TO ME ON THE BASIS OF SATISFACTORY EVIDENCE) TO BE THE PERSON(S) WHOSE NAME(S) (IS/ARE) SUBSCRIBED TO THE WITHIN INSTRUMENT AND ACKNOWLEDGED THAT (HE/SHE/THEY) EXECUTED THE SAME.

WITNESS MY HAND AND OFFICIAL SEAL. MY COMMISSION EXPIRES 10-29-84

OFFICIAL SEAL
LORI J ZITO
NOTARY PUBLIC - CALIFORNIA
VENTURA COUNTY
My comm. expires OCT 29, 1984

SIGNATURE OMISSIONS

PURSUANT TO SECTION 66436 OF THE SUBDIVISION MAP ACT, THE SIGNATURES OF THE FOLLOWING OWNERS OF EASEMENTS AND/OR OTHER INTERESTS HAVE BEEN OMITTED: EASEMENTS IN FAVOR OF ASSOCIATED TELEPHONE COMPANY AND SOUTHERN CALIFORNIA EDISON COMPANY BY DEED RECORDED JULY 5, 1951, IN BOOK 2789, PAGE 203 AND DEED RECORDED APRIL 25, 1939, IN BOOK 1341, PAGE 363, AND DEED RECORDED MAY 5, 1939, IN BOOK 1344, PAGE 494, O.R. AN EASEMENT IN FAVOR OF WAYNE BURTON AS RESERVED IN DEED RECORDED MAYCH 30, 1979, IN BOOK 9654, PAGE 1967, AND DEED RECORDED MARCH 30, 1979, IN BOOK 9654, PAGE 1972, O.R.

ENGINEER'S CERTIFICATE:

I, WILLIAM J. McKEEVER HEREBY CERTIFY THAT I AM A REGISTERED CIVIL ENGINEER OF THE STATE OF CALIFORNIA AND THAT THIS MAP CONSISTING OF 2 SHEETS, IS A TRUE AND COMPLETE REPRESENTATION OF A SURVEY MADE UNDER MY SUPERVISION IN JANUARY, 1983, AND THAT ALL THE MONUMENTS SHOWN THEREON ARE OF THE CHARACTER AND OCCUPY THE POSITIONS INDICATED OR WILL BE SET IN SUCH POSITIONS ON OR BEFORE 5-26-84 IN COMPLIANCE WITH SECTION 66495 OF THE SUBDIVISION MAP ACT AND ARE OR WILL BE SUFFICIENT TO ENABLE THE SURVEY TO BE RETRACED.

DATED: 5-26-83

REGISTERED CIVIL ENGINEER NO. 22502

AUDITOR'S CERTIFICATE:

I HEREBY CERTIFY THAT ACCORDING TO THE RECORDS OF THIS OFFICE, AS OF THIS DATE, THERE ARE NO LIENS AGAINST THE REAL PROPERTY SHOWN UPON THE ANNEXED MAP FOR UNPAID STATE, COUNTY, MUNICIPAL OR LOCAL TAXES OR SPECIAL ASSESSMENTS COLLECTED AS TAXES, EXCEPT TAXES OR SPECIAL ASSESSMENTS NOT YET PAYABLE ESTIMATED TO BE $7,051.00.

DATED: Sept. 1, 1983

ERROL J. MACZUM, COUNTY AUDITOR, COUNTY OF SAN BERNARDINO, CA

BY: Margaret A. Lopez

ENGINEER'S NOTES:

BEARINGS BASED UPON THE CENTERLINE OF WATERMAN AVENUE AS SHOWN BY MAP NO. 4586, P.M.B. 43/73, RECORDS OF SAN BERNARDINO COUNTY BEARING BEING NORTH.

—●— INDICATES MONUMENTS FOUND AS NOTED.

—○— INDICATES SET 1" I.P. W/R.C.E. 22502 TAG UNLESS NOTED OTHERWISE.

( ) INDICATES RECORD INFORMATION PER P.M.B. 43/73 RECORDS OF SAN BERNARDINO COUNTY UNLESS NOTED OTHERWISE.

R & M INDICATES RECORD AND MEASURED INFORMATION.

C.S.B. INDICATES CITY OF SAN BERNARDINO.

THIS SUBDIVISION CONTAINS 1 LOT.

STATE OF CALIFORNIA)
COUNTY OF RIVERSIDE

ON MAY 24, 1983 BEFORE ME LORI J. ZITO, A NOTARY PUBLIC IN AND FOR SAID STATE, PERSONALLY APPEARED ANNETTE M. BROCKA AND X X X X (PERSONALLY KNOWN TO ME/PROVED TO ME ON THE BASIS OF SATISFACTORY EVIDENCE) TO BE THE PERSON(S) WHOSE NAME(S) (IS/ARE) SUBSCRIBED TO THE WITHIN INSTRUMENT AND ACKNOWLEDGED THAT (HE/SHE/THEY) EXECUTED THE SAME.

WITNESS MY HAND AND OFFICIAL SEAL. MY COMMISSION EXPIRES 10-29-84

OFFICIAL SEAL
LORI J ZITO
NOTARY PUBLIC - CALIFORNIA
VENTURA COUNTY
My comm. expires OCT 29, 1984

83-209337

FILED REQUEST OF
FIRST AMERICAN TITLE INS CO
ON SEPT. 8, 1983
AT 11:01 A.M. IN
BOOK 168 PAGE 68/69
OF MAPS
SAN BERNARDINO COUNTY RECORDER
FEE $7.00

168/68

E-285

69/891

IN THE CITY OF SAN BERNARDINO, STATE OF CALIFORNIA

SHEET 2 OF 2 SHEETS

TRACT NO. 12359

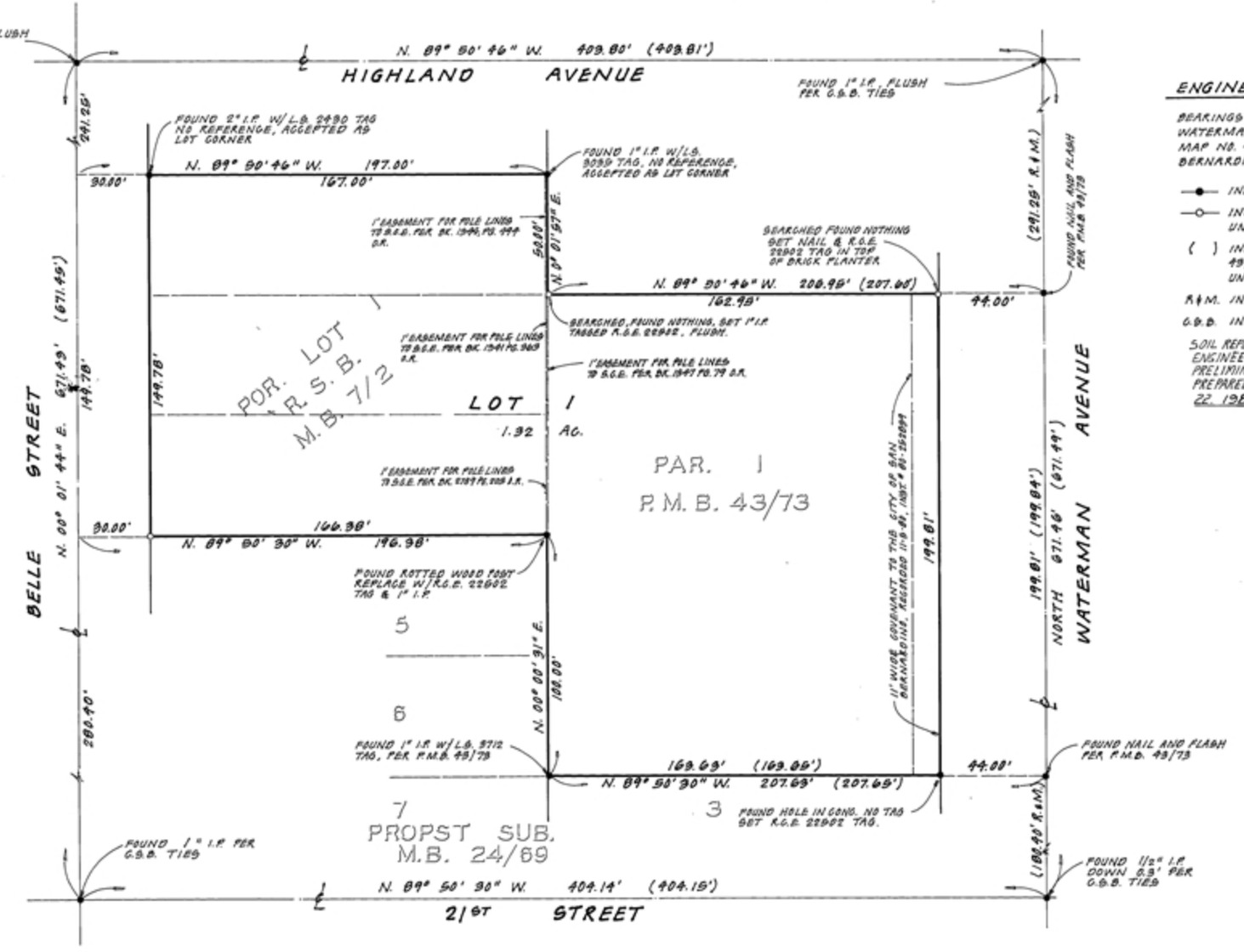
BEING A SUBDIVISION OF A PORTION OF LOT 1, BLOCK 39, RANCHO SAN BERNARDINO, AS SHOWN BY MAP ON FILE IN BOOK 7, OF MAPS, PAGE 2, ALSO PARCEL 1 OF P.M. 4986, AS PER PLAT RECORDED IN BOOK 49, PAGE 73 RECORDS OF SAN BERNARDINO COUNTY.

MAY 1989

FOR COMMERCIAL CONDOMINIUM PURPOSES

SCALE: 1" = 30'

W. J. McKEEVER, INC.
CIVIL ENGINEERING



ENGINEER'S NOTES:

BEARINGS BASED UPON THE CENTERLINE OF WATERMAN AVENUE AS SHOWN BY MAP MAP NO. 4986, P.M.B. 49/73 RECORDS OF SAN BERNARDINO CO., BEARING BEING NORTH

—●— INDICATES MONUMENTS FOUND AS NOTED.

—○— INDICATES SET 1" I.P. W/R.C.E. 22902 TAG UNLESS NOTED OTHERWISE.

( ) INDICATES RECORD INFORMATION PER P.M.B. 49/73 RECORDS OF SAN BERNARDINO CO. UNLESS NOTED OTHERWISE

R & M. INDICATES RECORD AND MEASURED INFORMATION

G.S.B. INDICATES CITY OF SAN BERNARDINO

SOIL REPORT PREPARED BY SYED Z AHMAD (ASSOCIATED SOILS ENGINEERING INC) P.C.E. NO. 16621 ON MARCH 2, 1983 AND PRELIMINARY SEISMIC-LIQUEFACTION POTENTIAL EVALUATION PREPARED BY C. MICHAEL SCULLIN E.G. No. 170 ON FEBRUARY 22, 1983.

E-286

168/69

EE/016

SHEET 1 OF 2 SHEETS

PARCEL MAP NO. 8993

SCALE: 1" = 30'

2 PARCELS

IN THE CITY OF SAN BERNARDINO, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA

BEING A PORTION OF LOT 9, IN BLOCK 42 OF RANCHO SAN BERNARDINO, AS PER PLAT RECORDED IN BOOK 7 OF MAPS, PAGE 2, RECORDS OF SAN BERNARDINO COUNTY, CALIFORNIA

DEREK H. WHITE R.C.E. 16058 MAY,1984

OWNER'S CERTIFICATE

I HEREBY CERTIFY THAT I AM THE ONLY PARTY HAVING ANY RECORD TITLE INTEREST IN THE LAND SUBDIVIDED AS SHOWN ON THE ANNEXED MAP AND I CONSENT TO THE PREPARATION AND RECORDATION OF THIS PARCEL MAP, AND I HEREBY DEDICATE TO THE CITY OF SAN BERNARDINO FOR PUBLIC THOROUGHFARE WATERMAN AVENUE AND NINTH STREET, SAID DEDICATION SHALL BE DEEMED TO INCLUDE ANY PUBLIC UTILITY FACILITIES OR SEWERS LOCATED ON OR UNDER SAID THOROUGHFARE.

I ALSO RESERVE TO MYSELF, MY HEIRS AND ASSIGNS THAT CERTAIN NON-EXCLUSIVE INGRESS, EGRESS, DRAINAGE AND PUBLIC UTILITY EASEMENT IN FAVOR OF PARCEL 1 AND 2, OVER AND ACROSS PARCEL 1 AND 2 AS DELINEATED ON SAID MAP.

Harold W Willis

HAROLD W. WILLIS OWNER

FIRST AMERICAN TITLE INSURANCE COMPANY, A CALIFORNIA CORPORATION AS TRUSTEE

BY Frank A. Skinnell ASST. SECRETARY

STATE OF CALIFORNIA }
COUNTY OF SAN BERNARDINO } SS:

ON THIS 10th DAY OF May, 1985, BEFORE ME the undersigned A NOTARY PUBLIC IN AND FOR SAID COUNTY AND STATE, PERSONALLY APPEARED HAROLD W. WILLIS KNOWN TO ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE WITHIN INSTRUMENT, AND ACKNOWLEDGED TO ME THAT HE EXECUTED THE SAME.

WITNESS MY HAND AND OFFICIAL SEAL.

Lee Ann Adams
SIGNATURE

NAME LEE ANN ADAMS

NOTARY PUBLIC IN AND FOR SAID COUNTY AND STATE

MY COMMISSION EXPIRES JUNE 25, 1986

OFFICIAL SEAL
LEE ANN ADAMS
NOTARY PUBLIC - CALIFORNIA
SAN BERNARDINO COUNTY
My Commission Expires June 25, 1986

ACCEPTANCE CERTIFICATE

THE CITY OF SAN BERNARDINO ACCEPTS AS PUBLIC STREET DEDICATIONS AS SHOWN ON THE ANNEXED MAP IN COMPLIANCE WITH TITLE 16, MUNICIPAL CODE OF THE CITY OF SAN BERNARDINO.

DATE: 5-20-85 SIGNED: Roger G. Hardgrave

ROGER G. HARDGRAVE
R.C.E. 23014
DIRECTOR OF PUBLIC
WORKS/CITY ENGINEER
CITY OF SAN BERNARDINO

ENGINEER'S CERTIFICATE

THIS MAP WAS PREPARED BY ME OR UNDER MY DIRECTION AND IS BASED UPON A FIELD SURVEY IN CONFORMANCE WITH THE REQUIREMENTS OF THE SUBDIVISION MAP ACT AND LOCAL ORDINANCE AT THE REQUEST OF HAROLD W. WILLIS ON MAY 14, 1984. I HEREBY STATE THAT THIS PARCEL MAP SUBSTANTIALLY CONFORMS TO THE APPROVED ON CONDITIONALLY APPROVED TENTATIVE MAP, IF ANY.

Derek H. White 2-25-85
DEREK H. WHITE R.C.E. 16058

CITY ENGINEER'S CERTIFICATE

THIS MAP CONFORMS WITH THE REQUIREMENTS OF THE SUBDIVISION MAP ACT AND LOCAL ORDINANCE.

DATE: 5-20-85 SIGNED: Roger G. Hardgrave

ROGER G. HARDGRAVE R.C.E. 23014
DIRECTOR OF PUBLIC
WORKS/CITY ENGINEER

IMPROVEMENT CERTIFICATE

IF THE REQUIRED IMPROVEMENTS ARE NOT COMPLETED PRIOR TO FILING OF THE PARCEL MAP, IMPROVEMENTS SHALL BE REQUIRED AT THE TIME OF DEVELOPMENT AS PER THE CONDITIONS AS APPROVED BY THE PLANNING COMMISSION ON FEBRUARY 5, 1984.

STATE OF CALIFORNIA }
COUNTY OF SAN BERNARDINO } SS:

ON May 15, 1985 BEFORE ME, THE UNDERSIGNED, A NOTARY PUBLIC IN AND FOR SAID STATE PERSONALLY APPEARED FRANK A. SKINNELL PERSONALLY KNOWN TO ME TO BE THE PERSON WHO EXECUTED THE WITHIN INSTRUMENT AS ASST. SECRETARY ON BEHALF OF FIRST AMERICAN TITLE INSURANCE COMPANY, THE CORPORATION THEREIN NAMED, AND ACKNOWLEDGED TO ME THAT SUCH CORPORATION EXECUTED THE WITHIN INSTRUMENT AS TRUSTEE PURSUANT TO ITS BY-LAWS OR A RESOLUTION OF ITS BOARD OF DIRECTORS.

WITNESS MY HAND AND OFFICIAL SEAL

SIGNATURE Teresa Cau

MY COMMISION EXPIRES 1-2-88

BOARD OF SUPERVISOR'S CERTIFICATE:

I HEREBY CERTIFY THAT A BOND IN THE SUM OF $1,200.00 HAS BEEN EXECUTED AND FILED WITH THE BOARD OF SUPERVISORS OF THE COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, CONDITIONED UPON THE PAYMENT OF ALL TAXES, STATE, COUNTY, MUNICIPAL, OR LOCAL, AND ALL SPECIAL ASSESSMENTS COLLECTED AS TAXES, WHICH AT THE TIME OF FILING OF THE ANNEXED MAPWITH THE COUNTY RECORDER ARE A LIEN AGAINST SAID PROPERTY, BUT NOT YET PAYABLE AND THAT THE SUBDIVIDER HAS FILED WITH ME A CERTIFICATE BY THE PROPER OFFICER GIVING HIS ESTIMATE OF THE AMOUNT OF SAID TAXES AND ASSESSMENTS, SAID BOND IS HEREBY ACCEPTED.

DATED: day 17, 1985

MARTHA M. SEKERAK
CLERK OF THE BOARD OF SUPERVISORS
OF THE COUNTY OF SAN BERNARDINO

BY: Julie Worley DEPUTY

AUDITOR'S CERTIFICATE:

I HEREBY CERTIFY THAT ACCORDING TO THE RECORDS OF THIS OFFICE, AS OF THIS DATE THERE ARE NO LIENS AGAINST THE REAL PROPERTY SHOWN UPON THE ANNEXED MAPFOR UNPAID STATE, COUNTY, MUNICIPAL, OR LOCAL TAXES OR SPECIAL ASSESSMENTS COLLECTED AS TAXES, EXCEPT TAXES OR SPECIAL ASSESSMENTS NOT YET PAYABLE, ESTIMATED TO BE $6,200.00

DATED: May 17, 1985

ERROL J. MACKZUM, COUNTY AUDITOR
COUNTY OF SAN BERNARDINO

BY: Janet J. Hill DEPUTY

85-124548
First American Title Co.
May 24, 1985
1:56 pm.
96 - 33-34
parcel maps
$8.00

96/33

SCALE: 1" = 30'
2 PARCELS

SHEET 2 OF 2 SHEETS

PARCEL MAP NO. 8993

IN THE CITY OF SAN BERNARDINO, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA

BEING A PORTION OF LOT 9, IN BLOCK 42 OF RANCHO SAN BERNARDINO, AS PER PLAT RECORDED IN BOOK 7 OF MAPS, PAGE 2, RECORDS OF SAN BERNARDINO COUNTY, CALIFORNIA.

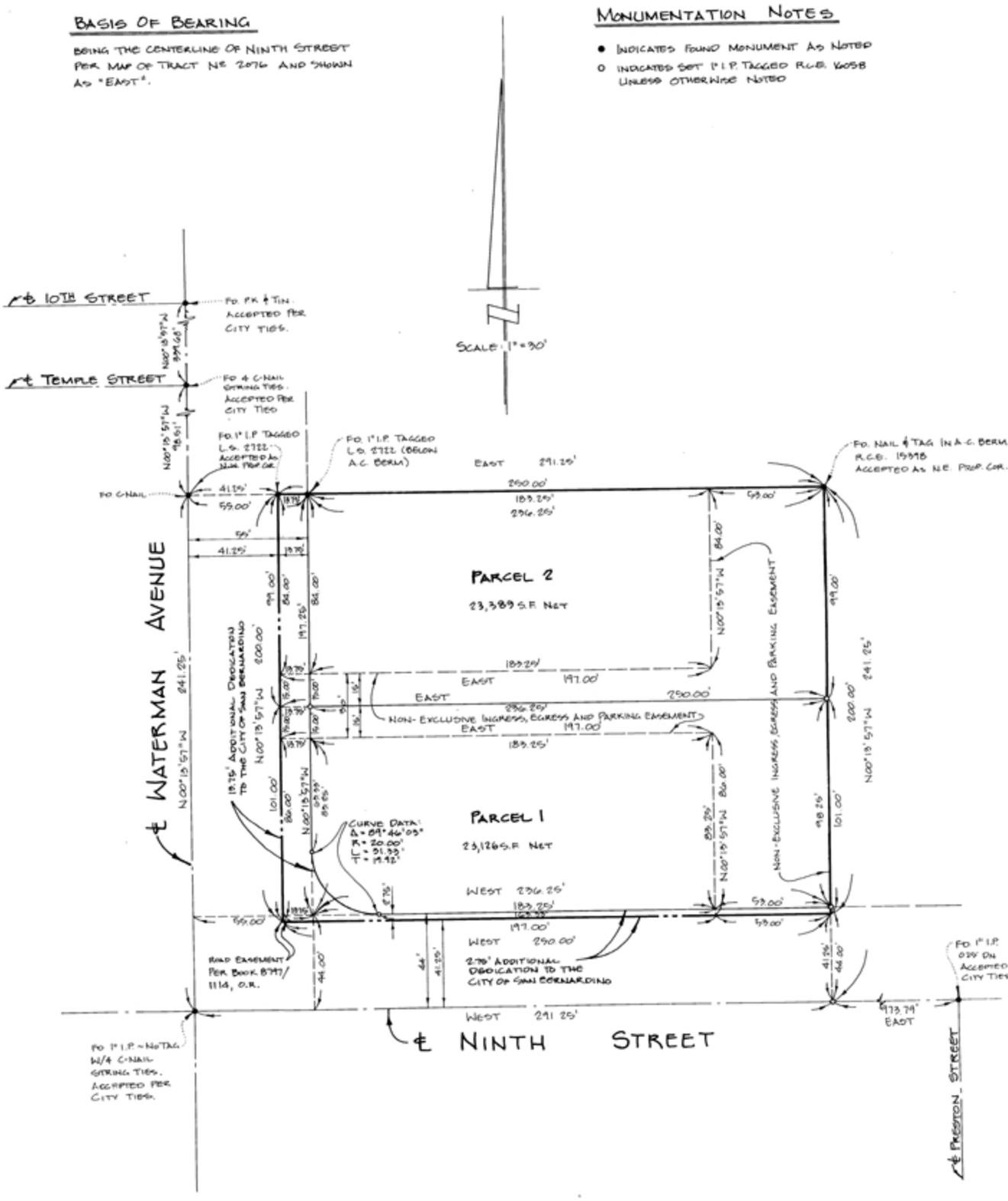
DEREK H. WHITE R.C.E. 16058 MAY, 1984

BASIS OF BEARING

BEING THE CENTERLINE OF NINTH STREET PER MAP OF TRACT NO. 2076 AND SHOWN AS "EAST".

MONUMENTATION NOTES

- ● INDICATES FOUND MONUMENT AS NOTED
- O INDICATES SET 1" I.P. TAGGED R.C.E. 16058 UNLESS OTHERWISE NOTED



E/96

IN THE CITY OF SAN BERNARDINO

PARCEL MAP NO. 9122

THAT PORTION OF PARCEL 4, AND PARCEL 5, OF PARCEL MAP NO. 7140, IN THE CITY OF SAN BERNARDINO, COUNTY OF SAN BERNARDINO STATE OF CALIFORNIA, AS PER PLAT RECORDED IN BOOK 69 OF PARCEL MAPS PAGE 1 AND 2, RECORDS OF SAID COUNTY AND STATE.

BROWN AND MULLINS Inc. FEBRUARY, 1985

OWNER'S CERTIFICATE

We hereby certify we are all and the only parties having any record title interest in the land subdivided as shown on the annexed map, and we consent to the preparation and recordation of this Parcel Map. We hereby irrevocably offer to dedicate to the City of San Bernardino, an easement for Storm Drains, as shown on the annexed map.

CLIFF R. CAREL & ASSOCIATES
a limited partnership (OWNER)

Clifford R. Carel
General Partner

NOTARY ACKNOWLEDGEMENT

STATE OF CALIFORNIA)
) ss
COUNTY OF SAN BERNARDINO)

On May 1, 1985 before me, the undersigned a Notary Public in and for said State, personally appeared CLIFFORD R. CAREL, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person that executed the within instrument as general partner on behalf of CLIFF R. CAREL & ASSOCIATES, the partnership therein named and acknowledged to me that the partnership executed it.

WITNESS my hand and official seal.

Signature Luisa Carr

NOTARY ACKNOWLEDGEMENT

STATE OF CALIFORNIA)
) ss
COUNTY OF SAN BERNARDINO)

On _____, before the undersigned a Notary Public in and for said State, personally appeared SALENA T. GREGORY, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person that executed the within instrument as a limited partner, on behalf of CLIFF R. CAREL & ASSOCIATES, the partnership therein named and acknowledged to me that the partnership executed it.

WITNESS my hand and official seal.

Signature_____

AUDITOR'S CERTIFICATE

I hereby certify that according to the records of this office, as of this date, there are no liens against the real property shown upon the annexed map for unpaid State, County, Municipal, or local taxes or special assessments collected as taxes, except taxes or special assessments not yet payable, estimated to be $900.00.

Dated: May 2, 1985

Errol J. MacKzum COUNTY AUDITOR
County of San Bernardino

By Janet J. Sell Deputy

BOARD OF SUPERVISOR'S CERTIFICATE

I hereby certify that a bond in the sum of $900 has been executed and filed with the Board of Supervisors of the County of San Bernardino, State of California, conditioned upon the payment of all taxes, which at the time of the filing of the annexed map with the County Recorder are a lien against said property, but not yet payable and that the subdivider has filed with me a certificate by the proper officer giving his estimate of the amount of said taxes and assessments, and said bond is hereby accepted.

Dated 5/2/85

Martha M. Sekerak
Clerk of the Board of Supervisors
of the County of San Bernardino

By Earlene Sprout Deputy

IMPROVEMENT CERTIFICATE

If the required improvements are not completed prior to the filing of this Parcel Map, improvements shall be required at the time of development as per the conditions as approved by the Planning Commission on April 2, 1985.

NOTARY ACKNOWLEDGMENT

STATE OF CALIFORNIA)
COUNTY OF SAN BERNARDINO) ss

On this ____ day of _____, 1985, before me the undersigned, a Notary Public in and for said County and State, personally appeared GLENDA SAUL personally known to me (or proved to me on the basis of satisfactory evidence) to be the person who executed the within instrument as Executive Director on behalf of CITY OF SAN BERNARDINO REDEVELOPMENT AGENCY the Agency therein named, and acknowledged to me that such Agency executed the within instrument.

Witness my hand and Official Seal

Signature

Notary Public in and for said County and State

My Commission expires_____

CITY ENGINEER'S CERTIFICATE

This map conforms with the requirements of the subdivision map act and local ordinance.

Date: 5-2-85

Roger G. Hardgrave, Director of Public Works/City Engineer

Roger G. Hardgrave, R.C.E. 23014

SURVEYOR'S CERTIFICATE

This map was prepared by me or under my direction and is based upon a field survey in conformance with the requirements of the Subdivision Map Act and local ordinance at the request of Cliff R. Carel in April 1984. I hereby state that this parcel map substantially conforms to the approved or conditionally approved tentative map, if any.

Date: April 29 1985

Russell J. Mullins L.S. 3716

CERTIFICATE OF ACCEPTANCE

The City of San Bernardino hereby approves the annexed map and accepts as Public the dedication for public use the easements as shown on the annexed map in compliance with the City of San Bernardino Municipal code Title 18.

Roger G. Hardgrave, Director of Public Works/City Engineer
City of San Bernardino, California

Date: 5-2-85

Roger G. Hardgrave, R.C.E. 23014

SIGNATURE OMISSIONS

Under the provisions of Section 66436 (c) (1) of the Subdivision Map Act, the following signatures have been omitted.

The signature of James W. Waters, Jr., the record owner of an easement for water ditch as disclosed by a document recorded in Book 40, page 386, of Deeds, which interest cannot ripen into a fee.

The signature of the Riverside Land Company, the record owner of an easement for water pipe lines as disclosed by document recorded in Book 541, page 322 of Deeds, which interest cannot ripen into a fee.

85-109154

FILED REQUEST OF
First American Title Ins. Co.
ON May 8, 1985
AT 12:38 P.M. IN
BOOK 96 PAGES 3/4
OF Parcel Maps
SAN BERNARDINO COUNTY RECORDER
FEE $8.00

E-289

96/3

IN THE CITY OF SAN BERNARDINO

PARCEL MAP NO. 9122

THAT PORTION OF PARCEL 4, AND PARCEL 5, OF PARCEL MAP NO. 7140, IN THE CITY OF SAN BERNARDINO, COUNTY OF SAN BERNARDINO STATE OF CALIFORNIA, AS PER PLAT RECORDED IN BOOK 69 OF PARCEL MAPS PAGE 1 AND 2, RECORDS OF SAID COUNTY AND STATE.

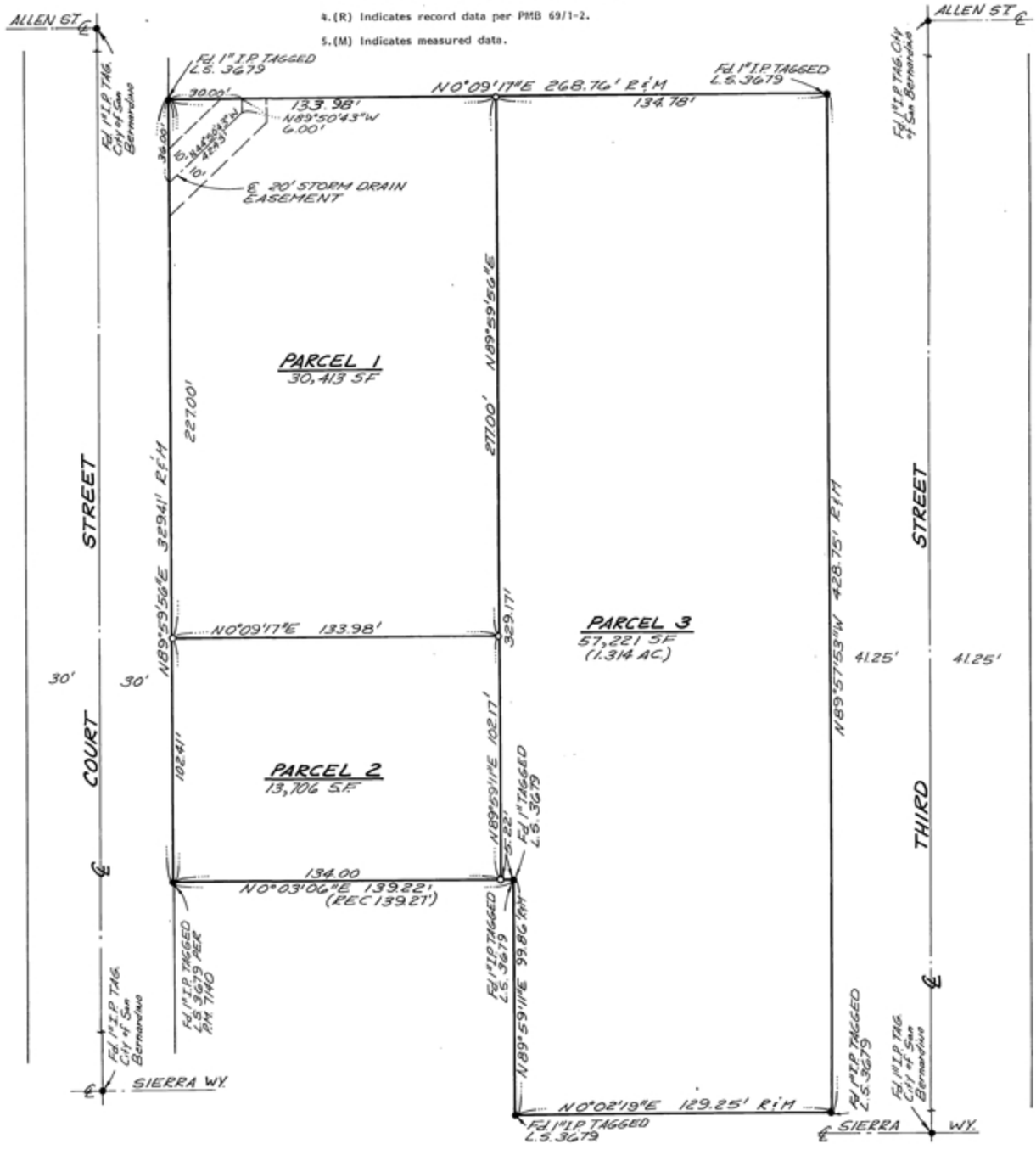
BROWN AND MULLINS Inc. FEBRUARY, 1985

30 20 10 0 30 60 90

SCALE IN FEET

SURVEYOR'S NOTES

1. Basis of Bearing taken from the centerline of Court St. shown as North89°59'56" East per Parcel Map 7140, PMB 69/1-2
2. ● Indicates found monuments as noted Per Parcel Map 7140, PMB 69/1-2
3. O Indicates set 1" IP tagged L.S. 3712 U.N.O.
4. (R) Indicates record data per PMB 69/1-2.
5. (M) Indicates measured data.



bh/ELI

PARCEL MAP NO. 13963

In the City of San Bernardino, California being a portion of Lot 3, Block 41 of Rancho San Bernardino, M.B. 7/2 in the County of San Bernardino, State of California

SHEET 1 OF 2

OWNER'S STATEMENT

We hereby state that we are the only parties having any record title interest in the land subdivided as shown on this parcel map and we hereby consent to the preparation and recordation of this parcel map. We hereby dedicate to the City of San Bernardino for public thoroughfare the additional Base Line Street dedication. Said dedication shall be deemed to include any public utility facilities or sewers located on or under said thoroughfare. We hereby dedicate to the City of San Bernardino front yard landscape maintenance easement on the residential parcel No. 1 as shown on said map.
We also hereby reserve to ourselves, our heirs and successors in interest a sanitary sewer easement across Parcel No 1 as shown on said map. We also reserve to ourselves, our heirs and assigns for the use and benefit of the present and future owners of Lot 7 of Tract 3123 recorded in Book 43 of tract maps page 89 a private Drainage Easement, as shown on said map.

Kevin M Schakel
Kevin M. Schakel

Shannon Schakel
Shannon A. Schakel

San Bernardino County Central Credit Union, a not-for-profit California Corporation, Benificiary of a Deed of Trust.

Susan Conjurski
Susan Conjurski, Credit Manager

CITY ENGINEER'S STATEMENT

I hereby certify that I have examined this map, that the subdivision shown thereon is substantially the same as it appeared on the Tentative Map and approved alterations thereto, and that all the provisions of the Subdivision Map Act of the State of California and the municipal code of the City of San Bernardino have been complied with, and I am satisfied that this map is technically correct.

Dated: 10-22-93 Gene R Klatt

REGISTERED PROFESSIONAL ENGINEER GENE R. KLATT No. CE-27086 Exp. 3-31-97 CIVIL STATE OF CALIFORNIA

Roger G Hardgrave RCE 23014-27086
Director of Public Works/City Engineer
City of San Bernardino, California

ACCEPTANCE CERTIFICATE

The City of San Bernardino hereby accepts the public street dedication as shown on the annexed map in conformance with Title 19, Municipal Code of the City of San Bernardino. And Herby Accepts the Front Yard Landscape Maintenance Easement, as shown on the Map.

Dated: 10-22-93 Gene R Klatt

Roger G Hardgrave RCE 23014-27086
Director of Public Works/City Engineer
City of San Bernardino, California

COUNTY AUDITOR'S STATEMENT

I hereby state that according to the records of this office, as of this date, there are no liens against the real property shown upon the annexed map for unpaid State, County, Municipal or local taxes or special assessments collected as taxes, except taxes or special assessments not yet payable.
Estimated to be $ 0

Dated: 10-13-93

Errol J. Macksum, County Auditor
County of San Bernardino, California
By: Robert B. Wright Deputy

BOARD OF SUPERVISOR'S CERTIFICATE

I hereby certify that a bond in the sum of 0 has been executed and filed with the Board of Supervisors of the County of San Bernardino, State of California, conditioned upon the payment of all taxes, State, County, Municipal, or local and all special assessments, collected as taxes, which at the time of filing of the annexed map with the County Recorder are a lien against said property but not payable and that the subdivider has filed with me a certificate by the proper officer giving his estimate of the amount of said taxes and assessments and said bond is hereby accepted.

Dated: 10-18-93 Earlene Sproat, Clerk of the Board of Supervisors of the County of San Bernardino

By Stephanie White Deputy

ENGINEER'S STATEMENT

This map was prepared by me or under my direction and is based upon a field survey in conformance with the requirements of the Subdivision Map Act and local ordinance at the request of Kevin M. and Shannon A. Schakel in July, 1990. I hereby state that this Parcel Map substantially conforms to the approved or conditionally approved Tentative Map if any.

Dated: 8/13/93 Gerald A Lunt

Gerald A. Lunt, RCE 14031

REGISTERED PROFESSIONAL ENGINEER GERALD A. LUNT No. 14031 Exp. 3/31/97 CIVIL STATE OF CALIFORNIA

NOTARY ACKNOWLEDGMENTS

STATE OF CALIFORNIA
COUNTY OF San Bernardino } SS:

On October 5, 93, before me, Veronica Campa personally appeared Susan Conjurski, personally known to me (~~or proved to me on the basis of satisfactory evidence~~) to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s) or the entity upon behalf of which the person(s) acted, executed the instrument.
Witness my hand and official seal.

Signature Veronica Campa
My commision expires: 4/29/94

STATE OF CALIFORNIA
COUNTY OF San Bernardino } SS:

On 10-6-1993, before me, Carla A. Call personally appeared Kevin M. Schakel & Shannon A. Schakel, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity (ies) and that by his/her/their signature(s) on the instrument the person(s) or the entity upon behalf of which the person(s) acted, executed the instrument.
Witness my hand and official seal.

Signature Carla Call
My commision expires: 7-22-1996

93-454356

FILED REQUEST OF First American Title Co.
ON Oct. 25, 1993
AT 10:11 am IN
BOOK 173 PAGES 49/50
OF Parcel Maps
SAN BERNARDINO COUNTY RECORDER
FEE 8.00

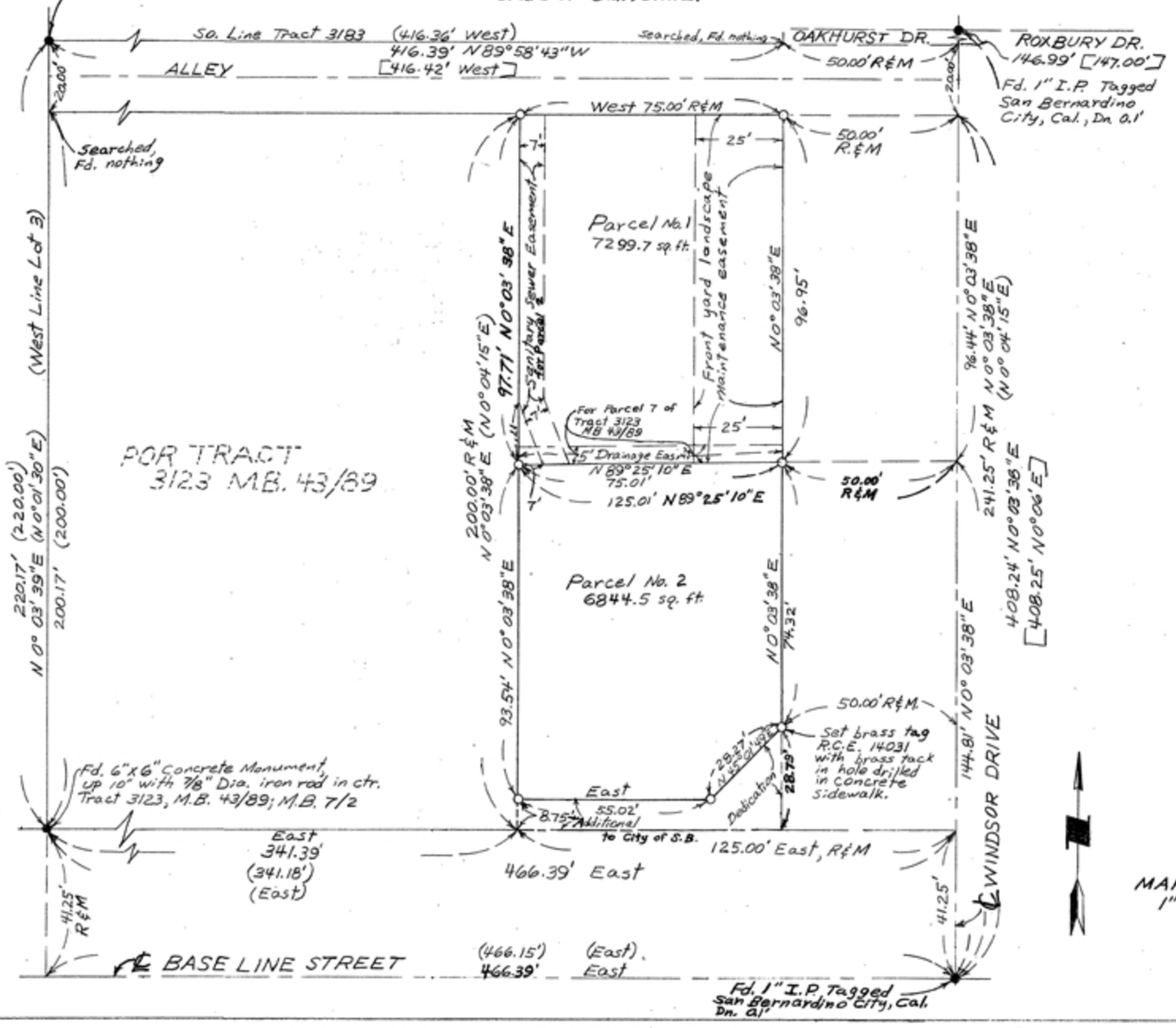
173/49

E-291

PARCEL MAP NO. 13963

In the City of San Bernardino, California being a portion of Lot 3, Block 41 of Rancho San Bernardino, M.B. 7/2 in the County of San Bernardino, State of California.

SHEET 2 OF 2



Gerald A. Lunt
Civil Engineer

August, 1993

ENGINEER'S NOTES

1. The basis of bearings is the northerly right of way of Base Line Street (South line of Lot 3, Block 41, R.S.B. being East.
2. This Parcel Map contains two lots on 0.344 Acres Gross
3. ● Denotes found monuments as noted.
4. ○ Denotes set 1" I.P. with brass tag stamped RCE 14031, unless otherwise noted
5. (---) Denotes Record Data per tract 3123, M.B. 43/89.
6. [---] Denotes Record Data per Tract 3183, M.B. 47/39-41.
7. R&M denotes record and measured data.

MAP SCALE
1" = 20'

IN THE CITY OF SAN BERNARDINO

SHEET 1 OF 1 SHEETS

200/69

PARCEL MAP NO. 15956

BEING A SUBDIVISION OF A PORTION OF LOT 5, BLOCK 41, RANCHO SAN BERNARDINO, IN THE CITY OF SAN BERNARDINO, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, AS PER PLAT RECORDED IN BOOK 7 OF MAPS, PAGE 2, RECORDS OF SAN BERNARDINO COUNTY.

SCALE: 1" = 60'

DEC 2002

NORTH

0' 20' 40'

GRAPHIC SCALE: 1"=20'

JOSEPH E. BONADIMAN & ASSOCIATES, INC.

CITY ENGINEER'S CERTIFICATE

I HEREBY CERTIFY THAT I HAVE EXAMINED THE ANNEXED MAP AND THAT THE SUBDIVISION SHOWN HERE-ON IS SUBSTANTIALLY THE SAME AS IT APPEARED ON THE TENTATIVE MAP, AND ANY APPROVED ALTERATIONS THEREOF, AND THAT ALL THE PROVISIONS OF THE SUBDIVISION MAP ACT AND LOCAL ORDINANCES HAVE BEEN COMPLIED WITH AND I AM SATISFIED THAT HTIS MAP IS TECHNICALLY CORRECT.

DATE: 10-9-03

ACTING CITY ENGINEER: MIKE W. GRUBBS, RCE 27006
FIELD ENGINEER
CITY OF SAN BERNARDINO

REGISTERED PROFESSIONAL ENGINEER MICHAEL W. GRUBBS No. 27006 Exp. 3-31-05 CIVIL STATE OF CALIFORNIA

OWNER'S STATEMENT

WE HEREBY STATE WE ARE THE ONLY PARTIES HAVING ANY RECORD TITLE INTEREST IN THE LAND SUBDIVIDED AS SHOWN ON THIS MAP, AND WE CONSENT TO THE PREPARATION AND RECORDATION OF THIS PARCL MAP. WE HEREBY RESERVE TO OURSELVES, OUR HEIRS, AND OUR ASSIGNS, BLANKET EASEMENTS FOR EXISTING PUBLIC UTILITIES, ACCESS, PARKING, SEWER AND DRAINAGE FACILITIES.

MARK P. KIM

NOTARY ACKNOWLEDGMENT

STATE OF CALIFORNIA
COUNTY OF SAN BERNARDINO

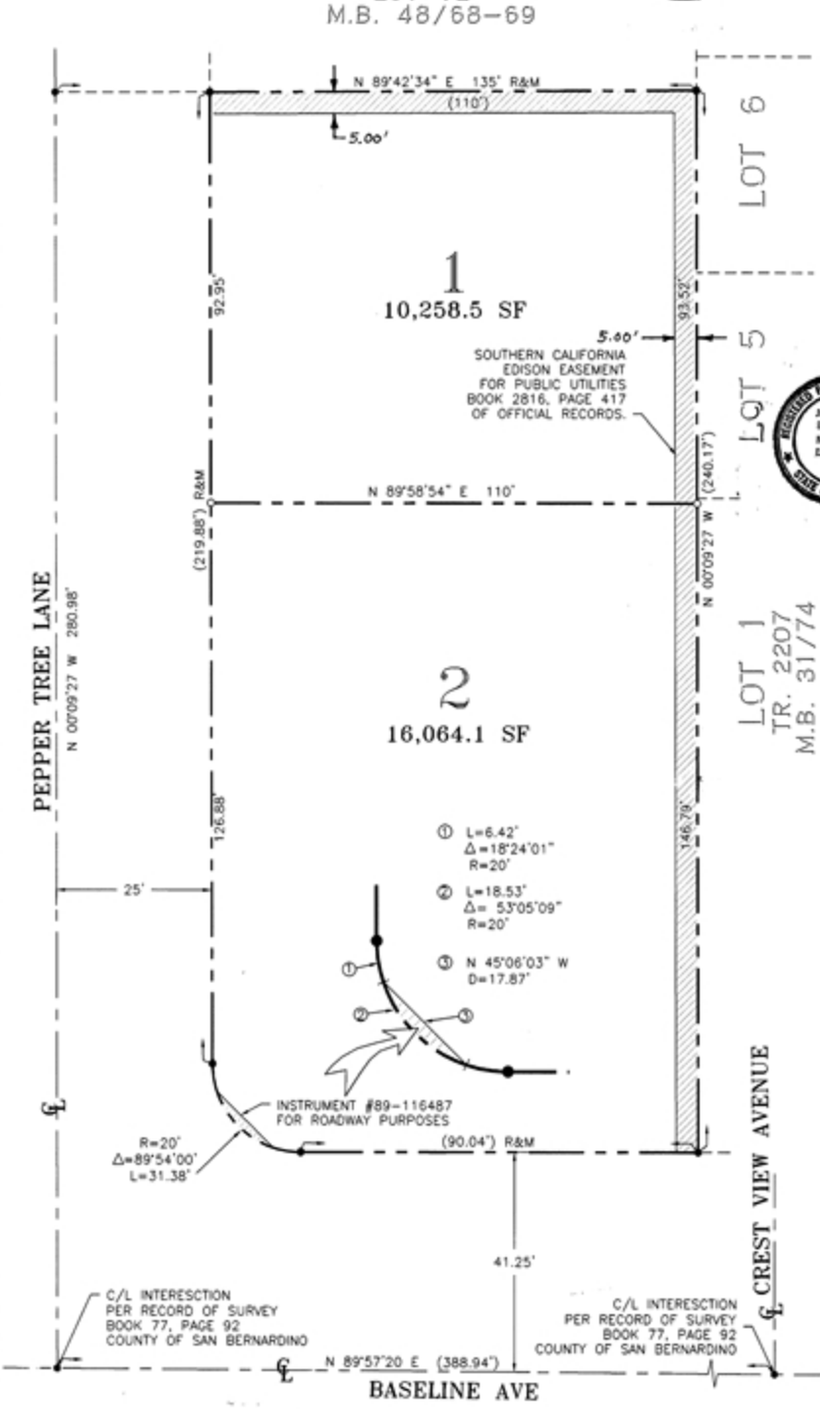
ON June 17, 2003 BEFORE ME Dana L. Bassler
PERSONALLY APPEARED MARK P. KIM

~~PERSONALLY KNOWN TO ME~~ (OR PROVED TO ME ON THE BASIS OF SATISFACTORY EVIDENCE) TO BE THE PERON(S) WHOSE NAME(S) IS/~~ARE~~ SUBSCRIBED TO THE SAME IN HIS/~~HER/THEIR~~ AUTHORIZED CAPACITY(IES), AND THAT BY HIS/~~HER/THEIR~~ SIGNATURE(S) ON THE INSTRUMENT THE PERSON(S), OF THE ENTITY UPON BEHALF OF WHICH THE PERSON(S) ACTED, EXECUTED THE INSTRUMENT.

SIGNATURE
WITNESS MY HAND

MY COMMISSION EXPIRES 9/29/04

DANA L. BASSLER COMM. # 1276715 NOTARY PUBLIC-CALIFORNIA SAN BERNARDINO COUNTY COMM. EXP. SEPT. 29, 2004



ENGINEER'S STATEMENT

THIS MAP WAS PREPARED BY ME OR UNDER MY DIRECTION AND IS BASED UPON A FIELD SURVEY IN CONFORMANCE WITH THE REQUIREMENTS OF THE SUBDIVISION MAP ACT AND LOAL ORDINANCE AT THE REQUEST OF MARK KIM. ALL MONUMNETS SHOWN HEREON ARE OF THE CHARACTER AND OCCUPY THE POSITIONS INDICATED. I HEREBY STATE THAT THIS PARCEL MAP SUBSTANTIALLY CONFORMS TO THE APPROVED OR CONDITIONALLY APPROVED TENTATIVE MAP, IF ANY.

DATE: 6-20-03

JOSEPH S.C. BONADIMAN, PE

REGISTERED PROFESSIONAL ENGINEER JOSEPH S. C. BONADIMAN No. C-30238 Exp. 3-31-05 CIVIL STATE OF CALIFORNIA

AUDITOR'S CERTIFICATE

I HEREBY CERTIFY THAT ACCORDING TO THE RECORD OF THIS OFFICE, AS OF THIS DATE, THERE ARE NO LIENS AGAINST THE REAL PROPERTY SHOWN UPON THE ANNEXED MAP FOR UNPAID STATE, COUNTY, MUNICIAP, OR LOCAL TAXES OR SPECIAL ASSESSMENTS COLLECTED AS TAXES, EXCEPT TAXES OR SPECIAL ASSESSMENTS NOT YET PAYABLE, ESTIMATED TO BE $ Ø

DATE: 9/26/03 Jeni Mooney DEPUTY
LARRY WALKER, COUNTY AUDITOR
COUNTY OF SAN BERNARDINO, CALIFORNIA

BOARD OF SUPERVISOR'S CERTIFICATE

I HEREBY CERTIFY THAT A BOND IN THE SUM OF $ Ø HAS BEEN EXECUTED AND FILED WITH THE BOARD OF SUPERVISORS OF THE COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, CONDTIONED UPON PAYMENT OF ALL TAXES, STAE, COUNTY, MUNICIPAL, OR LOCAL, AND ALL SPECIAL ASSESSMENTS, COLLECTED AS TAXES, WHICH AT THE TIME OF FILING OF THE ANNEXED MAP WITH THE COUNTY RECORDER ARE A LIEN AGAINST SAID PROPERTY, BUT NOT YET PAYABLE AND THAT THE SUBDIVIDER HAS FILED WITH ME A CERTIFICATE BY THE PROPER OFFICER GIVING HIS ESTIMATE OF THE AMOUNT OF SAID TAXES AND ASSESSMENTS, AND SAID BOND IS HEREBY ACCEPTED.

DATE: 9/26/03
J RENEE BASTIAN, CLERK OF THE BOARD OF SUPERVISORS OF THE COUNTY OF SAN BERNARDINO, CALIFORNIA

BY: Jeni Mooney DEPUTY

ENGINEERS NOTES

1. BASIS OF BEARINGS – IS THE C/L OF BASELINE AVENUE PER RECORD OF SURVEY BOOK 77 PAGE 92 OF MAPS. BEING NORTH 89°57'20" EAST
2. —●— INDICATES MONUMENT FOUND PER RS 77/92
3. —○— INDICATES SET NAIL WITH TAG RCE 30238
4. (90.04') INDICATES RECORD DATA PER RS 77/92
5. 90.04' R&M = RECORD AND MEASURED

San Bernardino County Recorder's Certificate

This map has been filed under Document Number 2003077330 this 14th day of Oct, 2003, at ~~[illegible]~~ m. in Book 200 of Parcel Maps at page 69, at the request of United Title Co. in the amount of $ 7.00

Larry Walker
Auditor-Controller/Recorder
County of San Bernardino

By: M. Avila
Deputy Recorder

200/69

330/44

FOR CONDOMINIUM PURPOSES
IN THE CITY OF SAN BERNARDINO
COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA

TRACT NO. 17704

BEING A SUBDIVISION OF PARCEL 3 OF PARCEL MAP NO. 9122, AS RECORDED IN PARCEL MAP BOOK 96, PAGE 3 & 4, RECORDS OF SAN BERNARDINO COUNTY, STATE OF CALIFORNIA. LOCATED IN SECTION 10, TOWNSHIP 1 SOUTH, RANGE 4 WEST, S.B.B.M.

MAPCO APRIL 2006

CONDOMINIUM NOTE:

THIS PROJECT IS A CONDOMINIUM PROJECT AS DEFINED IN SECTION 1351 OF THE CIVIL CODE.

OWNER'S STATEMENT:

WE HEREBY STATE THAT WE ARE ALL AND THE ONLY PARTIES HAVING ANY RECORD TITLE INTEREST IN THE LAND SUBDIVIDED AS SHOWN ON THIS MAP AND WE CONSENT TO THE PREPARATION AND RECORDATION OF THE ANNEXED FINAL MAP.

MEADOWBROOK PARK LOFTS, LLC, A CALIFORNIA LIMITED LIABILITY COMPANY

GEORGE JORDAN

INDYMAC BANK, F.S.B., AS BENEFICIARY OF A DEED OF TRUST RECORDED FEBRUARY 16, 2007 AS INSTRUMENT NO. 2007-0104045 OF OFFICIAL RECORDS.

GRACE SOLEIDAN F.V.P.

CHRIS NEWCHEK SVP

NOTARY ACKNOWLEDGMENT:

STATE OF CALIFORNIA)
) S.S.
COUNTY OF LOS ANGELES)

ON JULY 19, 2007 BEFORE ME, MONICA J. LOPEZ A NOTARY PUBLIC, PERSONALLY APPEARED GEORGE JORDAN PERSONALLY KNOWN TO ME (OR PROVED TO ME ON THE BASIS OF SATISFACTORY EVIDENCE) TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE WITHIN INSTRUMENT AND ACKNOWLEDGED TO ME THAT HE EXECUTED THE SAME IN HIS AUTHORIZED CAPACITY, AND THAT BY HIS SIGNATURE ON THE INSTRUMENT THE PERSON OR THE ENTITY UPON BEHALF OF WHICH THE PERSON ACTED, EXECUTED THE INSTRUMENT.

WITNESS MY HAND.

SIGNATURE: Mónica López MY COMMISSION EXPIRES: March 11, 2009

PRINT NAME: MONICA J. LOPEZ THE COUNTY OF MY PRINCIPAL PLACE OF BUSINESS IS: LOS ANGELES

NOTARY ACKNOWLEDGMENT:

STATE OF CALIFORNIA)
) S.S.
COUNTY OF LOS ANGELES)

ON July 25, 2007 BEFORE ME, Ricky Luc, Notary Public A NOTARY PUBLICPERSONALLY APPEARED GRACE SOLEIDAN AND CHRIS NEWCHEK PERSONALLY KNOWN TO ME (OR ~~PROVED TO ME ON THE BASIS OF SATISFACTORY EVIDENCE~~) TO BE THE PERSON(S) WHOSE NAME(S) ~~IS~~/ARE SUBSCRIBED TO THE WITHIN INSTRUMENT AND ACKNOWLEDGED TO ME THAT ~~HE/SHE~~/THEY EXECUTED THE SAME IN ~~HIS/HER~~/THEIR AUTHORIZED CAPACITY(IES), AND THAT BY ~~HIS/HER~~/THEIR SIGNATURE(S) ON THE INSTRUMENT THE PERSON(S) OR THE ENTITY UPON BEHALF OF WHICH THE PERSON(S) ACTED, EXECUTED THE INSTRUMENT.

WITNESS MY HAND.

SIGNATURE: MY COMMISSION EXPIRES: July 30, 2010

PRINT NAME: Ricky Luc THE COUNTY OF MY PRINCIPAL PLACE OF BUSINESS IS: Los Angeles

BOARD OF SUPERVISORS CERTIFICATE:

I HEREBY CERTIFY THAT A BOND IN THE SUM OF $4,000.00 HAS BEEN EXECUTED AND FILED WITH THE BOARD OF SUPERVISORS OF THE COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, CONDITIONED UPON THE PAYMENT OF ALL TAXES, STATE, COUNTY, MUNICIPAL, OR LOCAL AND ALL SPECIAL ASSESSMENTS, COLLECTED AS TAXES, WHICH AT THE TIME OF THE FILING OF THIS MAP WITH THE COUNTY RECORDER ARE A LIEN AGAINST SAID PROPERTY, BUT NOT YET PAYABLE AND THAT THE SUBDIVIDER HAS FILED WITH ME A CERTIFICATE BY THE PROPER OFFICER GIVING HIS ESTIMATE OF THE AMOUNT OF SAID TAXES AND ASSESSMENTS, AND SAID BOND IS HEREBY ACCEPTED.

DATE: 07/31/07

DENA SMITH, ~~[illegible]~~ CLERK OF THE BOARD OF SUPERVISORS OF THE COUNTY OF SAN BERNARDINO

BY: Jeri Mooney DEPUTY

AUDITOR'S CERTIFICATE:

I HEREBY STATE THAT ACCORDING TO THE RECORDS OF THIS OFFICE, AS OF THIS DATE, THERE ARE NO LIENS AGAINST THE REAL PROPERTY SHOWN UPON THIS MAP FOR UNPAID STATE, COUNTY, MUNICIPAL, OR LOCAL TAXES, SPECIAL ASSESSMENTS COLLECTED AS TAXES, EXCEPT TAXES OR SPECIAL ASSESSMENTS, NOT YET PAYABLE, ESTIMATED TO BE $4,000.00

DATE: 07/31/07

LARRY WALKER, COUNTY AUDITOR / CONTROLLER
COUNTY OF SAN BERNARDINO, CALIFORNIA

BY: Jeri Mooney DEPUTY

SOILS REPORT:

PURSUANT TO THE PROVISIONS OF SECTION 66490 OF THE SUBDIVISION MAP ACT, A SOILS REPORT WAS PREPARED BY SOILS SOUTHWEST, INC., R.C.E. NO. 31708, DATED NOVEMBER 28, 2005, FOR THIS SUBDIVISION.

SIGNATURE OMISSIONS:

THE SIGNATURE OF THE FOLLOWING HAVE BE OMITTED PURSUANT TO THE PROVISIONS OF SECTION 66436 (a)(3)(A) OF THE SUBDIVISION MAP ACT. THEIR INTERESTS CANNOT RIPEN INTO A FEE.

JAMES W. WATERS, JR., RECORD OWNER OF AN EASEMENT FOR WATER DITCH PURPOSES, PER DOCUMENT RECORDED MARCH 19, 1885 IN BOOK 40, PAGE 386 OF DEEDS. SAID EASEMENT CANNOT BE LOCATED FROM THE RECORD.

SURVEYOR'S STATEMENT:

THIS MAP WAS PREPARED BY ME OR UNDER MY DIRECTION AND IS BASED UPON A FIELD SURVEY IN CONFORMANCE WITH THE REQUIREMENTS OF THE SUBDIVISION MAP ACT AND LOCAL ORDINANCE AT THE REQUEST OF DAVID MLYNARSKI IN MARCH 2006. I HEREBY STATE THAT ALL THE MONUMENTS ARE OF THE CHARACTER AND OCCUPY THE POSITIONS INDICATED OR THAT THEY WILL BE SET IN THE THOSE POSITIONS WITHIN ONE YEAR AFTER THE ACCEPTANCE OF THE IMPROVEMENTS IN COMPLIANCE WITH SECTIONS 66495 AND 66496 OF THE SUBDIVISION MAP ACT, AND THAT THE MONUMENTS ARE, OR WILL BE, SUFFICIENT TO ENABLE THE SURVEY TO BE RETRACED, AND THAT THIS FINAL MAP SUBSTANTIALLY CONFORMS TO THE CONDITIONALLY APPROVED TENTATIVE MAP.

DATE: 7/17/07

MICHAEL L. ANDERSON, P.L.S. 6916
EXPIRATION DATE: SEPTEMBER 30, 2007

LICENSED LAND SURVEYOR MICHAEL L. ANDERSON P.L.S. 6916 Exp. 09/30/07 STATE OF CALIFORNIA

CITY ENGINEER'S STATEMENT:

I HEREBY STATE I HAVE EXAMINED THE ANNEXED MAP, THAT THE SUBDIVISION SHOWN THEREON IS SUBSTANTIALLY THE SAME AS IT APPEARED ON THE TENTATIVE MAP AND ANY APPROVED ALTERATIONS THERETO, AND THAT ALL THE PROVISIONS OF THE SUBDIVISION MAP ACT OF THE STATE OF CALIFORNIA, MUNICIPAL CODE OF THE CITY OF SAN BERNARDINO HAVE BEEN COMPLIED WITH, AND I AM SATISFIED THAT THE ANNEXED MAP IS TECHNICALLY CORRECT.

APPROVED BY: MARK LANCASTER, R.C.E. 48048
CITY ENGINEER, CITY OF SAN BERNARDINO

DATE: 9/11/07 BY: D. LOAN PARKER, R.C.E. 29570
DESIGNEE

REGISTERED PROFESSIONAL ENGINEER D. LOAN PARKER R.C.E. 29570 Exp. 03/31/09 CIVIL STATE OF CALIFORNIA

CITY COUNCIL'S STATEMENT:

I HEREBY STATE THAT THE MAYOR AND COMMON COUNCIL OF THE CITY OF SAN BERNARDINO, BY RESOLUTION ADOPTED ON THE 21st DAY OF MAY, 2007 APPROVED THE ANNEXED MAP.

DATE: Sept 6, 2007

RACHEL CLARK, CITY CLERK
CITY OF SAN BERNARDINO, CALIFORNIA

I HEREBY APPROVE THE FOREGOING RESOLUTION.

DATE: 9/10/07

PAT MORRIS, MAYOR
CITY OF SAN BERNARDINO, CALIFORNIA

SAN BERNARDINO COUNTY RECORDER'S CERTIFICATE:

THIS MAP HAS BEEN FILED UNDER DOCUMENT NUMBER 2007-0545268
THIS 24TH DAY OF SEPTEMBER, 2007, AT 2:41 P M. IN BOOK 330
OF ~~TRACT MAPS~~ AT PAGE 44-45 AT THE REQUEST OF
CHICAGO TITLE COMPANY
IN THE AMOUNT OF $ 1.00

LARRY WALKER
AUDITOR-CONTROLLER/RECORDER
COUNTY OF SAN BERNARDINO

BY: Diana Hernandez DEPUTY RECORDER

330/44

330/45

FOR CONDOMINIUM PURPOSES
IN THE CITY OF SAN BERNARDINO
COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA

TRACT NO. 17704

BEING A SUBDIVISION OF PARCEL 3 OF PARCEL MAP NO. 9122, AS RECORDED IN PARCEL MAP BOOK 96, PAGES 3 & 4, RECORDS OF SAN BERNARDINO COUNTY, STATE OF CALIFORNIA. LOCATED IN SECTION 10, TOWNSHIP 1 SOUTH, RANGE 4 WEST, S.B.B.M.

MAPCO

APRIL 2006

SURVEYOR'S NOTES:

BASIS OF BEARINGS: THE CENTERLINE OF THIRD STREET BEING N 89°57'53" W, PER PARCEL MAP NO. 7140, P.M.B. 69/1-2.

● INDICATES FOUND MONUMENT AS NOTED.

○ INDICATES SET 1" IRON PIPE TAGGED P.L.S. 6916

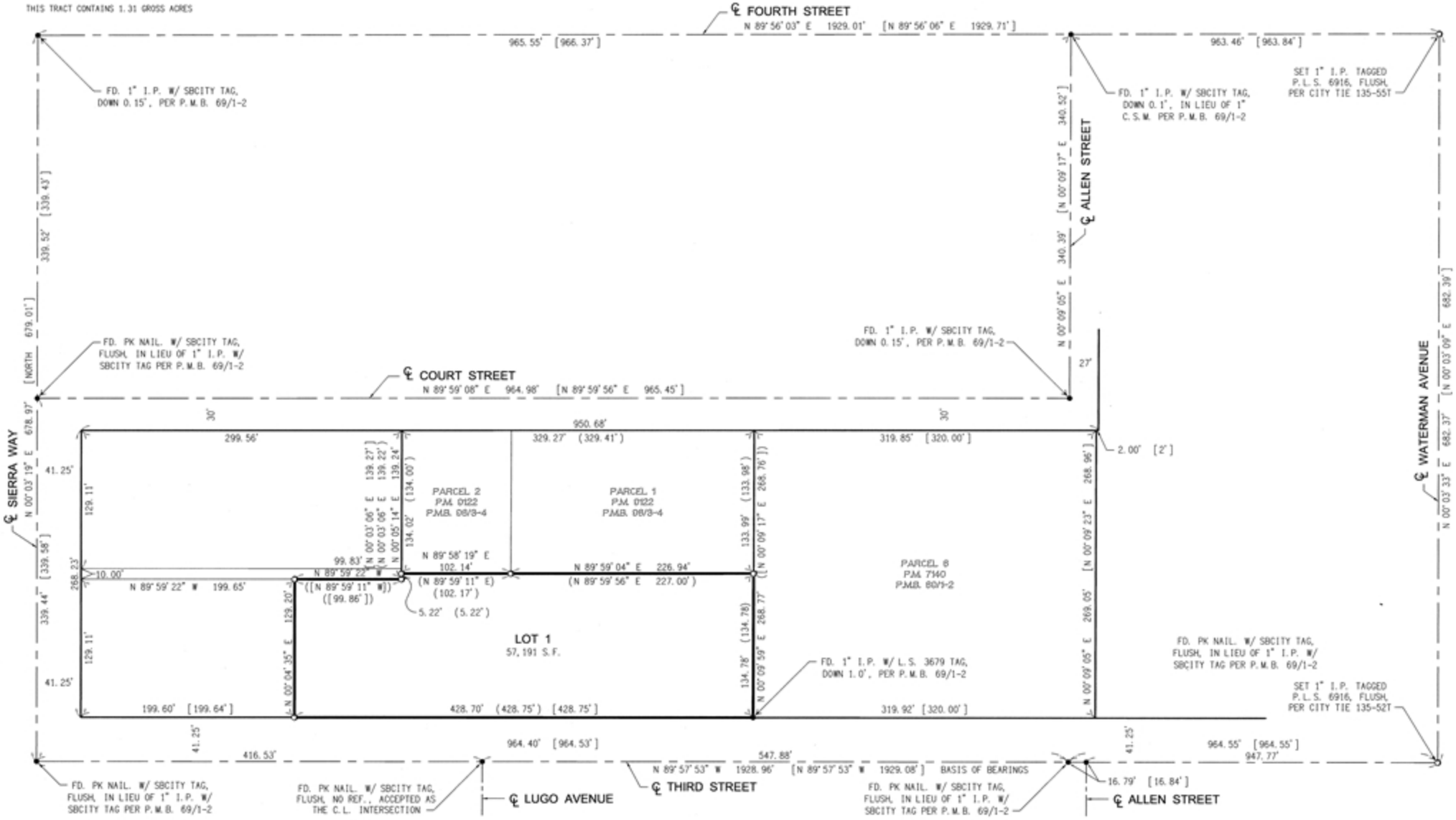
[ ] INDICATES RECORD DATA PER PARCEL MAP NO. 7140, P.M.B. 69/1-2

( ) INDICATES RECORD DATA PER PARCEL MAP NO. 9122, P.M.B. 96/4-5

SET NAIL & P.L.S. 6916 TAG IN BLOCK WALL OR 1" IRON PIPE TAGGED P.L.S. 6916 AT REAR LOT CORNERS.

THIS TRACT CONTAINS 1 NUMBERED LOT

THIS TRACT CONTAINS 1.31 GROSS ACRES



330/45

PHASE I ENVIRONMENTAL SITE ASSESSMENT

WATERMAN GARDEN TRANSFORMATION PLAN PROJECT

SAN BERNARDINO, CALIFORNIA

LSA

December 2010

PHASE I ENVIRONMENTAL SITE ASSESSMENT

WATERMAN GARDEN TRANSFORMATION PLAN PROJECT

SAN BERNARDINO, CALIFORNIA

Submitted to:

Design, Community & Environment
1625 Shattuck Avenue, Suite 300
Berkeley, California 94709

Prepared by:

LSA Associates, Inc.
20 Executive Park, Suite 200
Irvine, California 92614-4731
(949) 553-0666

LSA Project No. PYA1001

LSA

December 2010

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B: REQUESTS FOR INFORMATION AND AGENCY RESPONSES
C: ASSESSOR'S MAP BOOK 0147 PAGE 21, CITY OF SAN BERNARDINO PLANNING DEPARTMENT
D: COPIES OF SUPPORTING REPORTS AND MAPS
- 2009 Water Quality Report
- Oil and Gas Well Map
- Response Letter from Office of the State Fire Marshal

E: WORK PLAN FOR SOIL VAPOR EXTRACTION REBOUND TESTING PREPARED FOR THE FORMER MOBIL SERVICE STATION 18-ELG LOCATED AT 296 EAST BASE LINE STREET BY KLEINFELDER, INC.
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EXECUTIVE SUMMARY

LSA Associates, Inc. (LSA) was retained by the Design, Community & Environment (DCE) to prepare a Phase I Environmental Site Assessment (ESA) for a 32-acre (ac) property (hereafter known as the "subject site" or "site") for a new proposed public housing project.

The site is known as Waterman Garden and is located at the southeast corner of Waterman Avenue and Base Line Street in the northern portion of the City of San Bernardino in the County of San Bernardino, California (see Figure 1 of Appendix A). The site totals 32 ac and consists of existing public housing and related improvements.

According to the Track Info Services, LLC (Track Info) report, a total of three Resource Conservation and Recovery Act (RCRA) Generators (GEN) listing sites and one RCRA No Longer Reporting (NLR) listed at the same address as one of the RCRA GEN sites are listed as small quantity generators (SQGs). These sites are not considered potential concerns because the databases do not indicate that any accidental release of hazardous materials occurred. In addition, no violations were reported at these sites. During the visual site survey, no evidence of spills, accidental releases, or illegal dumping of hazardous substances was observed.

No hazardous substance releases were noted during the site survey or review of historical photographs.

This Phase I ESA was prepared in conformance with the scope and limitations of American Society for Testing and Materials (ASTM) Practice E 1527-05. In addition, this Phase I ESA will include the most current All Appropriate Inquiry (AAI) requirements for Phase I documents. Any exceptions to this practice are described in this report. Based on the Track Info database search, visual site survey, agency records request results, and historical aerial photograph and topographic map review conducted for this project, LSA recommends the following:

- Prior to structure disturbance, a State-certified asbestos professional should determine whether sampling of building materials for asbestos-containing materials (ACMs) should be performed. Any abatement or removal of ACMs must be performed in accordance with applicable federal, State, and local regulations.
- Prior to structure disturbance, a State-certified lead professional should survey the site structures and determine whether sampling for lead-based paint (LBP) is warranted. Any abatement or removal of LBP must be performed in accordance with applicable federal, State, and local regulations.
- Prior to structure disturbance, a qualified professional should survey the site structures and determine whether suspect polychlorinated-biphenyl- (PCB) containing equipment such as transformers or light ballasts is present. PCB-containing equipment must be handled and disposed of in accordance with applicable federal, State, and local regulations.

- A Health and Safety Plan should be developed for grading and demolition activities. The plan should include any soil and air monitoring required based on any sampling and procedures for handling any ACM, LBP, or PCB contamination encountered during the surveys indicated above.
- Prior to any development/redevelopment of the site, it should be determined if groundwater will be impacted or required during construction of the project. Any dewatering will require compliance with the State General Permit (2003-0003-DWQ) or an individual permit from the Regional Water Quality Control Board (RWQCB) Santa Ana Region, consistent with National Pollutant Discharge Elimination System (NPDES) requirements. The RWQCB will decide which permit is applicable and whether sampling is required once it receives and reviews the Notice of Intent (NOI).

This conclusion and summary does not contain all the information that is found in the full report. The report should be read in its entirety to obtain a more complete understanding of the information provided and to aid in any decisions made or actions taken based on this information.

As indicated in Sections 4.7 and 4.8, LBP and ACM issues were not included in the scope of work for this Phase I ESA.

1.0 INTRODUCTION

1.1 PURPOSE

A Phase I Environmental Site Assessment (ESA) is the process by which a person or entity seeks to determine whether a particular parcel of real property is subject to specific recognized environmental conditions (RECs). A Phase I ESA is both different from and less rigorous than an environmental audit.

The purpose of this Phase I ESA is to assess the presence of or potential for hazardous substance contamination (raw materials and/or wastes) on the subject property by means of investigation of present and historic land uses and observable physical conditions on the site.

1.2 SCOPE OF WORK

This Phase I ESA report follows the guidelines presented in the American Society for Testing and Materials (ASTM) Practice E 1527-05, Standard Practices for Environmental Site Assessments: Phase I Environmental Site Assessment Process. In addition, this Phase I ESA will include the most current All Appropriate Inquiry (AAI) requirements for Phase I documents. The scope of work is described below.

1.2.1 Site Reconnaissance

A visual site inspection of the property and immediate surrounding area was completed. A survey may reveal recognized environmentally hazardous conditions in connection with the property (e.g., presence of environmentally hazardous substances or petroleum products, surface soil contamination, discolored soil, or vegetation growth anomalies).

1.2.2 Interviews

This study inspection included interviews, when possible, with persons who may have firsthand knowledge of present and/or previous site usage. Several agencies were contacted regarding historical use records for the site (refer to Chapter 5.0, Historical Site Usage).

1.2.3 Physical Setting

A study of geological, hydrological, hydrogeological, topographical, and seismic characteristics of the site and general surrounding vicinity was completed.

1.2.4 Uses of Property

The assessment included evaluation of current and previous land use based on readily available municipal, county, and State/federal agency records and permits, as well as examination of historical aerial photographs and maps of the site and general surrounding vicinity (when available).

1.2.5 Records Review

A review of readily available county, State, and federal regulatory lists of known hazardous waste sites in the immediate area of the investigation property was completed.

1.2.6 Report Preparation

This report includes findings, conclusions, and recommendations along with copies of any pertinent documentation, photographs, and/or maps, when available.

Resumes for staff members who prepared this report are included in Appendix L.

2.0 SITE DESCRIPTION

2.1 LOCATION

The site is located in the City of San Bernardino within the southwestern portion of San Bernardino County (County), California. The site is known as Waterman Garden and is located southeast of the intersection of Baseline Street and North Waterman Avenue in the City of San Bernardino. The site is bounded by Baseline Street on the north, North Waterman Avenue on the west, East Olive Street on the south, and North La Junita Street on the east. The site's location is identified on the local vicinity map provided as Figure 2 of Appendix A.

2.2 CURRENT PROPERTY USE

The site encompasses a total of 32 acres (ac) and consists of four parcels, as shown on the Assessor's Map in Appendix C. The site corresponds to City of San Bernardino Assessor's Parcel Numbers (APNs) 0147-211-01, 0147-211-02, 0147-211-03, and 0147-211-04. These parcels are currently occupied by multifamily apartment buildings, a maintenance building, a public recreational area, several day-care facilities, a community center, and an administrative office building. Several roads were identified within the site (refer to Figure 2 of Appendix A for their locations).

LSA Associates, Inc. (LSA) conducted an interview with Ms. Nancy Finch, the current on-site manager, on November 30, 2010. Ms. Finch indicated that the majority of the on-site buildings were constructed on April 4, 1942.

The site and its surrounding areas are zoned as Residential Medium (RM), Commercial Heavy (CH), Commercial General (CG), and Residential Urban (RU). Existing land uses adjacent to the site include: commercial buildings to the north; an orange orchard and an orange juice manufacturing factory to the east; a gas station, a discount mall, and several retail stores to the south; and fast food restaurants and retail stores to the west. Photographs of the site are provided in Figure 3 of Appendix A.

3.0 ENVIRONMENTAL SETTING

3.1 TOPOGRAPHY

The approximate ground surface elevation is 1,092 feet (ft) above mean sea level (amsl). The site and surrounding area slope gently down in a south-southwest direction.

3.2 GEOLOGY AND HYDROGEOLOGY

Information in this section is based on the regional geology and hydrogeology information contained in the "Work Plan for Soil Vapor Extraction Rebound Testing" prepared for the Former Mobil Service Station 18-ELG located at 296 East Base Line Street by Kleinfelder, Inc. on June 8, 2005 (see Appendix E). This site is approximately 0.04 mile (mi) northwest of the western boundary of the site.

The subject property is located on a southward-sloping alluvial fan in the central San Bernardino Valley. Sediments at the site are mapped as Quaternary younger alluvial fan deposits. Two intermittent creeks, East Twin Creek and Warm Creek, are respectively located approximately 0.75 mi east and southeast of the site.

Alluvial soils encountered during previous (unrelated) subsurface investigations consist of relatively fine-grained materials from the surface to depths of approximately 27 to 52 ft below ground surface (bgs). These soils are predominantly silty sands and sandy silts. Sand with varying amounts of gravel and some silt was encountered at greater depths. A layer of silty sand and silt was encountered at depths ranging from 72 to 120 ft bgs.

The subject property is located in the Bunker Hill Groundwater Basin within the Upper Santa Ana River Groundwater Basin. Groundwater within the basin is utilized for municipal purposes. The City of San Bernardino operates two production wells in the vicinity of the subject property. The Gilbert Street Well (1N4W35M03S) is located approximately 2,000 ft north of the subject property. A water depth of 218.6 ft was measured in the Gilbert Street Well on April 14, 2004. The 7th Street Well (1S4W03J05S) is located approximately 3,000 ft south-southwest of the subject property. A water depth of 153.5 ft was measured in the 7th Street Well on April 8, 2004. The City of Riverside operates several production wells along Warm Creek, approximately 1 mi southeast of the site. During the groundwater monitoring and sampling event of the subject property on January 31, 2005, the measured depth to groundwater averaged approximately 143.69 ft bgs in the five newly installed groundwater monitoring wells.

The overall groundwater gradient is anticipated to be to the south-southwest toward the Santa Ana River.

4.0 SITE RECONNAISSANCE

LSA conducted a site reconnaissance on December 14, 2010. Carmen Lo, Assistant Environmental Planner, conducted a visual survey of the site on foot and by motor vehicle.

4.1 SITE SURFACE CONDITIONS

During the site reconnaissance, LSA personnel observed several used electric kitchen stove units and televisions in the parking lot of the maintenance building at 660 East Orange Street. They are observed to be in good condition; therefore, these used electric kitchen stove units and televisions do not represent a recognized environmental condition in connection with the site. In addition, wood shavings (which the maintenance staff has been using for the grounds of the multifamily apartment buildings) and a small pile of dirt (which the maintenance staff uses for repairing potholes for the site) were observed at the parking lot of the maintenance building. According to Jose Gonzalez, the current Supervisor Maintenance Worker, they are nonhazardous. The maintenance staffs store the wood shavings and the dirt at the parking lot of the maintenance building for preventive maintenance purposes.

During the site reconnaissance, LSA personnel did not observe leachate, seeps, surface staining, distressed vegetation, hummocky topography, closed depressions, pits, ponds, lagoons, or other visual indications of potential waste dumping on the site. LSA personnel did not detect any petroleum hydrocarbon or other chemical odors that would indicate that hazardous waste had been dumped in vacant areas of the site.

4.2 DRAINS, SUMPS OR CLARIFIERS

According to Mr. Jim Buckmaster, the current Maintenance Compliance Specialist, one storm drain is located at Elm Circle and another is located at Sycamore Circle.

4.3 SEWER SYSTEM

The multifamily apartment buildings at the site are served by a sanitary sewer system operated by the City of San Bernardino Municipal Water Department (SBMWD).

4.4 SOURCE OF POTABLE WATER

The multifamily apartment buildings on site are served by SBMWD and the City of San Bernardino Water Department (CSBWD). According to the 2009 Water Quality Report published by SBMWD, SBMWD took more than 6,000 water samples, which were provided to contract labs. These labs conducted more than 30,000 tests to identify all of the constituents in the drinking water to establish its eligibility as potable water. None of the samples were reported to be in violation of the regulatory

standards. Therefore, lead or other contaminants in drinking water are not expected to present an environmental concern in connection with the site.

4.5 SOLID WASTE DISPOSAL

The multifamily apartment buildings at the site are served by the City of San Bernardino Integrated Waste Management Division (COSBIWMD).

4.6 HEATING AND COOLING SYSTEMS

No heating, ventilating, and air conditioning (HVAC) systems are located on the roofs of any multifamily apartment buildings at the site. The HVAC systems are only located on the roofs of an administrative office building, a community center building, and two day-care buildings at the site. According to Mr. Jim Buckmaster, individual heating and cooling units were installed in some of the residential buildings.

4.7 LEAD-BASED PAINT

Site buildings were constructed prior to 1978, which indicates a potential for the presence of lead-based paint (LBP). Sampling and testing for the presence of LBP was not performed in accordance with the approved scope of work.

4.8 ASBESTOS-CONTAINING MATERIALS

Site buildings were constructed prior to 1978, which indicates a potential for the presence of asbestos-containing materials (ACMs). Sampling and testing for the presence of ACMs was not performed in accordance with the approved scope of work.

4.9 STORAGE TANKS

No present above-ground storage tanks (ASTs) or underground storage tanks (USTs) were observed at the time of the site reconnaissance. According to Mr. Jim Buckmaster and the Executive Director of the Housing Authority of the County of San Bernardino, Ms. Susan L. Benner, a former UST and an associated gas pump were located at the parking lot of the maintenance building at 660 East Orange Street. In the late 1990s, the gas pump stopped operation and the UST was removed in accordance with the City of San Bernardino Fire Department requirements.

4.10 STORAGE CONTAINERS AND HAZARDOUS SUBSTANCE USAGE

A hazardous material storage and waste shed is located at the northeast corner of the maintenance building. Containers of paint and paint thinner were observed in this shed at the time of the site reconnaissance. The containers were labeled and observed to be in good condition.

Two 55-gallon drums were also observed at the time of the site reconnaissance in this shed. According to Mr. Jim Buckmaster, the drums are scheduled to be removed by December 31, 2010. The drums were observed to be covered and in good condition, with no obvious cracks, stains, or leaks.

4.11 POLYCHLORINATED BIPHENYLS

Pole-mounted and pad-mounted electrical transformers were observed in several locations throughout the site. These pole-mounted and pad-mounted electrical transformers were observed in good condition during the site reconnaissance, and no sign of polychlorinated biphenyl (PCB) leakage from the transformers was observed.

One hydraulic-powered service elevator was observed in one of the structures of the maintenance building. The elevator pit was not accessed. According to Mr. Jim Buckmaster, the elevator is serviced quarterly by the Tyson Group. No hydraulic fluid leaks or elevator pressure problems were reported. The hydraulic-powered elevator does not represent a recognized environmental condition in connection to the site.

4.12 EVIDENCE OF WETLANDS

During the site reconnaissance, LSA personnel did not note evidence of wetlands at the site or within the immediate area (0.25 mi of the site). In addition, evidence of wetlands was not noted for the site or immediate vicinity on the topographic maps reviewed by LSA personnel.

4.13 RADON

According to the United States Environmental Protection Agency (EPA) Map of Radon Zones and the United States Geological Survey (USGS), San Bernardino County is located in Zone 2 of the EPA Radon Zone Map. Zone 2 is designated as a moderate potential radon zone with levels between 2 and 4 picocuries per liter (pCi/L) of air.

4.14 OFF-SITE OBSERVATION

During the site reconnaissance, LSA personnel drove through the area surrounding the site. The purpose of the off-site reconnaissance was to observe whether activities occurring or equipment located at off-site locations could have the potential to impact site soils and/or groundwater.

Pole-mounted and pad-mounted electrical transformers were observed in multiple locations throughout the area surrounding the site. These pole-mounted and pad-mounted electrical transformers were observed in good condition during the site reconnaissance, and no signs of leakage from the transformers was observed.

Several ASTs were observed at the orange juice manufacturing factory along North La Junita Street. Due to limited access on private property, the exact number of the ASTs and the condition and contents of these ASTs could not be verified; however, the ASTs visible from the public right-of-way were observed to be in good condition, with no obvious cracks, stains, or leaks.

Several 55-gallon drums were observed at the dumpster area of the south adjacent commercial center property. The drums were observed to be in good condition, with no obvious cracks, stains, or leaks.

5.0 HISTORICAL SITE USAGE

A summary of requests for information and agency responses described in this chapter are provided in Appendix B.

5.1 CITY OF SAN BERNARDINO, BUILDING AND SAFETY DEPARTMENT

On December 14, 2010, LSA reviewed records at the City Building Department (CBD). No building record was found for the site parcels.

5.2 CITY OF SAN BERNARDINO, PUBLIC WORKS DEPARTMENT

On November 24, 2010, LSA reviewed records at the City Public Works Department (PWD). No records pertaining to hazardous waste are maintained by the PWD.

5.3 STATE WATER RESOURCES CONTROL BOARD/REGIONAL WATER QUALITY CONTROL BOARD, SANTA ANA REGION

On November 24, 2010, LSA requested information via email from the Regional Water Quality Control Board (RWQCB), Santa Ana Region. According to the RWQCB, no records are available for the site. A copy of the RWQCB email response is provided in Appendix B.

5.4 SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

On November 23, 2010, a written request for records was submitted to the South Coast Air Quality Management District (SCAQMD) via facsimile. According to SCAQMD, no records are found for the site. A copy of the SCAQMD response letter is provided in Appendix B.

5.5 SAN BERNARDINO COUNTY FIRE DEPARTMENT, HAZARDOUS MATERIALS DIVISION

On November 23, 2010, LSA requested records for the site from the San Bernardino County Fire Department, Hazardous Materials Division headquarters. A response from this agency is pending as of the date of this report. Any information identified will be forwarded in an addendum letter upon receipt.

5.6 DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES MAP REVIEW/STATE FIRE MARSHAL RECORDS REQUEST

In order to determine the presence or absence of oil and gas wells and/or pipelines within the project limits, Reference Map Series Sheet K, dated June 30, 1986, prepared by the Division of Oil, Gas, and Geothermal Resources, were reviewed. No oil or gas wells and/or pipelines were located within 1 mi of the project limits. A copy of the oil and gas well map is provided in Appendix D.

The Office of the State Fire Marshal (OSFM) was contacted regarding the presence of underground pipelines in the vicinity of the project limits in a request dated November 22, 2010. OSFM responded in a letter received November 24, 2010, which indicated there were no pipelines jurisdictional to the OSFM in the project area. A copy of this correspondence is provided in Appendix D.

5.7 OTHER CONTACTS

On November 30 and December 3, 2010, LSA personnel emailed Ms. Nancy Finch, the current on-site manager, regarding present and past operations at the site. According to Ms. Finch, the site was built on April 4, 1942. She has been managing the site since 2003. During the period of her management, she is unaware of any potential environmental problems for both the site and surrounding properties.

LSA personnel also contacted Ms. Susan L. Benner, Executive Director of the Housing Authority of the County of San Bernardino, regarding present and past operations at the site. Ms. Benner also completed a Phase I ESA questionnaire, a copy of which is included in Appendix K. Included in this questionnaire are standard ASTM questions relating to potential environmental concerns both for the site and its surrounding properties.

On December 14, 2010, LSA personnel met with Mr. Jim Buckmaster, the current Maintenance Compliance Specialist, and Mr. Jose Gonzalez, the current Supervising Maintenance Worker, at the site. According to Mr. Buckmaster, he has been working at the site as a member of maintenance staff since 1981. He is unaware of any potential environmental problems for both the site and its surrounding properties. In addition, Mr. Gonzalez stated he has been working at the site as a member of the maintenance staff since 1992. He, too, is unaware of any potential environmental problems for both the site and its surrounding properties.

5.8 HISTORICAL AERIAL PHOTOGRAPHS

In order to check for evidence of former on-site and off-site features that could have a potential environmental impact on the site, historical aerial photographs were requested from Track Info. A review of these aerial photographs was completed to determine whether specific uses or facilities were present on the site (e.g., sumps, pits, ponds, ASTs, landfills, and outside storage of hazardous materials).

For the site and surrounding vicinity, available aerial photographs dating from 1938 to 2002 (described in the following table) were reviewed. The historic aerial photographs are provided in Appendix F.

Year	Description
1938	The site and the project vicinity are primarily characterized by agricultural uses (orchard). Several structures are shown in the northwest corner of the site. North-south roads in the vicinity include East Base Line Street and East Olive Street, and major east-west roads include North Waterman Avenue, and North La Junita Street. A number of residential structures were noted along North Waterman Avenue.
1953	The site and the surrounding areas located immediately to the west and east of the project limits are primarily characterized by residential development. East Orange Street, Alder Street, Elm Circle, and Crestview Avenue now appear within the site. The surrounding areas located immediately to the north and south are observed to be graded for development with minimal structures. The site and the project vicinity are primarily characterized by residential uses.
1966	The previously graded area north of the project limits has been developed for commercial purposes. There are no notable changes from the previous aerial photograph.
1977	The site has remained unchanged. A commercial structure has been established immediately south of the site. Additional development has occurred throughout the vicinity.
1980	The site and surrounding vicinity has remained relatively unchanged.
1994	The site has remained unchanged. Additional commercial structures have been established immediately south of the site. The remainder of the surrounding vicinity has remained relatively unchanged.
2002	The site and surrounding vicinity has remained relatively unchanged.

5.9 HISTORICAL SANBORN FIRE INSURANCE MAPS

Historical fire insurance company (Sanborn) maps were not available for the site (Appendix G).

5.10 HISTORICAL CITY DIRECTORIES

Historical city directories were reviewed by Track Info. Haines Directories were reviewed for the years 1949, 1951, 1955, 1961, 1966, 1971, 1976, 1981, 1986, 1991, 1996, 2001, 2005, and 2010 (Appendix H).

No specific environmental conditions were apparent to the site and surrounding properties based on the review of available city directories.

5.11 HISTORICAL TOPOGRAPHIC MAPS

Historical USGS topographic maps were requested from Track Info in order to check for evidence of former on-site and off-site features that could have a potential environmental impact on the site. For the site and surrounding vicinity, available topographic maps dated 1941 to 1980 were reviewed.

Review of the historical maps indicated no adverse land use had previously occurred at the site. Historical topographic maps are provided in Appendix I.

The following table provides observations made from the historical topographic maps in greater detail.

Year	Description
1941	North Waterman Avenue and East Base Line Street are present west and north of the project limits. A minimal number of structures are located along several unnamed roads and East Base Line Street. The site and surrounding area appear to exist as undeveloped land.
1954	East Orange Street, Alder Street, Elm Circle, and Crestview Avenue now appear within the project limits. No structures are observed within the project limits or areas immediately to the project limits. Waterman Garden is noted on the map. Several schools appear north of East Base Line Street.
1967	Commercial development is present north of East Base Line Street. A trailer park and Lyman School are visible immediately south of the project limits. No other notable changes are visible at this time.
1973	The site appears to be similar to the 1967 topographic map with the exception of a structure in the center of Lyman School. No substantial changes are noted from the previous photograph.
1980	There are no notable changes from the previous topographic map.

6.0 ENVIRONMENTAL DATABASE SEARCH

Regulatory search information (the database search report) was prepared by Track Info Services, LLC (Track Info). The search radii met the criteria specified in the ASTM Practice E 1527-05 *(Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process).* A regulatory records search of this nature is based on information published by federal, State, and local regulatory agencies and is used to determine whether the subject property or nearby properties are listed as having a past or present record of actual or potential environmental impacts from hazardous substances or materials. Regulatory listings include only those facilities that are known to the regulatory agencies at the time of publication. The database search reports, dated November 19, 2010, are provided in Appendix J.

Table A details the databases searched for inclusion of the subject site and/or any surrounding sites pursuant to the requirements of ASTM Practice E 1527-05. Table B provides a summary of the hazardous releases within the ASTM search area. The locations of these facilities are shown on Figure 3 in Appendix A.

The Track Info Environmental FirstSearch Summary Report summarizes the records identified in this database review. No major hazardous spill incidents are recorded as occurring within the project limits. Although no major hazardous spill incidents are recorded as occurring within the project limits or the immediate vicinity, this does not rule out the possibility of unrecorded, illegal dumping activities or impacts to the project area through contamination of groundwater from an off-site activity.

A Track Info Services, LLC (Track Info) database search dated November 19, 2010 (Appendix J) was reviewed for hazardous waste sites in the vicinity of the project. Within the FirstSearch database search radius were the following sites:

- 3 Resource Conservation and Recovery Act (RCRA) Generators (GEN) listing
- 1 RCRA No Longer Reporting (NLR) listing
- 2 Emergency Response Action Notification System (ERNS) release sites
- 6 State-listed sites
- 7 Solid Waste Landfill (SWL) sites
- 14 Leaking Underground Storage Tank (LUST) sites (two are listed at the same address [296 East Base Line Street] and three are listed at the same address [906 North Waterman Avenue])

Total of three RCRA GEN listing sites and one RCRA NLR (listed at the same address as one of the RCRA GEN sites) are listed as small quantity generators (SQGs). These sites are not considered a potential concern because these databases do not indicate that a release has occurred. In addition, no violations were reported at these sites.

Table A: Databases

Acronym	Name	Description
FEDERAL		
NPL	National Priority List	The United States Environmental Protection Agency's (EPA) registry of the nation's worst uncontrolled or abandoned hazardous waste sites. NPL sites are targeted for possible long-term remedial action under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980.
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System	A comprehensive listing of known or suspected uncontrolled or abandoned hazardous waste sites. These sites have either been investigated or are currently under investigation by the EPA for the release, or threatened release, of hazardous substances.
CERCLIS-NFRAP	Comprehensive Environmental Response, Compensation, and Liability Information System – No Further Remedial Action Planned	As of February 1995. CERCLIS sites designated as "No Further Remedial Action Planned" (NFRAP) have been removed from CERCLIS. NFRAP sites may be sites where, following an initial investigation, no contamination was found, the contamination was removed quickly without the need for the site to be placed on the NPL, or the contamination was not serious enough to require federal Superfund action or NPL consideration. The EPA has removed approximately 25,000 NFRAP sites to lift the unintended barriers to the redevelopment of these properties and has archived them as historical records so the EPA does not needlessly repeat the investigations in the future. This policy change is part of the EPA's Brownfields Redevelopment Program to help cities, states, private investors, and affected citizens promote economic redevelopment of unproductive urban sites.
RCRA COR	Resource Conservation and Recovery Act Corrective Action Report	This database contains information concerning RCRA facilities that have conducted or are currently conducting a corrective action. A Corrective Action Order is issued pursuant to RCRA Section 3008(h) when there has been a release of hazardous waste or constituents into the environment from an RCRA facility. Corrective actions may also be imposed as a requirement of receiving and maintaining a Treatment, Storage, and Disposal Facilities (TSDF) permit.
RCRA TSD	Resource Conservation and Recovery Information System	The EPA's RCRA program identifies and tracks hazardous waste from the point of generation to the point of disposal. The RCRA facilities database is a compilation by the EPA of facilities that report generation, storage, transportation, treatment, or disposal of hazardous waste.
RCRA GEN	RCRA Generators	The EPA's RCRA program identifies and tracks hazardous waste from the point of generation to the point of disposal. The RCRA facilities database is a compilation by the EPA of facilities that report generation, storage, transportation, treatment, or disposal of hazardous waste. RCRA Large Generators are facilities that generate at least 1,000 kilograms (kg)/month of nonacutely hazardous waste (or 1 kg/month of acutely hazardous waste). RCRA small quantity generators (SQGs) are facilities that generate less than 1,000 kg/month of nonacutely hazardous waste.
RCRA NLR	RCRA No Longer Reporting	The EPA's program identifies and tracks hazardous waste from the point of generation to the point of disposal. The RCRA facilities database is a compilation by the EPA of facilities that report generation, storage, transportation, treatment, or disposal of hazardous waste. The RCRA NLR database is a compilation of the facilities not currently classified by the EPA but still included in the Resource Conservation and Recovery Information System (RCRIS) database.

Table A: Databases

Acronym	Name	Description
		Reasons for nonclassification include failure to report in a timely manner, being no longer in business, being no longer in business at the listed address, and no longer generating hazardous waste materials in quantities that require reporting.
Federal IC/EC	Brownfield Management System (BMS) Federal Engineering and Institutional Controls (IC/EC)	BMS is national database system designed to assist the EPA in collecting, tracking, and updating information, as well as reporting on the major activities and accomplishments of the various Brownfield grant programs. IC/EC lists Superfund sites that have either an engineering or an institutional control.
ERNS	Emergency Response Action Notification System	A national computer database system used to store information on the sudden and/or accidental release of hazardous substances, including petroleum, into the environment. The ERNS reporting system contains preliminary information on specific releases, including the spill location, the substance released, and the responsible party.
Tribal Lands	Indian Lands of the United States	A database of areas with boundaries established by treaty, statute, and/or executive or court order, recognized by the federal government as territory in which American Indian Tribes have primary governmental authority. The Indian Lands of the United States map layer shows areas of 640 acres (ac) or more that are administered by the United States Bureau of Indian Affairs. Included are federally administered lands within a reservation that may or may not be considered part of the reservation.
STATE		
Tribal VCP	Site Mitigation and Brownfields Reuse Program Database (SMBRPD)/CalSites	The California Department of Toxic Substances Control (DTSC) has developed an electronic database system with information about sites that are known to be contaminated with hazardous substances, as well as information on uncharacterized properties where further studies may reveal problems. The SMBRPD, also known as CalSites, is used primarily by DTSC as an informational tool to evaluate and track activities at properties that may have been affected by the release of hazardous substances.
SPILLS 90	SPILLS List	Provided by Regional Water Quality Control Boards (RWQCBs) 1–9. The California RWQCBs maintain reports of sites that have records of spills, leaks, investigations, and cleanups.
SWL	Solid Waste Landfill Facilities (SWF/LF) State Waste Management Unit Data System (WMUDS)	Closed and inactive landfills. SWF/LF records typically contain an inventory of solid waste disposal facilities on landfills. These may be active or inactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for SWLs or disposal sites. Provided by the State Water Resources Control Board (SWRCB); used for program tracking and inventory of waste management units. Contains information from the facility and Waste Management Unit; Solid Waste Assessment Test (SWAT) program and report summary information, Chapter 15 (formerly Subchapter 15); Toxic Pits Cleanup Act (TPCA) and RCRA program information; and closure information. Also contains some information from the Waste Discharge System (WDS).

Table A: Databases

Acronym	Name	Description
UST	Regional Underground Storage Tank	The historical database of registered USTs is provided by the SWRCB, Office of Underground Storage Tanks. Refer to the local-level UST list for more current information. Some states do not require registration of heating oil tanks, especially those used for residential purposes.
AST	Aboveground Storage Tank	The historical database of registered ASTs is provided by the SWRCB.
LUST	Leaking Underground Storage Tank	Maintained by the SWRCB. LUST records contain an inventory of reported LUST incidents. Not all states maintain these records, and the information stored varies state by state.
Tribal IC	Deed-Restricted Sites Listing	The California Environmental Protection Agency's (CalEPA) DTSC Board maintains a list of deed-restricted sites, properties where the DTSC has placed limits or requirements on the future use of the property due to the varying levels of cleanup possible, practical, or necessary at the site.
State Permit	CA County–San Diego	San Diego Hazardous Materials Permits; handlers and generators permit information maintained by the Hazardous Materials Division.
State Other	CalEPA/County SMBRPD/CalSites	The California DTSC has developed an electronic database system with information about sites that are known to be contaminated with hazardous substances and information on uncharacterized properties where further studies may reveal problems. The SMBRPD, also known as CalSites, has information to evaluate and track activities at properties that may have been affected by the release of hazardous substances.

Table B: Hazardous Substance Releases

Figure 3 Map ID No.	Address and Distance from Subject Site	Databases	Status
1	Southern California 999 North Waterman Avenue (0.07 mi southwest of the project limits)	ERNS	On September 25, 1997, three transformers on a H-shaped structure were knocked down due to an unknown cause. Some material was washed down the storm sewer due to the rain. Polychlorinated biphenyls (PCBs) were not reported in the transformer oil. The soil and storm sewer were reported to be affected by the release. Since the site is located outside the project limits, it is unlikely that this site will pose a concern during construction of the project.
2	Southern California Gas Company 9th Street and Don Julian Intersection (0.07 mi southwest of the project limits)	ERNS	On September 24, 1991, a pipeline-related incident was reported. Natural gas was released during the incident. No further information is available at this time. However, since the site is located outside the project limits, it is unlikely that this site will pose a concern during construction of the project.
3	El Toro II Tire Shop 207 East Base Line Street (0.18 mi northwest of the project limits)	SWL	The property is listed as an active tire shop. It is likely that the waste at this facility is limited to waste tires. Therefore, it is unlikely to pose a concern to the site.
4	Universal Tire Shop 826 East Base Line Street (0.20 mi northeast of the project limits)	SWL	The property is listed as an active tire shop. It is likely that the waste at this facility is limited to waste tires. Therefore, it is unlikely to pose a concern to the site.
5	Zapata Tire and Rim Unlimited 803 East Base Line Street (0.20 southeast of the project limits)	SWL	The property is listed as an active tire shop. It is likely that the waste at this facility is limited to waste tires. Therefore, it is unlikely to pose a concern to the site.
6	Morales Tire III 147 East Base Line Street (0.30 northwest of the project limits)	SWL	The property is listed as an active tire shop. It is likely that the waste at this facility is limited to waste tires. Therefore, it is unlikely to pose a concern to the site.
7	Discount Tire Centers 101 West Base Line Street (0.37 mi northwest of the project limits)	SWL	The property is listed as an active tire shop. It is likely that the waste at this facility is limited to waste tires. Therefore, it is unlikely to pose a concern to the site.
8	Anton Elementary School 780 East Gilbert Street (0.43 mi northeast of the project limits)	STATE	A site inspections and visit of the school property was performed on October 12, 2002. The California Department of Toxic Substances Control (DTSC) determined that the site requires “No Further Action.” Therefore, this site is unlikely to pose a concern during construction of the proposed project.
9	In and Out Tires 697 North Waterman Avenue (0.43 mi southwest of the project limits)	SWL	The property is listed as an active tire shop. It is likely that the waste at this facility is limited to waste tires. Therefore, it is unlikely to pose a concern to the site.

Table B: Hazardous Substance Releases

Figure 3 Map ID No.	Address and Distance from Subject Site	Databases	Status
10	Lincoln II North Elementary School Arrowhead Avenue/Base Line Street (0.62 mi northwest of the project limits)	STATE	According to the FirstSearch database report, the site is currently considered inactive, needing evaluation. Phase I and a Preliminary Endangerment Assessment Workplan were conducted at the site. No other information is available at this time. Based on the distance of this site from the project limits, this site is unlikely to pose a concern during the construction of the proposed project.
11	Monterey II Elementary School 9th Street/Tippecanoe Avenue (0.69 mi southeast of the project limits)	STATE	A site investigation of the proposed school property was performed due to potential impacts to soils from agricultural use. As of August 19, 2004, the DTSC has approved the Preliminary Endangerment Assessment for this site and determined that the site requires "No Further Action." Therefore, this site is unlikely to pose a concern during construction of the proposed project.
12	Lincoln II North Elementary School West 13th Street/D Street (0.77 mi northwest of the project limits)	STATE	A voluntary clean-up program of the proposed school property was conducted due to historical industrial usage. The site has historically been an industrial property that was used for a gas station, dry cleaners, and other light industrial uses. DTSC entered into an Environmental Oversight Agreement with the San Bernardino City Unified School District to provide oversight for a Preliminary Endangerment Assessment for the site. However, due to its distance from the project limits, this site is unlikely to pose a potential environmental concern in connection with the proposed project.
13	Gerald Hobbs Property 7194 Conejo Drive (0.80 mi northeast of the project limits)	STATE	According to the FirstSearch database report, the site is considered certified. Potential contaminants of concern include arsenic in the soil. The past use of the site is reported to be a residential area. DTSC prepared the Public Notice and the Work Notice, and prepared to publish it in the local newspapers and distribute it to the neighborhoods. No other information is available at this time. Based on the status of this site and its distance from the project limits, this site is unlikely to pose a concern during construction of the proposed project.
14	Inland Behavioral and Health S 665 and 671 North D Street (0.90 southwest of the project limits)	STATE	Pursuant to the Memorandum of Understanding (MOU), DTSC reviewed a Phase I Environmental Site Assessment (ESA) Report and other documents for this site. The site is currently vacant and is proposing to construct a new health center on the subject property. A supplemental Phase I ESA was prepared by DTSC and it was concluded that no action was needed for this site because no contamination was reported on the site.

Table B: Hazardous Substance Releases

Figure 3 Map ID No.	Address and Distance from Subject Site	Databases	Status
			Based on the status of this site and its distance from the project limits, this site is unlikely to pose a concern during construction of the proposed project.

Source: TrackInfo Services, LLC. Environmental FirstSearch Report. November 19, 2010.
Note: The sites plotted on Figure 3 are based on available information provided in the FirstSearch Database Report. Most of the sites on Figure 3 were identified by address. However, several release sites that were plotted on Figure 3 are based on approximate intersection information because no addresses were available. Therefore, there is no way of identifying the exact location of the release for these sites.
mi = mile/miles

A total of 14 of these reported LUST sites have been issued case closure status and are unlikely to pose a concern during construction of the proposed project.

In addition, a total of two non-geocoded sites were reported within the FirstSearch database report. The two non-geocoded sites (one non-geocoded Tribal land site and one SWL site) were listed within the search radius of the FirstSearch environmental database. Non-geocoded sites consist of sites where missing or inaccurate information has been provided by the reporting agency, or where insufficient information prevents the proper placement of a site on a given map. The two non-geocoded sites were determined to be located more than 1 mi from the project limits and therefore are unlikely to pose a potential environmental concern during construction of the proposed project.

7.0 FINDINGS

The following information was discovered in the course of this Phase I ESA for the overall site:

- The Track Info database report found that a total of three RCRA GEN listing sites and one RCRA NLR, which is listed at the same address as one of the RCRA GEN sites, are listed as SQGs. These sites are not considered a potential concern because these databases do not indicate that any releases have occurred. In addition, no violations were reported at these sites. A total of 14 of these reported LUST sites have been issued case closure status and are unlikely to pose a concern during construction of the proposed project.
- Due to the age of the existing structures on the subject site, there is a potential of encountering ACMs and LBP. There is also a potential to encounter PCBs from light ballasts in electrical transformers within the existing structures.

8.0 RECOMMENDATIONS

Based on the governmental records search, visual site survey, agency records request results, and historical aerial photograph and topographic map review conducted for this project, LSA recommends the following:

- **ACM Survey:** Prior to structure disturbance, a State-certified asbestos professional should determine whether sampling of building materials for ACMs should be performed. Any abatement or removal of ACMs must be performed in accordance with applicable federal, State, and local regulations.
- **LBP Survey:** Prior to structure disturbance, a State-certified lead professional should survey the site structures and determine whether sampling for LBP is warranted. Any abatement or removal of LBP must be performed in accordance with applicable federal, State, and local regulations.
- **PCB Survey:** Prior to structure disturbance, a qualified professional should survey the site structures and determine whether suspect PCB-containing equipment (e.g., transformers) is present. PCB-containing equipment must be handled and disposed of in accordance with applicable federal, State, and local regulations.
- **Health and Safety Plan:** A Health and Safety Plan should be developed for grading and demolition activities. The Plan should include any soil and air monitoring required based on recommended sampling outlined above, and include procedures for handling previously unknown contamination encountered during these activities.
- **Groundwater:** Any dewatering will require compliance with the State General Permit (2003-0003-DWQ) or an individual permit from the RWQCB, Santa Ana Region, consistent with National Pollutant Discharge Elimination System (NPDES) requirements. The RWQCB will decide which permit is applicable and whether sampling is required once it receives and reviews the Notice of Intent (NOI).

9.0 LIMITATIONS

The findings and opinions presented are specific to the dates of LSA site work and should not be relied on to represent conditions at substantially later dates. The opinions included herein are based on information obtained during the study and on LSA's experience. If additional information becomes available, which might impact environmental findings, LSA requests the opportunity to review the information, reassess the potential concerns, and modify LSA's opinions, as necessary.

Although this assessment has attempted to identify the potential for environmental impacts to the subject property, potential sources of contamination may have escaped detection due to: (1) the inaccuracy/incompleteness of public records, and (2) the presence of undetected or unreported environmental incidents. It was not within the scope of this assessment to address non-ASTM issues, such as radon, lead in drinking water, and wetlands. It was not the purpose of this study to determine the actual presence or degree or extent of contamination, if any, at the site, which could require additional exploratory work, including sampling and laboratory analysis.

LSA's professional services have been performed using the degree of care and skill ordinarily exercised, under similar conditions, by reputable environmental consultants practicing in this or similar localities. No other warranty, expressed or implied, is made as to the professional information in this report.

This report is intended for the use of the Design, Community & Environment (DCE) only. LSA's services have been performed under mutually agreed-upon terms and conditions. If other parties wish to rely on this report, please have them contact LSA so that a mutual understanding and agreement of the terms and conditions for LSA services can be established prior to their use of this information.

Prepared by:

_____ _____

Carmen Lo, REA I #30249 Date
Assistant Environmental Planner

Reviewed by:

_____ _____

Kent Norton, AICP, REA I #06827 Date
Senior Environmental Planner

10.0 REFERENCES

Information presented in this report is based upon the following sources:

10.1 AERIAL PHOTOGRAPHS

Date of Photo	Scale
1938	1 inch = 375 feet
1953	1 inch = 375 feet
1966	1 inch = 375 feet
1977	1 inch = 375 feet
1980	1 inch = 375 feet
1994	1 inch = 375 feet
2002	1 inch = 375 feet

The aerial photographs provided by Track Info are included in Appendix F.

10.2 MAPS

United States Geological Survey (USGS) Topographic Maps. *North San Bernardino, California*, Quadrangle, 7.5-minute series, 1941, 1954, 1967, 1973, and 1980. (Provided in Appendix I)

Reference Map Series Sheet K. State of California Department of Conservation, June 30, 1986. (Provided in Appendix D)

10.3 REPORTS AND REFERENCES

City of San Bernardino Municipal Water Department (SBMWD), 2009 Water Quality Report, 2009. (Provided in Appendix D)

Kleinfelder, Inc. Work Plan for Soil Vapor Extraction Rebound Testing Former Mobil Service Station 18-ELG, January 8, 2005. (Provided in Appendix E)

San Bernardino County Fire Department, Hazardous Materials Division. Request for Records Information letter. November 29, 2010. (Provided in Appendix B)

South Coast Air Quality Management District (SCAQMD). Completion Letter. December 16, 2010. (Provided in Appendix B)

Track Info Services, LLC (Track Info). *City Directory Report.* 425 Crestview Avenue. December 1, 2010. (Provided in Appendix H)

Track Info. Environmental FirstSearch Report. Southeast of Waterman and Baseline Street. November 19, 2010. (Provided in Appendix J)

Track Info. Sanborn Map Report. of Waterman and Baseline Street. November 19, 2010. (Provided in Appendix G)

10.4 WEBSITES

Cal Recycle. Solid Waste Information System (SWIS) database: http://www.calrecycle.ca.gov/SWFacilities/Directory/Default.htm, accessed November 23, 2010.

Department of Toxic Substance Control (DTSC). Envirostor website: http://www.envirostor.dtsc.ca.gov/public/profile_report.asp?global_id=33320002, accessed November 22, 2010.

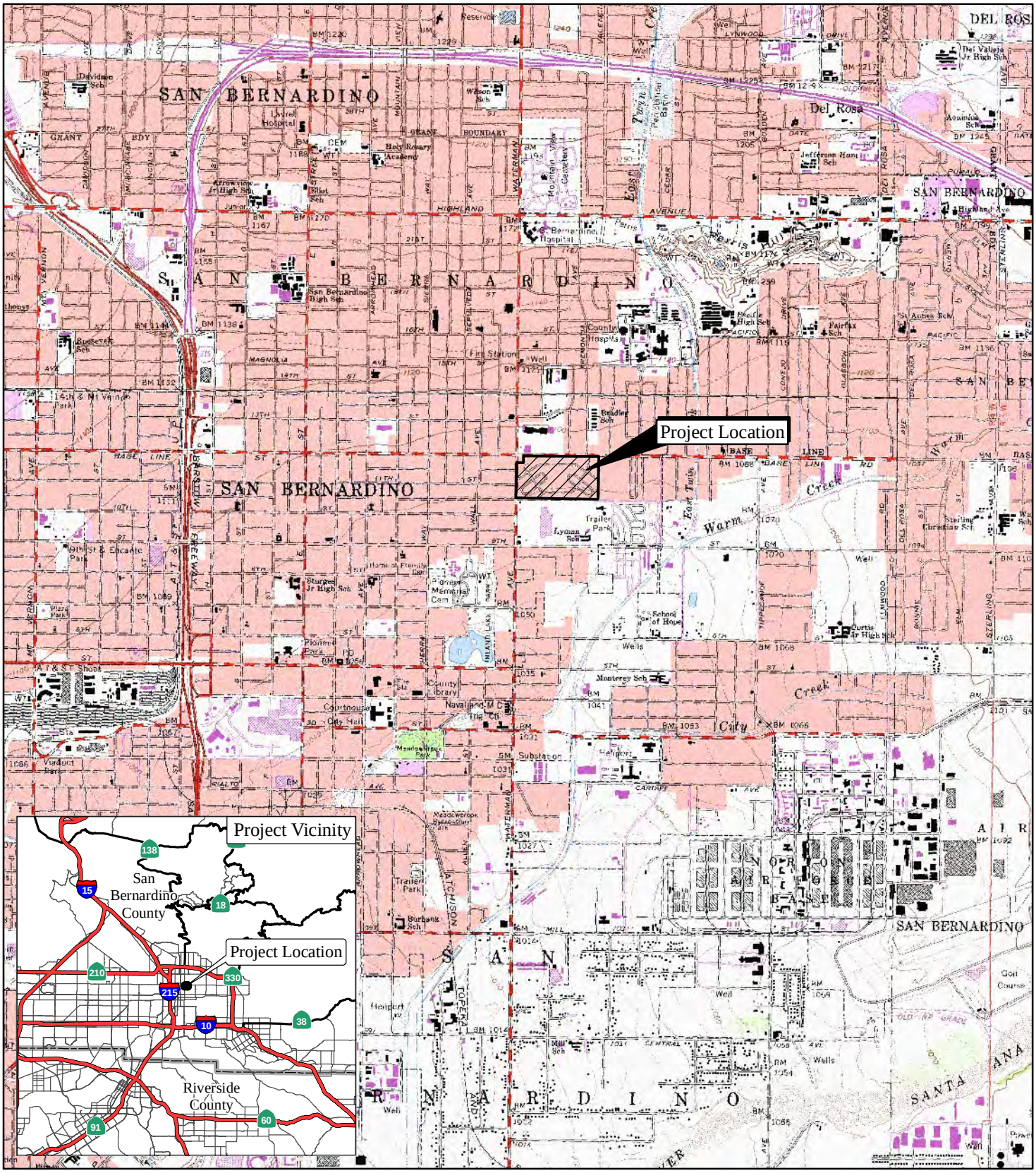
State Water Resources Control Board (SWRCB). GeoTracker website: http://geotracker.swrcb.ca.gov/, accessed November 23, 2010.

United States Environmental Protection Agency (EPA). Map of Radon Zone in California on EPA data website: http://www.city-data.com/radon-zones/California/California.html, accessed November 29, 2010.

APPENDIX A

FIGURES

Figure 1: Project Location
Figure 2: Local Vicinity
Figure 3: Hazardous Releases
Figure 4: Site Photos



LSA

LEGEND

Project Location

FIGURE 1

0 1500 3000

FEET

SOURCE: USGS 7.5' QUAD - San Bernardino South ('80)

I:\PYA1001\GIS\Fig1_ProjLoc.mxd (11/19/2010)

DCE San Bernardino Housing Phase I ESA Project

Project Location

LSA

LEGEND

Site Location

FIGURE 2

0 200 400
FEET

SOURCE: Bing (2008)

I:\PYA1001\GIS\LocalVicinity.mxd (11/23/2010)

DCE San Bernardino Housing Phase I ESA Project

Local Vicinity

LSA

LEGEND

- Site Location
- 1 Southern California *(0.07 mi southwest of the project limits)*
- 2 Southern CA Gas Company *(0.07 mi southwest of the project limits)*
- 3 El Toro II Tire Shop *(0.18 mi northwest of the project limits)*
- 4 Universal Tire Shop *(0.20 mi northeast of the project limits)*
- 5 Zapata Tire and Rim Unlimitied *(0.20 mi southeast of the project limits)*
- 6 Morales Tire III *(0.30 mi northwest of the project limits)*
- 7 Discount Tire Centers *(0.37 mi northwest of the project limits)*
- 8 Anton Elementary School *(0.43 mi northeast of the project limits)*
- 9 In and Out Tires *(0.43 mi southwest of the project limits)*
- 10 Lincoln II North Elementary SC *(0.62 mi northwest of the project limits)*
- 11 Monterey II Elementary School *(0.69 mi southeast of the project limits)*
- 12 Lincoln II North Elementary SC *(0.77 mi northwest of the project limits)*
- 13 Gerald Hobbs Property *(0.80 mi northeast of the project limits)*
- 14 Inland Behavioral and Health Services *(0.90 mi southwest of the project limits)*

N

0 310 620
FEET

SOURCE: Bing (2008)

FIGURE 3

DCE San Bernardino Housing Phase I ESA Project

Hazardous Substance Release

i:\pya1001\gis\haz_sites.mxd (11/24/2010)

a. Multifamily apartment building along East Orange Street, looking north.

b. Maintenance building at the site located at 660 East Orange Street, looking south.

Figure 4. Site Photos

c. Wood shavings observed in the parking lot of the maintenance building.

d. Small pile of dirt used for repairing potholes for the site observed in the parking lot of the maintenance building

Figure 4. Site Photos

e. Containers of paint and paint thinner located in the hazardous materials storage and waste shed at the maintenance building.

f. A hazardous materials storage and waste shed observed in the parking lot of the maintenance building.

Figure 4. Site Photos

g. Two 55-gallon drums of hazardous waste observed in the hazardous materials storage and waste shed at the maintenance building.

h. Used televisions observed in the parking lot of the maintenance building.

Figure 4. Site Photos

i. Pole-mounted transformer on site.

j. An orange orchard and an orange juice manufacturing factory adjacent to and east of the site.

Figure 4. Site Photos

k. School buildings adjacent to and south of the site.

l. Retail stores adjacent to and south of the site. Several 55-gallon drums were observed at this property.

Figure 4. Site Photos

m. Day-care service on site, looking south.

n. Fast food restaurant at the southeast corner of North Waterman Avenue and East Base Line Street.

Figure 4. Site Photos

o. Neighborhood commercial center adjacent to and north of the site, looking west.

p. Fast food restaurant and retail stores adjacent to and east of the site, looking east.

Figure 4. Site Photos

q. Retail stores and commercial buildings along North Waterman Avenue, looking south.

r. Gas station located at the southeast corner of North Waterman Avenue and East Olive Street, looking south.

Figure 4. Site Photos

s. Pole-mounted transformer along East Base Line Street.

t. Individual air conditioning units at the multifamily apartment building at the site.

Figure 4. Site Photos

APPENDIX B

REQUESTS FOR INFORMATION AND AGENCY RESPONSES

Carmen Lo

From: FileReview8 FileReview8 [FileReview8@waterboards.ca.gov]
Sent: Wednesday, November 24, 2010 6:33 AM
To: Carmen Lo
Subject: Re: Public Record Review Request

Good Morning, Carmen ~

We have no records in our database for the addresses listed. If you have any questions/concerns, please don't hesitate to contact us.

Thank you for your inquiry.

Santa Ana Regional Water Quality Control Board
Attention: File Review Request
3737 Main Street , Suite 500
Riverside, California 92501-3348
Phone (951) 782-4499
Fax (951) 781-6288
E-mail: FileReview8@waterboards.ca.gov>>> "Carmen Lo" <Carmen.Lo@lsa-assoc.com> 11/23/10 3:00 PM >>>
To Whom It May Concern,

I am preparing a Phase I Environmental Site Assessment (ESA) and would like to request a record review to see whether this properties have potential environmental concerns to my project. All of these properties are located in City of San Bernardino, CA.

Please see the names and addresses below:

El Toro II Tire Shop
207 E. Baseline St

Universial Tire Shop
826 E. Baseline St

Zapata Tire & RIM Unlimited
803 E. Baseline

Morales Tire III
147 E. Baseline

In and Out Tires
697 N. Waterman Ave

Please let me know when the records will be ready for me to review.

Thanks

Carmen Lo, REA I
Assistant Environmental Planner
LSA Associates, Inc.
20 Executive Park, Suite 200
Irvine, CA 92614

carmen.lo@lsa-assoc.com
(949) 553-0666
Fax: (949) 553-8076

CUPA
San Bernardino County Fire Department • Hazardous Materials Division
620 S. E St., San Bernardino, CA 92415-0153 • (909) 386-8468 FAX (909) 386-8460

REQUEST FOR A CERTIFIED HAZARDOUS MATERIALS RECORDS SEARCH FINDING REPORT

The main focus of a REQUEST FOR A CERTIFIED HAZARDOUS MATERIALS RECORDS SEARCH FINDING REPORT is to determine whether there exists in San Bernardino County Fire Department (County Fire) files any record relating to contamination or reports of spills at a particular site. A Certified Hazardous Materials Records Search Finding Report should reveal whether there are any facilities at the site that are subject to current or past regulatory activity by County Fire, such as underground storage tanks, hazardous material handlers, hazardous waste generators, and EPCRA or CalARP facilities, as well as any reports of spills, incidents, complaints, or cleanup activity, that can be a useful tool in providing a history of compliance or non-compliance.

Once County Fire has completed its records search, a Certified Hazardous Materials Records Search Finding Report will be prepared and issued, which will detail all County Fire records associated with a particular site by type, date, location, and status where applicable. (Any files identified in a Certified Hazardous Materials Records Search Finding Report can be made available for copies and/or review upon request.)

If the completed records search reveals no County Fire record of hazardous material activity at the site, a Certified Hazardous Materials Records Search Finding Report will be issued, noting that "no records" were identified.

Please provide a specific site address or location description. If a situs address does not exist or cannot be found, list another type of location identifier such as Assessor Parcel Number (preferable), cross streets or intersections (e.g., NWC 5th Ave. & Main St.), and/or legal description, and if possible attach a map to this request form.

SITE INFORMATION		
Property Owner or Business Name	Location (Site Address and/or Assessor Parcel No.)	City/Community
—	multiple locations (Residential Bldg) 425 Crestview Ave (See attached map)	San Bernardino

Please provide your name, the company you represent, and contact information below.

REQUESTOR INFORMATION				
NAME	TITLE (If individual, leave blank)	COMPANY (If individual, leave blank)		
Carmen Lo	Ass. Env. Planner	LSA Associates, Inc		
MAILING ADDRESS	CITY	STATE	ZIP CODE	
20 Executive Park, Suite 200	Irvine	CA	92614	
TELEPHONE	FAX	EMAIL ADDRESS		
(949) 553-0666	(949) 553-8076	carmen.lo@lsa-assoc.com		

So that we may provide better service, please check one or more of the boxes below which best describe how the findings of the Certified Hazardous Materials Records Search will be used and/or your relationship to the property in question.

PURPOSE OR RELATIONSHIP TO PROPERTY

- [x] 1. Phase I site assessment or due diligence **AT THE SITE**
- [ ] 2. Environmental professional involved with remediation **AT THE SITE**
- [x] 3. Phase I site assessment or due diligence **NEARBY**
- [ ] 4. Environmental professional involved with remediation **NEARBY**
- [ ] 5. Proposed School Site (1/4 mi. search for AHM)
- [ ] 6. Proposed Drinking Water Well
- [ ] 7. Owner or operator of the facility or property
- [ ] 8. Potential buyer
- [ ] 9. Real Estate Agent, Lender, Appraiser
- [ ] 10. Pending escrow
- [ ] 11. Proposed redevelopment
- [ ] 12. Legal or other reason: _____

AGENCY USE	
Certified Record Search Finding Report Issued: __/__/__	Reference No:
Certified No Record Finding Report Issued: __/__/__	Amount Paid:
	Receipt No.:
	Date:

** IMPORTANT –THIS PAGE MUST BE SIGNED PRIOR TO SUBMITTAL **

DISCLAIMER: While all attempts are made to provide accurate, current, and reliable information, County Fire recognizes the possibility of human error. Therefore, County Fire, its officers, employees, agents and volunteers, make no representations as to the accuracy, completeness or suitability of a Certified Hazardous Materials Records Search Finding Report and provides a Certified Hazardous Materials Records Search Finding Report "as is", with no warranties, express or implied, including the implied warranty of fitness for a particular purpose. In no event shall County Fire be liable for any damages of any nature whatsoever, arising out of the issuance of a Certified Hazardous Materials Records Search Finding Report. County Fire therefore assumes no liability for damages incurred directly or indirectly as a result of any errors, omissions or discrepancies in a Certified Hazardous Materials Records Search Finding Report.

RELEASE AND INDEMNIFICATION: In consideration for the issuance of a Certified Hazardous Materials Records Search Finding Report, I hereby release and forever discharge County Fire, its officers, employees, agents and volunteers from any and all claims, actions, losses, damages and/or liability in connection with County Fire's issuance of a Certified Hazardous Materials Records Search Finding Report, including, but not limited to, claims that may arise due to the active or passive negligence of County Fire, its officers, employees, agents and volunteers.

I am familiar with the provisions of California Civil Code Section 1542, which provides as follows:

"A general release does not extend to claims which the creditor does not know or suspect to exist in his or her favor at the time of executing the release, which if known by him or her must have materially affected his or her settlement with the debtor."

I hereby expressly waive any and all rights that I may have there under. I understand and acknowledge the significance and consequence of this specific waiver of California Civil Code Section 1542 and assume full responsibility for any injuries, damages, losses or liabilities that I may hereafter discover as possibly resulting from County Fire's issuance of a Certified Hazardous Materials Records Search Finding Report.

In further consideration for County Fire's issuance of a Certified Hazardous Materials Records Search Finding Report, I hereby agree, for myself, my heirs, administrators, executors and assigns, that I shall indemnify, defend (with counsel approved by County) and hold harmless County Fire, its officers, employees, agents and volunteers from any and all claims, demands, actions or suits arising out of or in connection with County Fire's issuance of a Certified Hazardous Materials Records Search Finding Report brought by any third party.

* * *

I have read the above terms and conditions, including the paragraphs entitled "DISCLAIMER" and "RELEASE AND INDEMNIFICATION", and by my signature below, I affirm that I understand these terms and conditions and accept them as part of my REQUEST FOR A CERTIFIED HAZARDOUS MATERIALS RECORDS SEARCH FINDING REPORT.

I hereby request a Certified Hazardous Materials Records Search Finding Report for the location described on Page 1 of this application.

- ☐ I am including payment of the initial fee of $130.00, for the first hour of research, by check or money order, payable to San Bernardino County Fire Dept. I understand that research exceeding one hour will be billed at the rate of $130.00 for each additional hour spent by County Fire in completing this request.
- ☐ I have faxed or emailed this request and will forward payment along with the original request form within 48 hours.

REQUESTOR'S SIGNATURE	
SIGNATURE OF REQUESTOR	DATE 11/29/10

Rev. 8/30/10

LSA

LEGEND

Site Location

FIGURE 2

N

0 200 400
FEET

SOURCE: Bing (2008)

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DCE San Bernardino Housing Phase I ESA Project

Local Vicinity

LSA

20 EXECUTIVE PARK, SUITE 200
IRVINE, CALIFORNIA 92614
949-553-0666

THE
IDER
OF

San Bernardino County Fire Dept.
Hazmat Division
"620 South ""E"" Street"
San Bernardino, CA 92415 US

WARNING: THIS DOCUMENT IS VOID IF ACCOUNT

Information Management
Public Records Unit

Direct Dial (909) 396-3700
Fax:(909) 396-3330

COMPLETION LETTER

December 16, 2010

CARMEN LO
ISA ASSOCIATES INC
20 EXECUTIVE PARK # STE 200
IRVINE, CA 92614

Ref.: CONTROL NO. 64052
Received 11/24/2010

Re: EQL, NOV'S, N/C'S & COMPLAINTS.

After a thorough search of this agency's records:

NO REQUESTED RECORDS WERE FOUND FOR THE ABOVE-REFERENCED FACILITY OR FACILITY SITE.

If you have any questions, please do not hesitate to contact me, Tuesday through Friday, **8:00 a.m**. to **4:30 p.m.**

Sincerely,

MARIA CARDENAS x2311
For Colleen Paine
Public Records Coordinator

:mc

APPENDIX C

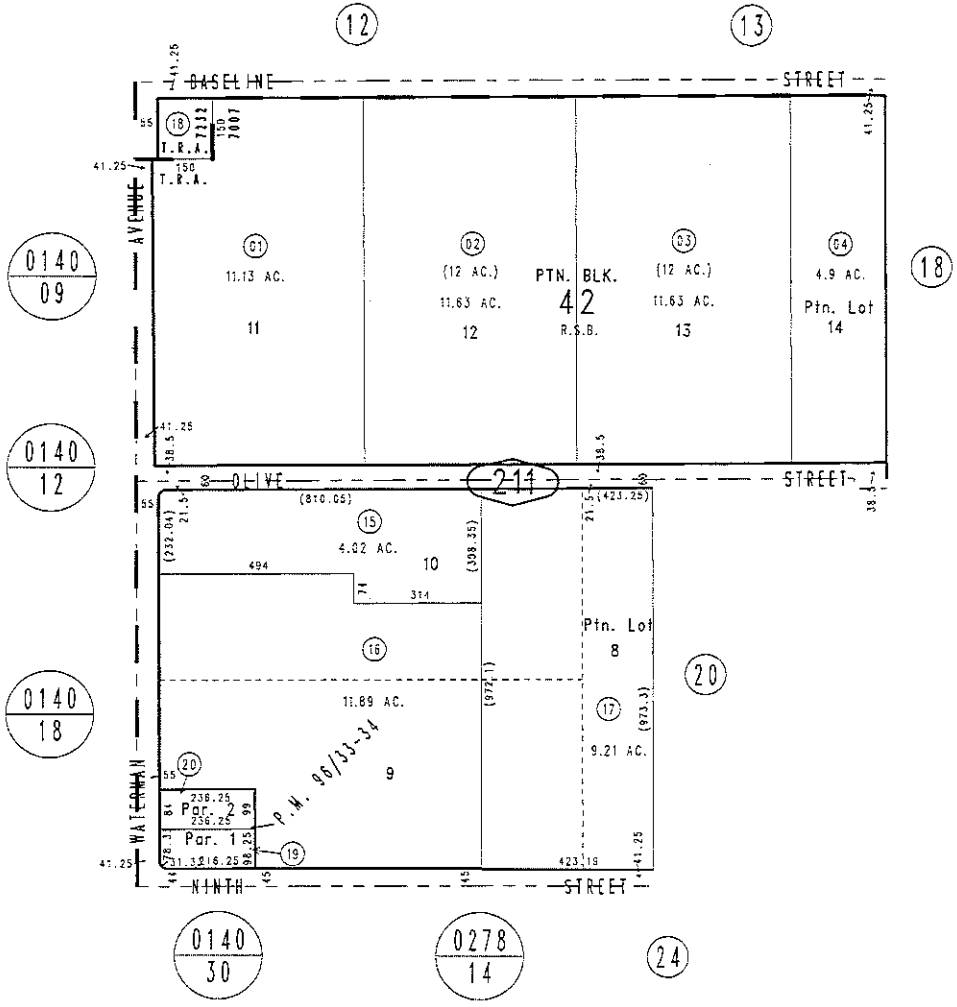
ASSESSOR'S MAP BOOK 0147 PAGE 21, CITY OF SAN BERNARDINO PLANNING DEPARTMENT

THIS MAP IS FOR THE PURPOSE OF AD VALOREM TAXATION ONLY.

Ptn. Rancho San Bernardino
M.B. 7/2

City of San Bernardino 0147 - 21
Tax Rate Area
7232,7007

1" = 300'



December 2004

Parcel Map No. 8993, P.M. 96/33-34

Assessor's Map
Book 0147 Page 21
San Bernardino County

REVISED

F1-54

APPENDIX D

COPIES OF SUPPORTING REPORTS AND MAPS

2009 Water Quality Report

Oil and Gas Well Map

Response Letter from Office of the State Fire Marshal

City of San Bernardino Municipal Water Department

Trusted, Quality Service Since 1905

Emergency Numbers

Police-Fire-Medical Emergencies Only 911
Poison Control.....(800) 222-1222
National Suicide Prevention Lifeline
..... (800) 273-TALK or (800) 273-8255
Emergency Mental Health Hospital Services
.....(909) 580-1800
California Missing Children Hotline
..... (800) 222-FIND or (800) 222-3463
Water Department
- General .....(909) 384-5141
- Customer Service.....(909) 384-5095

City of San Bernardino
Municipal Water Dept
PO Box 710
San Bernardino, CA 92402

PRESORT STD
U. S. Postage
PAID
Permit No. 126
San Bernardino, CA
92423

ECR WSS
Postal Customer

TIME DATED MATERIAL

Conservation Programs

SBMWD invites you to participate in our Water Conservation Program of rebates and water-smart landscaping classes. Residential customers can get a rebate of $50 when they install an ultra-low flush or high-efficiency toilet in a home built in or before 1992. Toilets installed before 1992 use 3.5 to 7 gallons of water for every flush. Today's toilets use 1.6 gallon or less per flush and can save their owners thousands of gallons of water each year while still flushing as well as older models. We are offering up to two toilet rebates per residence to replace older toilets.

Up to half of the water used at a residence is used for landscaping. Sprinkler controllers can reduce the amount of water used on lawns and gardens and make sure that you are still watering your landscaping efficiently. SBMWD customers can get a rebate of $35 for adding rain or soil moisture sensors to an existing controller, $45 for the first time installation of an electronic timer, or up to $65 for installing a new weather-based or "smart" controller.

To help you reduce the water used in your yard without sacrificing the beauty of your home and to help you get your money's worth out of every drop of water, we host free landscaping classes. The classes cover landscape design, plant selection and water management with how-to-demonstrations.

You can get a toilet or sprinkler controller rebate application at our website at www.sbcitywater.org, pick one up at our offices on the 5th Floor of City Hall at 300 North D Street, or call (909) 384-5095 and have one mailed to you. If you want to attend one of our landscaping classes, call us at (909) 384-5095 and ask to be added to our mailing list.

We also offer free home water conservation kits. Each kit includes a water-smart shower nozzle, aerators for the kitchen and bathroom sinks and a toilet bag. These tools all help you reduce the water you use inside the home. Pick up a kit at our office on the 5th Floor of City Hall.

To qualify for either program, you must be either the residential customer of record or a property owner within our SBMWD service area and be pre-approved for any rebates prior to purchase.

Customer Service Assistance Program

Do you feel like you need a little help with your water bill? SBMWD's Customer Assistance Program offers qualified residents a $5.00 reduction in their monthly water bill. If you are not participating in any other low-income utility-assistance program, live in a single family residence and can provide documentation of low income status, you may qualify for assistance. To learn more, come see us at our offices on the 5th floor of City Hall at 300 North D Street, or call us at (909) 384-5095.

The City of San Bernardino's 2009 Consumer Confidence Report

La ciudad del informe de la calidad del agua de la publicación anual del San Bernardino 2009

Este informe contiene información muy importante sobre su agua potable.
Tradúzcalo o hable con alguien que lo entienda bien.

ABOUT THIS REPORT

The City of San Bernardino Municipal Water Department (SBMWD) is proud to announce that all of the water we served in 2009 met all of the required standards for drinking water. Throughout 2009, as we do each year, the SBMWD took more than 6,000 water samples that we provided to our contract labs. These labs conducted more than 30,000 tests to identify all of the constituents in our drinking water, ensuring its quality. This report describes in detail the constituents we found in the drinking water we served and how much of each constituent was present. Some of these constituents are naturally occurring while others are man-made. The State of California Department of Public Health (DPH) regulates some of these constituents, both natural and man-made, and has set maximum contaminant levels (MCLs). In some cases, there are Federal maximum contaminant level goals (MCLGs) for chemical or mineral constituents. If any of these limits were exceeded in the drinking water during the year 2009, we tell you so in this report. If any MCL or MCLG was exceeded, we also describe treatment technology that can be used to eliminate the contaminants. State law also requires that we tell you, our customers, how much it will cost to install the treatment equipment, and how much it will increase the cost of your water. We do all of this in this report because consumers have a right to know what is in their drinking water. We believe that an educated consumer is more likely to help protect their drinking water sources and to understand the true costs of safe drinking water.

SOBRE ESTE INFORME

Los empleados del Departamento Municipal de Agua de San Bernardino estamos orgullosos en poderles reportar que toda el agua servida a nuestros clientes, en el año 2009 satisfizo todas las normas de calidad establecidas para el agua potable domestica.

Durante el 2009, tomamos más de 6,000 muestras para que nuestros laboratorios pudieran conducir más de 30,000 pruebas para identificar todos los constituyentes en nuestra agua potable y así poder asegurar su calidad. En este reporte, describimos en detalle cuales constituyentes encontramos en el agua potable que suministramos, y que cantidad de cada constituyente se encontró presente. Algunos de estos constituyentes ocurren naturalmente mientras que otros son causados por presencia de animales y actividades humanas. El Departamento de Salud Publica de California establece y regula los niveles máximos de contaminantes (MCLs). En ciertos casos, existen Metas Federales de Máximo Nivel de Contaminante (MCLGs), para los constituyentes químicos o minerales. Si se excedió cualquiera de estos limites en el agua potable durante el año pasado, nosotros lo divulgamos en este informe. Si MCLs o MCLGs fueron excedidos, también revelamos la tecnología de tratamiento que fue empleada para eliminar los contaminantes. Leyes Estatales también requieren que avisemos a nuestra clientela cual será el costo de instalar el equipo de tratamiento y cuanto aumentara el costo de su agua. Este reporte contiene toda esta información porque nuestros consumidores tienen derecho a saber el contenido de su agua potable. Nosotros creemos que al educar al consumidor a cerca de los costos verdaderos del agua potable segura, es más probable que este ayude a proteger sus fuentes de agua potable.

CHLORINE IN THE WATER

Why do we put chlorine in the water? Chlorine is an oxidizing agent used as a disinfectant that, when added to water, kills microorganisms such as bacteria and viruses. The State of California requires that we maintain a minimum residual of 0.2 parts per million (ppm) of chlorine in our water at all times to kill any potential microorganism(s).

CLORO EN EL AGUA

¿Por qué ponemos cloro al agua? El cloro es un agente oxidante que cuando se le añade al agua elimina los microorganismos tales como la bacteria y el virus. El estado de California requiere que mantengamos un residuo mínimo de 0.2 partes por millón (ppm) de cloro en nuestra agua en todo momento para eliminar cualquier posible microorganismo.

REGULATIONS

In order to ensure that tap water is safe to drink, U.S. Environmental Protection Agency (USEPA) and the State Department of Public Health (DPH) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. DPH regulations also establish limits for contaminants in bottled water that must provide the same protection for public health. More information can be obtained by calling the U.S. Food and Drug Administration's Office of Plant and Dairy Foods and Beverages, telephone number (301) 436-2023, for additional information. The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, that can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals that are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural applications, and septic systems.
- Radioactive contaminants can be naturally-occurring or be the result of oil and gas production and mining activities.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline (1-800-426-4791).

REGULACIONES

Para asegurar que el agua que sale del grifo sea segura para beber, la Agencia de Protección Ambiental de los Estados Unidos (USEPA) y el Departamento de Salud Pública de California (DPH) prescriben regulaciones que limitan la cantidad de ciertos contaminantes en el agua proporcionada por los sistemas públicos de agua. El DPH también establece regulaciones que limitan la cantidad de contaminantes contenidos en el agua embotellada, las cuales deben proveer la misma protección para la salud pública. Si desea más información a cerca de estas regulaciones, puede contactar a la Oficina de Plantas, Comidas Lácteas, y Bebidas, de la FDA llamando al (301)436-2023. Las fuentes de nuestra agua potable (del grifo o embotellada) incluyen ríos, lagos, arroyos, estanques, cuencas y pozos. Cuando el agua pasa por la superficie de la tierra o por el suelo, los minerales que ocurren naturalmente y en algunos casos los materiales radioactivos, son disueltos. Al mismo tiempo, puede recoger substancias que son resultado de presencia de animales y actividades humanas.

Los contaminantes que pueden estar presentes en las fuentes de agua incluyen:

- Contaminantes microbianos, tales como el virus y la bacteria, los cuales pueden resultar a causa de plantas de tratamiento de aguas negras, sistemas sépticos, y operaciones agrícolas de ganado y fauna.
- Contaminantes inorgánicos, tales como sales y metales, los cuales pueden ocurrir naturalmente o ser el resultado de escurrimiento urbano de aguas lluvias, vertidos de aguas negras industriales o domesticas, de la producción de petróleo y gas, minas o agrícola.
- Plaguicidas y herbicidas los cuales pueden resultar de una variedad de fuentes tales como la agricultura, escurrimiento urbano de aguas lluvias, y usos residenciales.
- Contaminantes químico-orgánicos, incluyendo químicos sintéticos y orgánicos volátiles los cuales son subproductos de procesos industriales y de la producción de petróleos o también a causa de gasolineras, escurrimiento urbano de aguas lluvias, o de sistemas sépticos.
- Contaminantes radioactivos, pueden ocurrir naturalmente o pueden ser el resultado de la producción petrolera y gas o de actividades mineras.

Es razonable esperar que el agua potable, incluyendo el agua embotellada, contenga por lo menos pequeñas cantidades de algunos contaminantes. La presencia de contaminantes no indica necesariamente que el agua presente un riesgo a su salud. Puede obtener más información sobre los contaminantes y los posibles efectos a su salud llamando a la Línea de Agua Potable Segura (Safe Drinking Water Hotline) de la USEPA al (800)426-4791.

VULNERABLE POPULATION

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. U.S. Environmental Protection Agency/ Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

POBLACIONES VULNERABLES

Algunas personas son más vulnerables a los contaminantes en el agua que la población general. Personas con el sistema inmunológico comprometido, tales como las personas con cáncer sometidas a quimioterapia, personas que han sido sometidas a transplantes de órganos, personas con VIH/SIDA, o otros trastornos del sistema inmunológico, algunos ancianos, y bebes podrían estar a riesgo de contraer infecciones. Estas personas deberían consultar con su medico sobre el agua potable. Las pautas de la Agencia Federal de Protección Ambiental (USEPA/Control de Enfermedades) sobre las maneras apropiadas para reducir el riesgo de infección por Cryptosporidio y otros contaminantes microbianos están disponibles por medio de la línea telefónica para agua potable segura (Safe Drinking Water Hotline) 1-800-426-4791.

ABOUT OUR WATER SOURCE

The water that we serve to our customers comes from a natural underground aquifer called the Bunker Hill Basin. This basin was formed by ancient earthquakes that tilted huge portions of the bedrock deep under the surface of the earth to form the basin. These bedrock formations prevent the groundwater from flowing away underground to the Pacific Ocean.

Rain and melting snow from the local mountains help replace the water we take out of the basin, replenishing our water supply. Under some circumstances, we import water through the State Water Project to replenish our basin, as do other agencies that use the basin. This water percolates through the ground to be captured and stored in the Bunker Hill Basin.

Estimates say that there is as much as 1. 6 trillion gallons of water in the basin. This water fills all of the pores and open spaces in between grains of sand and gravel that also fill the basin. This sand and gravel acts as a filtering agent and helps to give us the high quality water that we enjoy. This valuable natural resource significantly reduces the need to import water from Northern California or from the Colorado River, as many other cities in Southern California must do. This keeps our rates relatively low and helps to keep our water quality high.

We share the water in the Bunker Hill Basin with more than 20 other local public and private water suppliers. All of these water suppliers have developed long-term plans to protect the quality of water in the basin and to protect the watershed. It is now one of our highest priorities to follow and update these plans as the Inland Empire's population and water needs change. We believe that this will be done by implementing a comprehensive, enforceable groundwater basin management plan. In all, more than 600,000 residents of the greater Riverside-San Bernardino area depend on the basin for their water, making our jobs a tremendous responsibility.

WATER TREATMENT

A portion of the Bunker Hill Basin has been contaminated by historic discharges of volatile organic compounds (VOCs) known as trichloroethylene (TCE) and tetrachloroethylene (PCE). In partnership with the U. S. Environmental Protection Agency (USEPA) and under the auspices of a Superfund Project, the Water Department has undertaken a project to clean up this contamination. The project will cost approximately $70 million over the project's 50-year lifetime. Because of the agreement, this project will not affect the cost of your drinking water. The project's primary method of removing these compounds involves passing contaminated water through a series of large vessels, each containing 30,000 pounds of granular activated carbon. Operating in pairs, the vessels can treat up to 750 gallons of water per minute. This process removes the TCE and PCE contaminants from your drinking water.

SOURCE WATER ASSESSMENT PROGRAM

In response to the Federal Safe Drinking Water Act (SDWA), the State Department of Public Health Division of Drinking Water and Environmental Management developed a program, called the Drinking Water Source Assessment and Protection (DWSAP) Program, to assess the vulnerability of drinking water sources to contamination. The San Bernardino Municipal Water Department completed our DWSAP in 2002, and it is available in our offices at San Bernardino's City Hall, 300 North D Street, on the fifth floor. Based on this assessment, we have concluded that our sources of drinking water are most vulnerable to historical contamination from industrial operations. Industrial activities in the last century left certain volatile organic compounds in the earth that have now contaminated portions of the Bunker Hill Basin. Your drinking water is treated to remove such contaminants before it is delivered to you.

ADDITIONAL REQUIRED INFORMATION

The Safe Drinking Water Act requires additional health information based on finding contaminants at a certain level within a utility sample. Although we have met all of the state MCLs for nitrate and arsenic, we are required to report the following information:

NITRATE: Nitrate in drinking water at levels above 45 mg/L is a health risk for infants of less than six months of age. Such nitrate levels in drinking water can interfere with the capacity of the infant's blood to carry oxygen, resulting in a serious illness; symptoms include shortness of breath and blueness of the skin. Nitrate levels above 45 mg/L may also affect the ability of the blood to carry oxygen in other individuals, such as pregnant women and those with certain specific enzyme deficiencies. If you are caring for an infant, or you are pregnant, you should ask advice from your health care provider. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity.

ARSENIC: While your drinking water meets the Federal and State standard for arsenic, it does contain low levels of arsenic. The arsenic standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. The U.S. Environmental Protection Agency continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

SOBRE EL ABASTECIMIENTO DE AGUA SUBTERRÁNEA

El agua que proveemos a nuestros clientes viene de un depósito de agua subterráneo natural llamado Bunker Hill Groundwater Basin. Esta cuenca fue formada por temblores que inclinaron grandes porciones de roca profunda bajo la superficie de la tierra para formar los lados y el suelo de la cuenca. Esta formación de roca previene que el flujo del agua llegue al suelo del Océano Pacifico.

Nuestro abastecimiento de agua subterránea constantemente es reabastecido por la nieve derretida y por el escurrimiento de las lluvias que provienen de las montañas locales. Bajo ciertas circunstancias, importamos agua por parte del Proyecto de Agua Estatal (State Water Project) para reabastecer nuestra cuenca, lo cual también hacen otras agencias que usan la cuenca. Esta agua se filtra al suelo y es almacenada en la cuenca.

Se estima que existen aproximadamente 1.6 trillones de galones de agua en la cuenca. Esta agua llena todos los poros y espacios entre granos de tierra y piedras que también llenan la cuenca. La tierra y piedra ayudan a filtrar el agua de alta calidad que disfrutamos. Este valioso recurso natural libera a nuestra ciudad de los costos de importar agua del norte de California o del Rió Colorado, como lo tienen que hacer muchas otras ciudades del sur de California. Esto mantiene nuestras tarifas bajas y ayuda mantener nuestra calidad de agua.

Compartimos la cuenca subterránea con más de 20 abastecedores de agua públicos y privados. Todos los abastecedores de agua han desarrollado planes de largo plazo para proteger la calidad de agua en la cuenca y para proteger la tierra que almacena nuestra agua potable. Es una de nuestras prioridades más importantes ponernos al corriente de estos planes más ahora que cambia la población y necesidades de agua de nuestra comunidad. Nosotros creemos que esto puede ser realizado con la implementación de un plan comprensivo con capacidad de imponer, para la operación de la cuenca. En total, más de 600,000 residentes de la gran área de Riverside-San Bernardino dependen de la cuenca para recibir su agua, lo cual convierte nuestro trabajo en una tremenda responsabilidad.

TRATAMIENTO DEL AGUA

Una porción de la Cuenca de Bunker Hill, ha sido contaminada por vertidos de compuestos orgánicos volátiles (VOCs) conocidos como tricloroetileno (TCE) y tetracloroetileno (PCE). En colaboración con la Agencia Federal de Protección Ambiental (USEPA) y bajo el auspicio de un Proyecto de Fondo Mayor, el Departamento Municipal de Agua de San Bernardino ha iniciado un proyecto para limpiar esta contaminación. El costo aproximado del proyecto es $70 millones; este será adjudicado durante los 50 años de vida del proyecto. Gracias a una resolución legal, este proyecto no afectara el costo de su agua potable. El método principal de extirpación de estos compuestos, consiste en pasar el agua contaminada por una serie de buques los cuales contienen 30,000 libras de granulado de carbón activado. Estos buques funcionan en pares, que pueden tratar 750 galones de agua por minuto. Este proceso extirpa el TCE y PCE del agua, convirtiéndola en agua segura para beber.

PROGRAMA DE EVALUACIÓN DE FUENTES DE AGUA

En respuesta al Acto Federal de Agua Potable Segura (SDWA), La división de Agua Potable y Manejo del Ambiente del Departamento de Servicios de Salud de California (CDPH) ha desarrollado un programa para evaluar la vulnerabilidad de las fuentes de agua potable a la contaminación, el cual se llama Evaluación y Protección de las Fuentes de Agua Potable (DWSAP). El Departamento Municipal de Agua de San Bernardino completo el programa DWSAP durante el año 2002, y está disponible en nuestra oficina localizada en el quinto piso de la Alcaldía de San Bernardino, 300 Norte Calle "D." Con los resultados de esta evaluación, hemos concluido que nuestro abastecimiento de agua es más susceptible a contaminación histórica de actividades industriales. Las actividades industriales del último siglo han dejado ciertos compuestos orgánicos volátiles en la tierra que ahora han contaminado porciones de la Cuenca Subterránea Bunker Hill. Su agua potable es tratada para extirpar este tipo de compuestos antes de su suministro.

INFORMACIÓN ADICIONAL REQUERIDA

El Decreto de Agua Potable Segura requiere que se de información adicional sobre la salud si se encuentran ciertos niveles de contaminantes dentro de la muestra de utilidad. Aunque cumplimos con todos los MCLs del estado para nitrato, se nos requiere divulgar la siguiente información:

NITRATO: Nitrato en agua potable a niveles mas de 45mg/L es un riesgo a la salud de bebes de menos de 6 meses de edad. Tales niveles en agua potable pueden interferir con la capacidad de cargar oxigeno en la sangre del infante, causando enfermedades serias; síntomas incluyen tono azul de piel y respiraciones cortas. Niveles de nitrato de mas de 45mg/L también podrían afectar la habilidad de la sangre de cargar oxigeno en otros individuos así como mujeres embarazadas y aquellos con deficiencias de enzimas. Si usted cuida infantes o esta embarazada debería pedir el consejo de su doctor. Los niveles de Nitrato pueden incrementar rápidamente por periodos cortos de tiempo a causa de lluvia o actividades agrícolas.

ARSÉNICO: Mientras su agua potable encuentra el estándar actual de la Agencia Federal de Protección Ambiental (USEPA) para el arsénico, contiene niveles mínimos de este mismo. El estándar equilibra la comprensión actual de efectos posibles de salud contra los costos de quitar el arsénico del agua potable. El USEPA continua investigando los efectos de la salud de niveles mínimos de arsénico, el cual es un mineral capaz de causar cáncer en altas concentraciones y es ligado a otros efectos de la salud tales como daño a la piel y problemas circulatorios.

If you have any questions, please contact:

George H. Castillo, Administrative Services Manager
City of San Bernardino Municipal Water Department
P. O. Box 710
San Bernardino, CA 92402
Phone: (909) 384-5141 / Fax: (909) 384-7211

Please include your name, address and phone number so that we can respond to you directly.

Si usted tiene cualquier pregunta sobre la información contenida en este informe por favor comuníquese con George H. Castillo, Gerente de Servicios Administrativos (909) 384-5141 o envíe sus comentarios o preguntas por correo. Por favor incluya su nombre, dirección y número de teléfono para poder responderle directamente.

TABLE TERMS AND DEFINITIONS

The State allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old.

TERMS TO KNOW

CONTAMINANT: Any physical chemical, biological, or radiological substance or matter in water.

PRIMARY DRINKING WATER STANDARD (PDWS): MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

SECONDARY DRINKING WATER STANDARD: Secondary Drinking Water Standards shall not be exceeded in the water supplied to the public because these constituents may adversely affect the taste, odor, or appearance of drinking water.

MAXIMUM CONTAMINANT LEVEL (MCL): The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible.

MAXIMUM CONTAMINANT LEVEL GOAL (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the United States Environmental Protection Agency.

PUBLIC HEALTH GOAL (PHG): The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency. The PHGs are not currently enforceable; however, we have included them in this report.

MAXIMUM RESIDUAL DISINFECTANT LEVEL (MRDL): The Highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

MAXIMUM RESIDUAL DISINFECTANT LEVEL GOAL (MRDLG): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

REGULATORY ACTION LEVEL (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

DETECTION LEVEL REPORTED (DLR): Detection limit for purposes of reporting. The designated minimum level at or above which any analytical finding of a contaminant in drinking water resulting from monitoring required by Title 22, Chapter 15, shall be reported to the CDPH.

TREATMENT TECHNIQUE (TT): A required process intended to reduce the level of a contaminant in drinking water.

SBMWD AVERAGE: Numerical average of constituent values in active wells above the DLR in SBMWD's water system.

TERMINOS Y DEFINICIONES

El estado nos deja monitorear los niveles de ciertos contaminantes menos de una vez al año por que las concentraciones de estos contaminantes no cambian frecuentemente. Cierta información, aunque sea representativa, fue tomada hace más de un año.

TÉRMINOS A SABER

CONTAMINANTE: Cualquier sustancia o materia físico-química, biológica, o radiológica que existe en el agua.

ESTÁNDAR PRIMARIO DE AGUA POTABLE: Los MCLs y MRDLs para contaminantes que afectan la salud. Esto incluye sus requisitos de monitoreo, reportación, y tratamiento de agua.

ESTÁNDAR SECUNDARIO DE AGUA POTABLE: Las pautas secundarias de agua potable no serán excedidas en el agua suministrada al público porque estos componentes podrían afectar de manera adversa el sabor, olor o el aspecto del agua potable.

NIVEL MÁXIMO DE CONTAMINANTES (MCL): El nivel más alto de un contaminante que es permitido en el agua potable. Los MCLs se han fijado para que se aproximen al los PHGs (o MCLGs) en cuanto es posible utilizando la mejor tecnología de tratamiento disponible. MCLs secundarios son fijados para proteger el olor, sabor, y apariencia del agua potable.

META DE NIVEL MÁXIMO DE CONTAMINANTE (MCLG): El nivel de un contaminante en el agua potable bajo el cual se conoce que no hay o se espera que haya riesgo a la salud. Los MCLGs son fijados por la Agencia Federal de Protección Ambiental.

META DE SALUD PÚBLICA (PHG): El nivel de un contaminante en el agua potable bajo el cual se conoce que no hay o no se anticipa que haya riesgo a la salud. Los PHGs son fijados por la Agencia Estatal de Protección Ambiental y aun no son impuestas pero los hemos incluido en este reporte.

NIVEL MÁXIMO DE DESINFECTANTE RESIDUO (MRDL): El nivel de desinfectante agregado para el tratamiento del agua, el cual no puede exceder en el grifo del consumidor.

META DE NIVEL MÁXIMO DE DESINFECTANTE RESIDUO (MRDLG): El nivel de desinfectante agregado para el tratamiento del agua bajo cual no existe ningún riesgo de salud. Los MRDLGs son fijados por la Agencia Federal de Protección Ambiental.

NIVEL DE ACCIÓN REGLAMENTARIO (AL): La concentración de un contaminante que cuando es excedida, causa que se ponga en acción el tratamiento e otros requisitos que un sistema de agua deberá seguir.

NIVEL DE DETECCIÓN REPORTADO (DLR): El límite de detección usado para reportar. El nivel mínimo designado, en el cual o excediéndolo, como resultado de una determinación analítica de haber encontrado un contaminante conforme al Titulo 22, Capitulo 15, será reportado al Departamento de Servicios de Salud de California (CDPH).

TÉCNICA DE TRATAMIENTO (TT): Un proceso requerido para reducir los niveles de contaminantes en el agua potable.

PROMEDIO DEL SBMWD: Promedio de los valores constituyentes de los pozos activos excediendo el DLR en el sistema de agua del SBMWD.

Important Definitions

NS: No Standard established / Norma no establecida
PPM or **mg/L**: parts per million, or milligrams per liter / : Partes por millón, o miligramo por litro
PPB or **ug/L**: parts per billion, or micrograms per liter / Partes por billones, o microorganismos por litro
pCi/L: picocuries per liter (a measure of radioactivity) / Picocurias por litro (una medida de radiación)
µS/cm: measure of electric current / Unidad de corriente eléctrica

AL: Action level / Nivel de Acción
NL: Notification Level / Nivel de Notificación
ND: Non-Detect / No Detectado
NTU: Nephelometric Turbidity Units / Unidades de Turbiedad Nefelometrícas

Note: PPM, or mg/L, is parts per million, or milligrams per liter, and PPB, or ug/L, is parts per billion, or micrograms per liter. One part per million is the equivalent of 1/2 of a dissolved aspirin tablet in a full bathtub of water (approximately 50 gallons). One part per billion is equivalent to 1/2 of a dissolved aspirin tablet in 1,000 bathtubs of water (approximately 50,000 gallons).

Nota: Una parte por millón es equivalente a ½ aspirina disuelta en una tina de baño llena de agua (aproximadamente 50 galones). Una parte por billón es el equivalente a ½ aspirina disuelta en mil tinas de baño (aproximadamente 50,000 galones).

Regulated by Primary Drinking Water Standards (in order to protect against possible adverse health effects)

Substance (Units)	Year Sampled	MCL (AL) [MRDL] [NL]	PHG (MCLG) [MRDLG]	SBMWD Average	Range (Low - High)	Violation	Typical Source
ORGANIC CONTAMINANT							
cis-1,2 dichloroethylene (c-1,2-DCE) (ug/L)	2008 - 2009	6	100	ND	ND - 0.68	No	Discharge from industrial chemical factories; major biodegradation byproduct of TCE and PCE groundwater contamination
Tetrachloroethylene (PCE) (ug/L)	2008 - 2009	5	0.06	ND	ND - 3.50	No	Discharge from factories, dry cleaners, and auto shops (metal degreaser)
Trichloroethylene (TCE) (ug/L)	2008 - 2009	5	1.70	ND	ND - 0.77	No	Discharge from metal degreasing sites and other factories
INORGANIC CONTAMINANT							
Arsenic (ug/L)	2008 - 2009	10	0.004	ND	ND - 8.10	No	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Aluminum (mg/L)	2008	1	0.60	ND	ND - 0.064	No	Erosion of natural deposits
Fluoride (mg/L)	2008	2	1	0.51	0.27 - 1.20	No	Erosion of natural deposits; discharge from fertilizer and aluminum factories
Nitrate as NO3 (mg/L)	2009	45	45	19.5	2.20 - 30.00	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
RADIONUCLIDES							
Gross Alpha Particle Activity (pCi/L)	2001 - 2009	15	NS	3.38	1.34 - 12.28	No	Erosion of natural deposits
Radium 228 (pCi/L)	2004 - 2009	5	0.019	ND	ND - 1.20	No	Erosion of natural deposits
Uranium (pCi/L)	2007 - 2009	20	0.43	2.77	0.36 - 5.58	No	Erosion of natural deposits

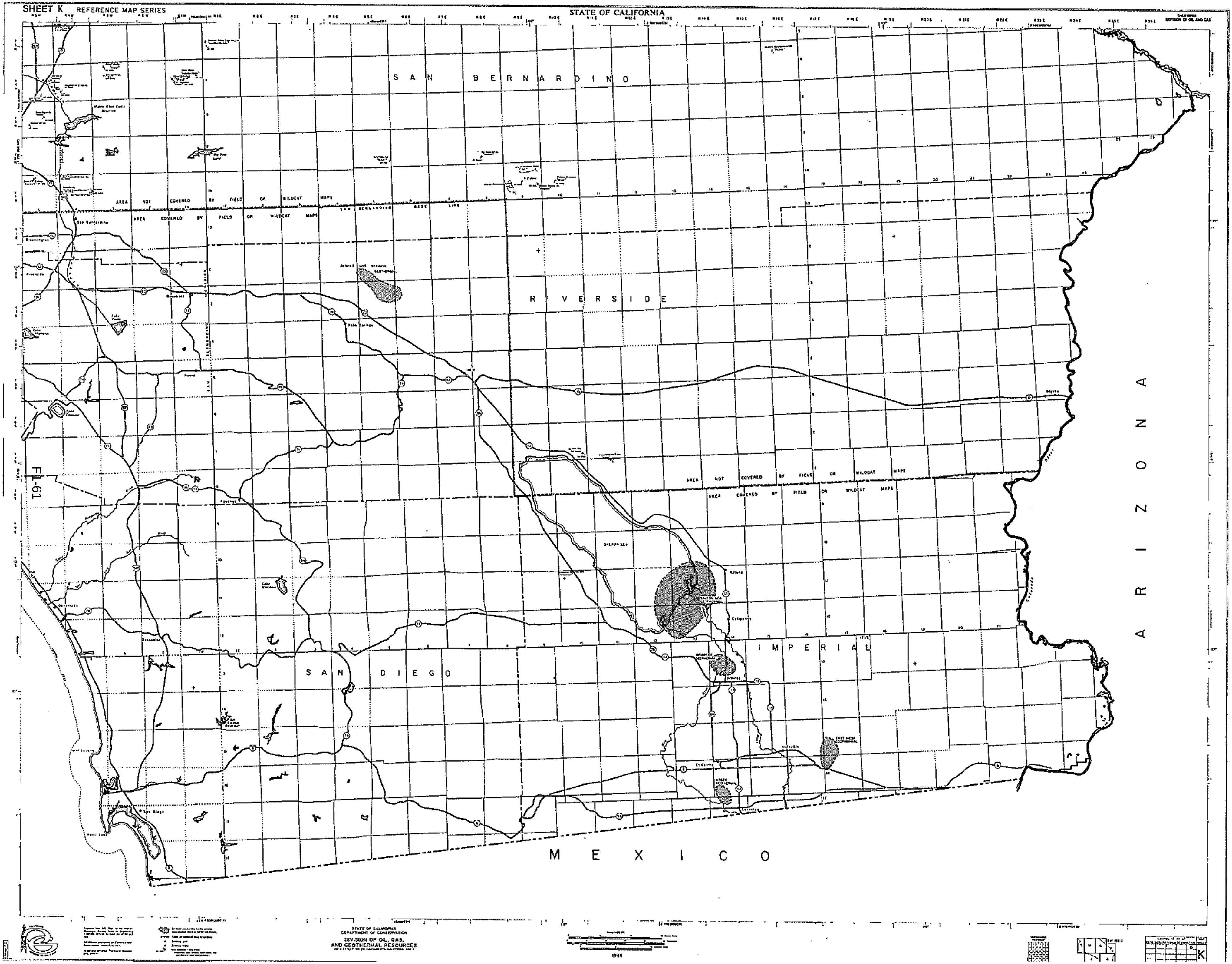
Regulated by Primary Drinking Water Standards (in order to protect against possible adverse health effects)

Substance (Units)	Year Sampled	MCL (AL) [MRDL] [NL]	PHG (MCLG) [MRDLG]	SBMWD Average	Range (Low - High)	Violation	Typical Source
CHEMICAL DISINFECTANT							
Chlorine (mg/L)	2009	[4]	[4]	0.71	0.30 - 2.00	No	Drinking water disinfectant added for treatment
DISINFECTANT BY-PRODUCT							
Total Trihalomethanes (TTHM) (ug/L)	2009	80	NS	3.07	ND - 9.40	No	By-product of drinking water disinfection
HAA5 (ug/L)	2009	60	NS	ND	ND - 6.00	No	By-product of drinking water disinfection
MICROBIOLOGICAL							
Total Coliform Bacteria (Present/Absent)	2009	MCL: presence of coliform bacteria in > 5% of monthly samples	(0)	Absent	Absent - 1.42%	No	Naturally present in the environment
AT-THE-TAP MONITORING							
Copper (mg/L) No. of sites collected: 52 No. of sites exceeding AL: 0	2009	(1.30)	0.30	90th Percentile = 0.19	ND - 0.34	No	Internal corrosion of household plumbing systems

Regulated by Secondary Drinking Water Standards (in order to protect the odor, taste and appearance of drinking water)

AESTHETICS							
Aluminum (ug/L)	2008	200	NS	ND	ND - 64	No	Erosion of natural deposits
Chloride (mg/L)	2008 - 2009	500	NS	19.16	3.60 - 54	No	Runoff/leaching from natural deposits
Corrosivity (Non-Corrosive)	2008 - 2009	Non-Corrosive	NS	0.46	0.00 - 0.80	No	Natural or industrially-influenced balance of hydrogen, carbon and oxygen in the water; affected by temperature and other factors
Odor - Threshold (units)	2008	3	NS	1.0	1.00 - 2.00	No	Naturally - occuring organic materials
Specific Conductance (µS/cm)	2008	1600	NS	566.04	305 - 750	No	Substances that form ions when in water
Sulfate (mg/L)	2008 - 2009	500	NS	55.98	4.10 - 250	No	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (mg/L)	2008 - 2009	1000	NS	355.58	190 - 530	No	Runoff/leaching from natural deposits
Turbidity (NTU)	2009	5	NS	ND	ND - 3.50	No	Soil Runoff

Substance (Units)	Year Sampled	MCL (AL) [MRDL] [NL]	PHG (MCLG) [MRDLG]	SBMWD Average	Range (Low - High)	Violation	Typical Source
UNREGULATED CONTAMINANT							
Dichlorodifluoromethane (Freon 12) (ug/L)	2009	[1000]	NS	1.44	ND - 5.70	No	Polymerization processes, food sterilization, home and commercial refrigeration, paint and varnish remover manufacturing and use, water purification, copper and aluminum production, glass bottle manufacturing, leak detecting agent in thermal expansion valves. Prior to 1979, frequently used as an aerosol propellant for cosmetics, pharmaceutics, insecticides, paints, adhesives, and cleaners
Chromium, hexavalent (CrVI) (ug/L)	2001 - 2008	NS	NS	ND	ND - 4.90	No	Use in manufacture of wood preservative formulations that include chromium compounds, e.g., potassium dichromate, chromic acid, and sodium dichromate; industrial applications, e. g. , automobile, appliance, and other consumer product manufacturing; steel hardening, manufacturing of stainless steel and other alloys, chromium plating; pigment making, leather tanning, and welding
Vanadium (ug/L)	2001 - 2008	[50]	NS	3.49	ND - 11.40	No	Naturally occuring; other sources may include steel manufacturing, phthalic anhydride, sulfuric acid, pesticides, dyes, inks, pigments, and other chemicals; has been found in association with hazardous waste sites
ADDITIONAL MONITORING							
Hardness (as CACO3) (mg/L)	2008 - 2009	NS	NS	228.46	100 - 290	N/A	Naturally-occuring
Sodium (mg/L)	2008 - 2009	NS	NS	20.83	13 - 47	N/A	Naturally-occuring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ARIZONA
MEXICO
AREA NOT COVERED BY FIELD OR WILDCAT MAPS
AREA COVERED BY FIELD OR WILDCAT MAPS
SAN BERNARDINO BASE LINE
Palm Springs
San Diego
STATE OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS,
AND GEOTHERMAL RESOURCES
1986

Office of the State Fire Marshal

Pipeline Safety Division
P.O. Box 944246
Sacramento, CA 94244-2460

Request ID: 11242010SFM002

TO: LSA ASSOCIATES
CARMEN LO

,

Phone: 949 553 0666
Fax: 949 553 8076

FROM: Lisa Dowdy

Phone: (916) 445-8477
Fax: (916) 445-8526

PIPELINE LOCATION REQUEST FOR:

E BASELINE & N WATERMAN
SAN BERNARDINO, CA 92410

THERE ARE NO PIPELINES JURISDICTIONAL TO THE STATE FIRE MARSHAL IN THE AREA FOR WHICH YOU HAVE INQUIRED.

- FOR NATURAL GAS PIPELINES PLEASE CONTACT YOUR LOCAL GAS COMPANY

- FOR OTHER TYPES OF PIPELINE PLEASE CONTACT THE DIVISION OF OIL AND GAS AT (714) 816-6847

- FOR PUBLIC UTILITIES PLEASE CONTACT THE PUBLIC UTILITIES COMMISSION AT (415) 703-2782

APPENDIX E

EXCERPTS FROM WORK PLAN FOR SOIL VAPOR EXTRACTION REBOUND TESTING PREPARED FOR THE FORMER MOBIL SERVICE STATION 18-ELG LOCATED AT 296 EAST BASE LINE STREET BY KLEINFELDER, INC.

A Report Prepared for:

Mr. Gregory K. Barton
ExxonMobil Oil Corporation
3700 West 190th Street, TPT-2
Torrance, California 90504

WORKPLAN FOR SOIL VAPOR EXTRACTION REBOUND TESTING
FORMER MOBIL SERVICE STATION 18-ELG
296 EAST BASLINE STREET
SAN BERNARDINO, SAN BERNARDINO COUNTY, CALIFORNIA 92410
SBCFD-HMD CASE NO. 95-017

Kleinfelder Project Number 51682

Prepared by:

Virginia L. Moore
Project Manager

Reviewed by:

Lizanne Simmons
California Professional Geologist, No. 7431

PROFESSIONAL GEOLOGIST
ELIZABETH ANNE SIMMONS
No. 7431
STATE OF CALIFORNIA

KLEINFELDER, INC.
1220 Research Drive, Suite B
Redlands, California 93474

June 8, 2005

1.0 INTRODUCTION

Kleinfelder, Inc. (Kleinfelder), on behalf of ExxonMobil Oil Corporation (ExxonMobil), submits this *Workplan for Soil Vapor Extraction Rebound Testing* for your review and approval. The *Workplan* is submitted in order to complete soil vapor extraction (SVE) rebound testing at the site to evaluate the potential for site closure.

2.0 SITE DESCRIPTION

The site was formerly operated as a Mobil service station, but is now doing business as a "One Stop Smog Shop" service facility. The site is situated on the northwest corner of the intersection of Baseline Street and Waterman Avenue in a commercial area of the City of San Bernardino, California. Restaurants and small retail businesses are located in the immediate vicinity of the site. A site vicinity map is presented as Figure 1.

3.0 SITE GEOLOGY AND HYDROGEOLOGY

The site is situated at an elevation of approximately 1,092 feet above mean sea level (msl), located on a southward sloping alluvial surface in the San Bernardino Valley. Sediments at the site are mapped as Quaternary younger alluvial fan deposits. Two intermittent creeks, East Twin Creek and Warm Creek, are located approximately 0.75 miles east and southeast of the site, respectively.

Alluvial soils encountered during subsurface investigations consist of relatively fine-grained materials from the surface to depths of approximately 27 to 52 feet below ground surface (bgs). These soils are predominantly silty sands and sandy silts. Sand with varying amounts of gravel and some silt was encountered at greater depths. A layer of silty sand and silt was encountered at depths ranging from 72 to 120 feet bgs.

The site is located in the Bunker Hill Groundwater Basin within the Upper Santa Ana River Groundwater Basin. Groundwater within the basin is utilized for municipal purposes. The City of San Bernardino operates two production wells in the vicinity of the site. The "Gilbert Street Well (1N4W35M03S)" is located approximately 2,000 feet north of the site. A depth to water of 218.6 feet was measured in "Gilbert Street Well" on April 14, 2004. The "7th Street Well

(1S4W03J05S)" is located approximately 3,000 feet south-southwest of the site. A depth to water of 153.5 feet was measured in the "7th Street Well" on April 8, 2004. The City of Riverside operates several production wells along Warm Creek approximately one-mile southeast of the site. Additional information for production wells in the vicinity of the site can be found in the Western Municipal Water District/San Bernardino Valley Municipal Water District's *Cooperative Well Measuring Program, Spring 2004.*

During the groundwater monitoring and sampling event January 31, 2005, the measured depth to groundwater averaged approximately 143.69 feet bgs in the five newly installed groundwater monitoring wells.

4.0 PREVIOUS ENVIRONMENTAL INVESTIGATIONS

Soils containing hydrocarbon concentrations were encountered at the site during underground storage tank (UST) replacement operations conducted during October 1987. Total petroleum hydrocarbons as gasoline (TPH-g) and benzene were detected in soil samples collected beneath the former gasoline USTs. The soil sample collected beneath the former used oil UST did not contain detectable concentrations of total recoverable petroleum hydrocarbons (TRPH). A site plan is presented as Figure 2.

Tetra Tech, Inc. (Tetra Tech) conducted assessment activities at the site consisting of the installation of six soil borings (B-1 through B-6) during February 1988, the installation of three groundwater monitoring wells (MW-1 through MW-3) during April 1988, and groundwater sampling. Maximum TPH-g and benzene concentrations were detected in samples collected at 20 and 25 feet bgs near the southwestern corner of the UST area. Groundwater was encountered at 65 feet bgs. Groundwater samples did not contain detectable concentrations of benzene, toluene, ethylbenzene and total xylenes (BTEX). Details of the investigation are presented in Tetra Tech's report *Site Investigation, Soil and Groundwater Sampling*, dated November 11, 1988. Figure 2 shows the locations of the soil borings and Table 1 presents the soil analytical results.

Target Environmental Services, Inc. conducted a soil gas survey at the site in October 1989. Maximum hydrocarbon vapor concentrations were detected near the UST area.

APPENDIX F

HISTORICAL AERIAL PHOTOGRAPHS, TRACK INFO SERVICES, LLC

Environmental FirstSearch

Historical Aerial Photo

2002

Waterman and Baseline St, San Bernardino, CA 92410

Job Number: PYA1001
Target Site: 34.120095, -117.275707

Approximate Scale: 1 in equals 375 ft

Environmental FirstSearch

Historical Aerial Photo

1994

Waterman and Baseline St, San Bernardino, CA 92410

Job Number: PYA1001
Target Site: 34.120095, -117.275707

Approximate Scale: 1 in equals 375 ft

Environmental FirstSearch

Historical Aerial Photo

1980

Waterman and Baseline St, San Bernardino, CA 92410

Job Number: PYA1001
Target Site: 34.120095, -117.275707

Approximate Scale: 1 in equals 375 ft

Environmental FirstSearch

Historical Aerial Photo

1977

Waterman and Baseline St, San Bernardino, CA 92410

Job Number: PYA1001
Target Site: 34.120095, -117.275707

Approximate Scale: 1 in equals 375 ft

Environmental FirstSearch

Historical Aerial Photo

1966

Waterman and Baseline St, San Bernardino, CA 92410

Job Number: PYA1001
Target Site: 34.120095, -117.275707

Approximate Scale: 1 in equals 375 ft

Environmental FirstSearch

Historical Aerial Photo

1953

Waterman and Baseline St, San Bernardino, CA 92410

Job Number: PYA1001
Target Site: 34.120095, -117.275707

Approximate Scale: 1 in equals 375 ft

Environmental FirstSearch

Historical Aerial Photo

1938

Waterman and Baseline St, San Bernardino, CA 92410

Job Number: PYA1001
Target Site: 34.120095, -117.275707

Approximate Scale: 1 in equals 375 ft

APPENDIX G

HISTORICAL FIRE INSURANCE MAPS, TRACK INFO SERVICES, LLC

HISTORICAL FIRE INSURANCE MAPS

NO MAPS AVAILABLE

11-19-10
PYA1001
SOUTHEAST OF WATERMAN AND BASELINE ST
SAN BERNARDINO CA 92410

A search of FirstSearch Technology Corporation's proprietary database of historical fire insurance map availability confirmed that there are NO MAPS AVAILABLE for the Subject Location as shown above.

FirstSearch Technology Corporation's proprietary database of historical fire insurance map availability represents abstracted information from the Sanborn® Map Company obtained through online access to the U.S. Library of Congress via local libraries.

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APPENDIX H

CITY DIRECTORIES, TRACK INFO SERVICES, LLC

Track Info Services City Directory Report

Prepared for: Carmen Lo – LSA Associates Inc

Client Job No/Name: PYA1001
TIS Log No: 57686

Subject Property:
425 Crestview Ave
San Bernardino, CA 92410

December 1, 2010

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Track Info Services City Directory Report

Addresses of Potential Concern: A summary of gas stations, cleaners, automotive shops, and other address occupants of potential environmental concern located on the subject street, within the vicinity of the target address. The addresses listed are included in the body of the report.

YEAR	ADDRESS	OCCUPANT
No Addresses of Potential Concern identified on the subject street, within vicinity of the Target address.		

2010 Haines: San Bernardino County p. 297		
Crestview Ave First listing odd side of street is 425	**425 Crestview Ave** Housing Auth Of The Co Of	439 Crestview Ave Wells Daniell
2005 Haines: San Bernardino County p. 274		
Crestview Ave First listing odd side of street is 425	**425 Crestview Ave** Housing Auth SnBdo Wlfr Work	441 Crestview Ave Serrano Alicia
2001 Haines: San Bernardino County p. 305		
Crestview Ave First listing odd side of street is 425	**425 Crestview Ave** Housing Authority Work Program	439 Crestview Ave No Response
1996 Haines: San Bernardino County p. 206		
Crestview Ave First listing odd side of street is 425	**425 Crestview Ave** No Response	439 Crestview Ave No Response
1991 Haines: San Bernardino County & High Desert Area p. 162		
Crestview Ave First listing odd side of street is 425	**425 Crestview Ave** Nguyen La Thi	439 Crestview Ave No Response
1986 Haines: San Bernardino County & High Desert Area p. 152		
Crestview Ave *(N)* First listing odd side of street is 425	**425 Crestview Ave** *(N)* Sanchez Josefina	439 Crestview Ave *(N)* No Response
1981 Haines: San Bernardino Riverside City & Suburban p. 296		
Crestview Ave *(N)* First listing odd side of street is 425	**425 Crestview Ave** *(N)* No Response	439 Crestview Ave *(N)* No Response
1976 Haines: San Bernardino Riverside City & Suburban p. 335		
Crestview Ave *(N)* First listing odd side of street is 425	**425 Crestview Ave** *(N)* No Response	439 Crestview Ave *(N)* Bass Floyd L

1971 Haines: Riverside San Bernardino City & Suburban p. 171		
Crestview Ave *(N)* First listing odd side of street is 427	**425 Crestview Ave** *(N)* Address not listed	427 Crestview Ave *(N)* Harlan Connie
1966 General Telephone: San Bernardino p. 15		
Crestview Ave First listing odd side of street is 427	**425 Crestview Ave** Address not listed	427 Crestview Ave Harlan Connie
1961 Luskey's: San Bernardino p. 19		
Crestview Ave First listing odd side of street is 427	**425 Crestview Ave** C Jones	427 Crestview Ave L Campos
1955 Luskey's: San Bernardino p. 20		
Crestview Ave First listing odd side of street is 427	**425 Crestview Ave** Smith C R	427 Crestview Ave Harper R V
1951 Luskey's: San Bernardino p. 43		
299 Crestview Ave Gerow J O	**425 Crestview Ave** Vacant	427 Crestview Ave Wright J P
1949 San Bernardino Directory Co's: San Bernardino p. 699		
299 Crestview Ave Gerow J O	**425 Crestview Ave** Butler Ward	427 Crestview Ave Robinson G C
End Of Search due to: *A) earlier directory or street listing not found;* **B) listing out of range, listings re-numbered, or no numeric listings**		

Notes:

- Subject Property is in bold, the next lowest address on the same side of the street is to the left and the next highest address on the same side of the street is to the right.
- The next lowest and highest addresses are the closest listed for the same side of the street as the target and may or may not be adjacent. They are the closest listed in the source consulted.
- Occupant names and statements such as 'Vacant', 'No info' and 'Under constr' are verbatim.
- Occupant names are listed once per address although they may be listed multiple times in the directory.
- A forward slash between names indicates multiple companies listed under same main company.
- Previous refers to source and entries listed above what is being read.
- The source used is cited in the row above referenced address and occupant.

APPENDIX I

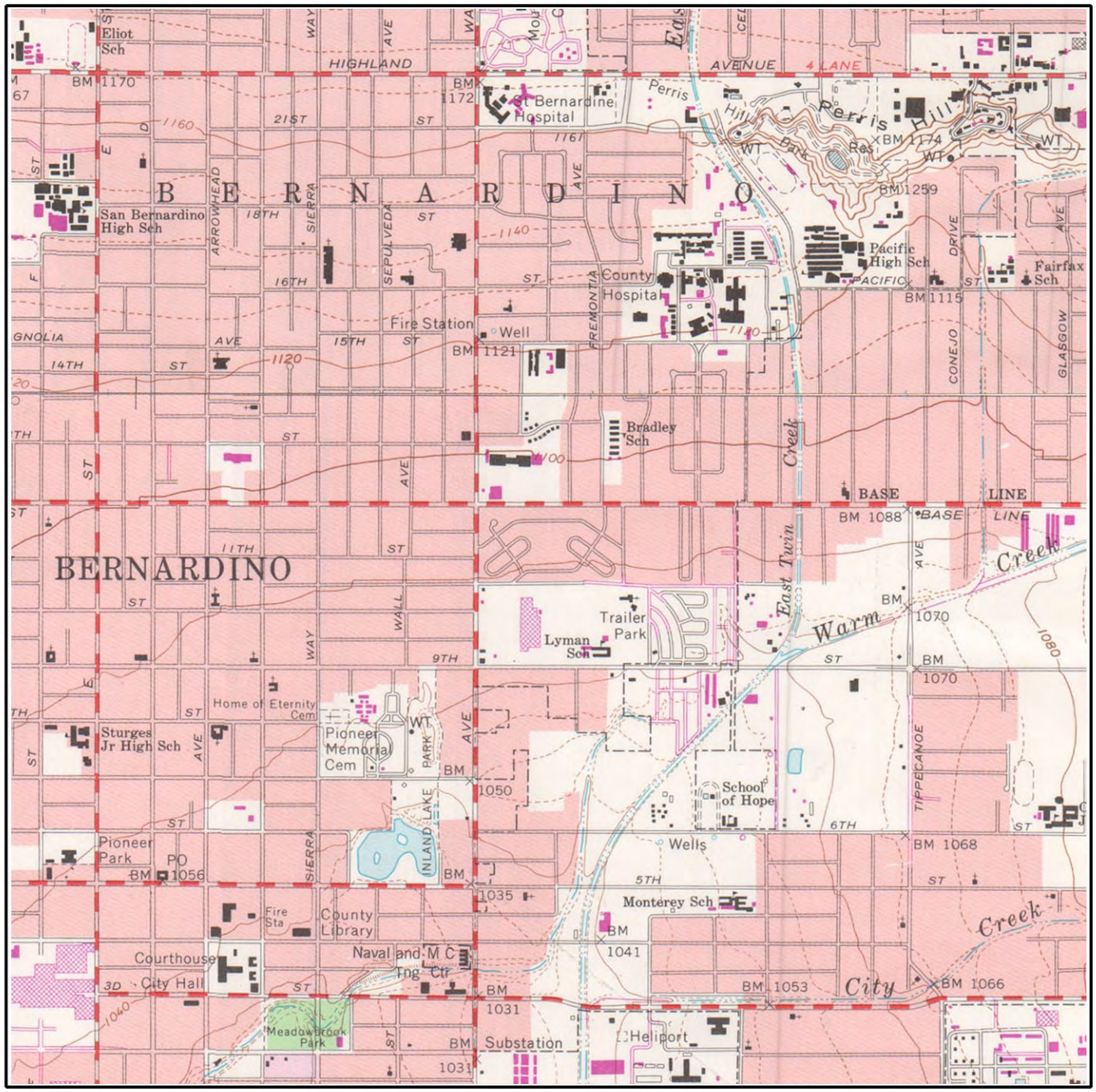
HISTORICAL TOPOGRAPHIC MAPS, TRACK INFO SERVICES, LLC

Environmental FirstSearch

Historical Topographic Map

Quad Name: San Bernardino South, CA
Year: 1980 Original Map Scale: 1:24,000

Southeast of Waterman And Baseline St, San Bernardino, CA 92410



Job Number: PYA1001
Target Site: 34.119934, -117.275731

N Quad Name: North San Bernardino, CA
Year: 1980

0 miles 0.5 1

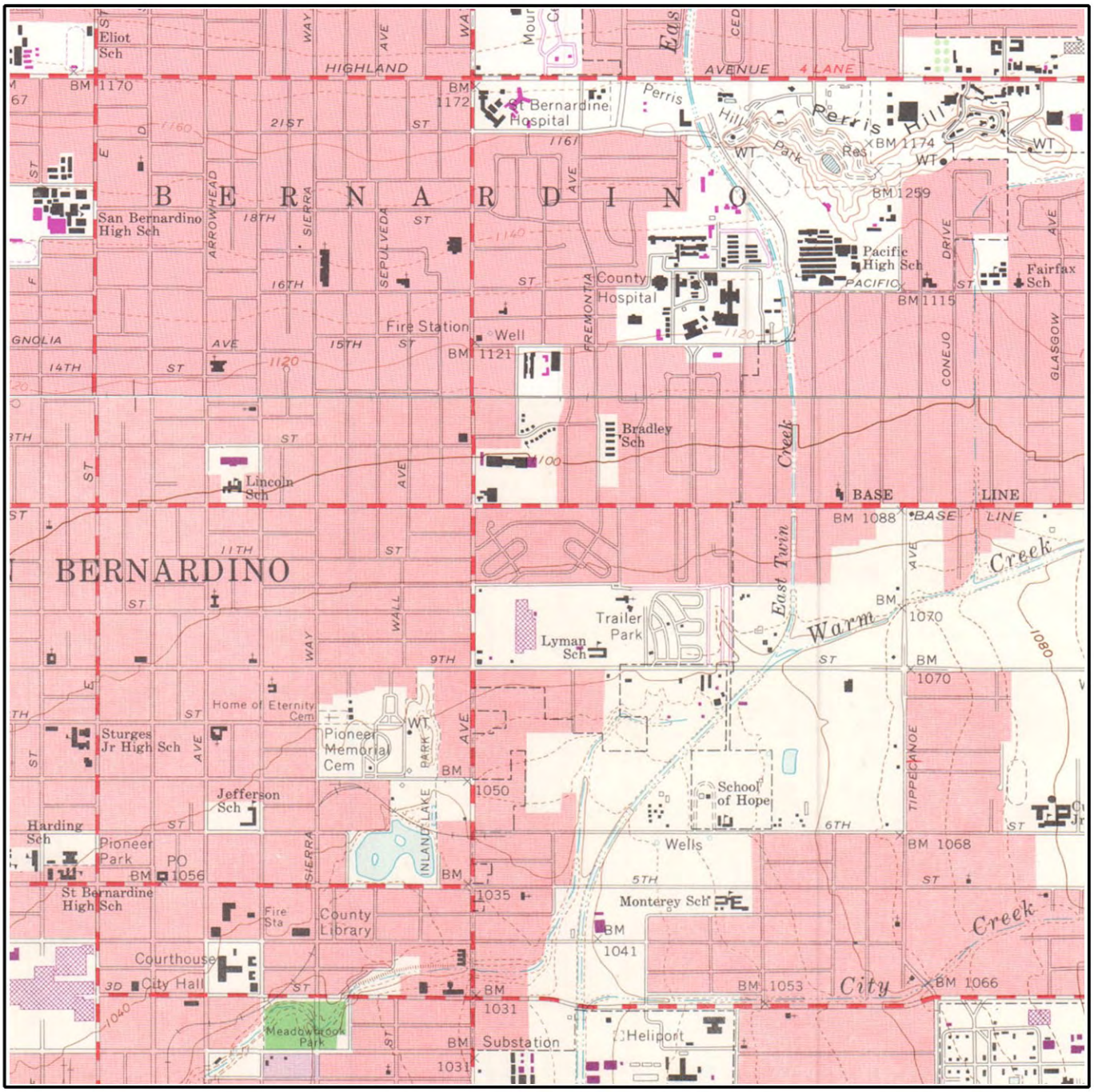
Building
Railroad
Topo Contour
Tanks
Depression
Primary Highway
Quarry or Open Pit Mine
Trail

Environmental FirstSearch

Historical Topographic Map

Quad Name: San Bernardino South, CA
Year: 1973 Original Map Scale: 1:24,000

Southeast of Waterman And Baseline St, San Bernardino, CA 92410



Job Number: PYA1001
Target Site: 34.119934, -117.275731

N Quad Name: North San Bernardino, CA
Year: 1973

0 miles 0.5 1

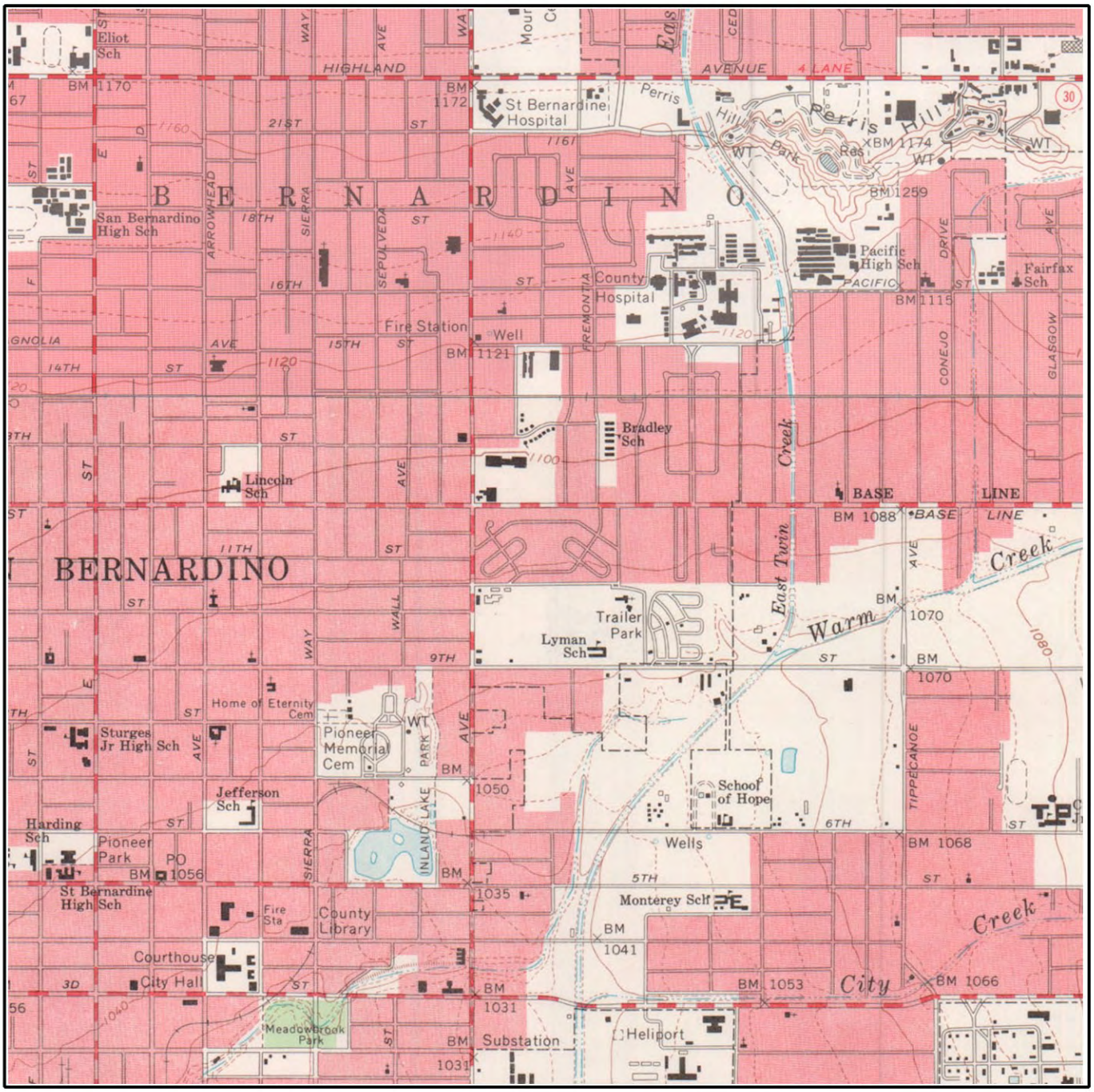
Building
Railroad
Topo Contour
Tanks
Depression
Primary Highway
Quarry or Open Pit Mine
Trail

Environmental FirstSearch

Historical Topographic Map

Quad Name: San Bernardino South, CA
Year: 1967 Original Map Scale: 1:24,000

Southeast of Waterman And Baseline St, San Bernardino, CA 92410



Job Number: PYA1001
Target Site: 34.119934, -117.275731

N Quad Name: North San Bernardino, CA
Year: 1967

0 miles 0.5 1

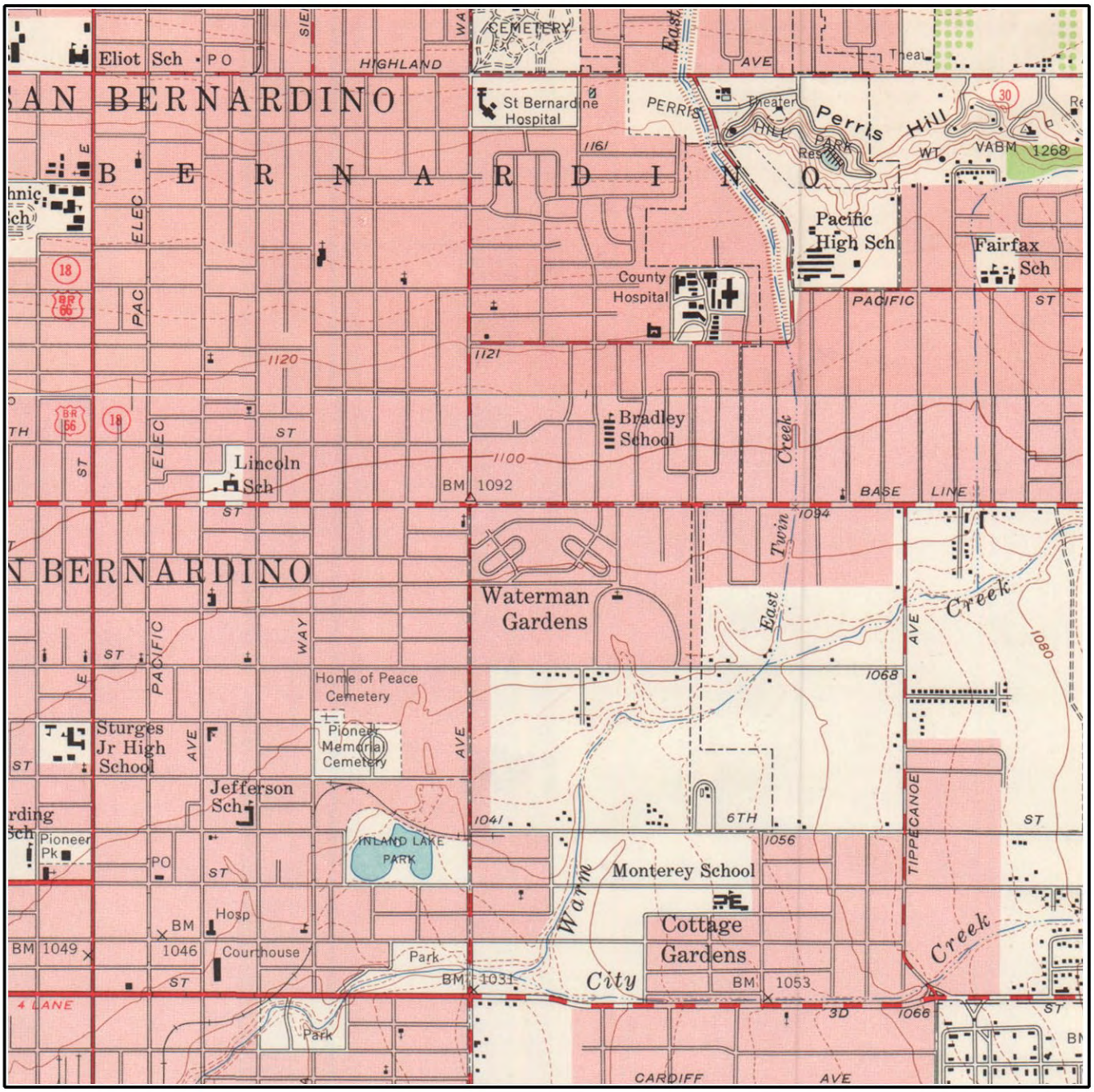
Building
Railroad
Topo Contour
Tanks
Depression
Primary Highway
Quarry or Open Pit Mine
Trail

Environmental FirstSearch

Historical Topographic Map

Quad Name: San Bernardino South, CA
Year: 1954 Original Map Scale: 1:24,000

Southeast of Waterman And Baseline St, San Bernardino, CA 92410



Job Number: PYA1001
Target Site: 34.119934, -117.275731

N Quad Name: North San Bernardino, CA
Year: 1954

0 miles 0.5 1

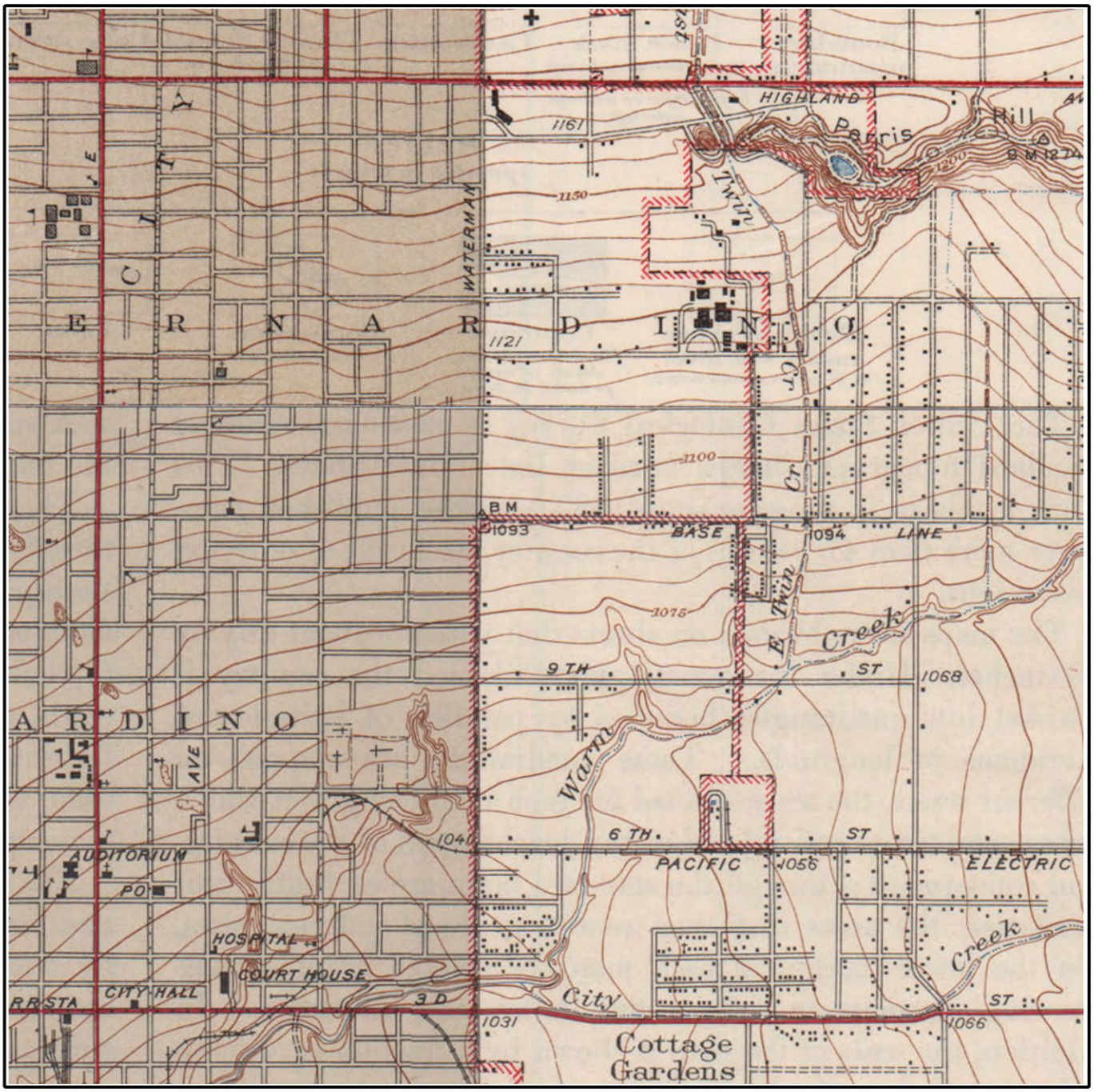
Building
Railroad
Topo Contour
Tanks
Depression
Primary Highway
Quarry or Open Pit Mine
Trail

Environmental FirstSearch

Historical Topographic Map

Quad Name: San Bernardino South, CA
Year: 1943 Original Map Scale: 1:31,680

Southeast of Waterman And Baseline St, San Bernardino, CA 92410



Job Number: PYA1001
Target Site: 34.119934, -117.275731

N Quad Name: North San Bernardino, CA
Year: 1941

0 miles 0.5 1

Building
Topo Contour
Depression
Quarry or Open Pit Mine
Railroad
Tanks
Primary Highway
Trail

APPENDIX J

ENVIRONMENTAL FIRSTSEARCH REPORT, TRACK INFO SERVICES, LLC

TRACK ➤ INFO SERVICES, LLC

Environmental FirstSearch™ Report

Target Property: CDE SAN BERNARDINO HOUSING PROJECT

SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

Job Number: PYA1001

PREPARED FOR:

LSA Associates, Inc.

20 Executive Park, Suite 200

Irvine, CA 92614

949-553-0666

11-19-10

Tel: (866) 664-9981 *Fax: (818) 249-4227*

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Environmental FirstSearch
Site Information Report

Request Date:	11-19-10	**Search Type:**	AREA
Requestor Name:	LSA - Carmen Lo		0.06 sq mile(s)
Standard:	ASTM-05	**Job Number:**	PYA1001
		Filtered Report	

Target Site: SOUTHEAST OF WATERMAN AND BASELINE ST
SAN BERNARDINO CA 92410

Demographics

Sites:	78	**Non-Geocoded:**	2	**Population:**	NA
Radon:	NA				

Site Location

	Degrees (Decimal)	Degrees (Min/Sec)		UTMs
Longitude:	-117.275731	-117:16:33	**Easting:**	474572.071
Latitude:	34.119934	34:7:12	**Northing:**	3775293.637
Elevation:	N/A		**Zone:**	11

Comment

Comment:

Additional Requests/Services

Adjacent ZIP Codes: 1 Mile(s)

ZIP Code	City Name	ST	Dist/Dir	Sel
92401	SAN BERNARDINO	CA	0.41 SW	Y
92404	SAN BERNARDINO	CA	0.01 NE	Y
92405	SAN BERNARDINO	CA	0.37 NW	Y
92408	SAN BERNARDINO	CA	0.97 SW	Y

Services:

	Requested?	Date
Fire Insurance Maps	No	
Aerial Photographs	Yes	11-19-10
Historical Topos	Yes	11-19-10
City Directories	Yes	11-19-10
Title Search/Env Liens	No	
Municipal Reports	No	
Online Topos	No	

Environmental FirstSearch
Search Summary Report

Target Site: SOUTHEAST OF WATERMAN AND BASELINE ST
SAN BERNARDINO CA 92410

FirstSearch Summary

Database	Sel	Updated	Radius	Site	1/8	1/4	1/2	1/2>	ZIP	TOTALS
NPL	Y	10-21-10	1.00	0	0	0	0	0	0	0
NPL Delisted	Y	10-21-10	0.50	0	0	0	0	-	0	0
CERCLIS	Y	08-31-10	0.50	0	0	0	0	-	0	0
NFRAP	Y	08-31-10	0.50	0	1	0	1	-	0	2
RCRA COR ACT	Y	09-14-10	1.00	0	0	0	0	0	0	0
RCRA TSD	Y	09-14-10	0.50	0	0	0	0	-	0	0
RCRA GEN	Y	09-14-10	0.25	0	1	2	-	-	0	3
RCRA NLR	Y	09-14-10	0.12	0	1	-	-	-	0	1
Federal Brownfield	Y	10-01-10	0.25	0	0	0	-	-	0	0
ERNS	Y	10-21-10	0.12	0	2	-	-	-	0	2
Tribal Lands	Y	12-01-05	1.00	0	0	0	0	0	1	1
State/Tribal Sites	Y	08-04-10	1.00	0	0	0	1	5	0	6
State Spills 90	Y	10-13-10	0.12	0	0	-	-	-	0	0
State/Tribal SWL	Y	09-29-10	0.50	0	0	3	3	-	1	7
State/Tribal LUST	Y	10-13-10	0.50	0	3	7	4	-	0	14
State/Tribal UST/AST	Y	10-27-10	0.25	1	8	11	-	-	0	20
State/Tribal EC	Y	NA	0.25	0	0	0	-	-	0	0
State/Tribal IC	Y	08-04-10	0.25	0	0	0	-	-	0	0
State/Tribal VCP	Y	08-04-10	0.50	0	0	0	0	-	0	0
State/Tribal Brownfields	Y	NA	0.50	0	0	0	0	-	0	0
State Permits	Y	10-13-10	0.12	2	9	-	-	-	0	11
State Other	Y	08-04-10	0.25	0	0	0	-	-	0	0
FI Map Coverage	Y	08-23-10	0.12	0	1	-	2	-	0	3
Federal IC/EC	Y	11-04-10	0.50	0	0	0	0	-	0	0
HW Manifest	Y	08-02-10	0.12	2	6	-	-	-	0	8
- TOTALS -				5	32	23	11	5	2	78

Notice of Disclaimer

Due to the limitations, constraints, inaccuracies and incompleteness of government information and computer mapping data currently available to TRACK Info Services, certain conventions have been utilized in preparing the locations of all federal, state and local agency sites residing in TRACK Info Services's databases. All EPA NPL and state landfill sites are depicted by a rectangle approximating their location and size. The boundaries of the rectangles represent the eastern and western most longitudes; the northern and southern most latitudes. As such, the mapped areas may exceed the actual areas and do not represent the actual boundaries of these properties. All other sites are depicted by a point representing their approximate address location and make no attempt to represent the actual areas of the associated property. Actual boundaries and locations of individual properties can be found in the files residing at the agency responsible for such information.

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HISTORICAL FIRE INSURANCE MAPS

NO MAPS AVAILABLE

11-19-10
PYA1001
SOUTHEAST OF WATERMAN AND BASELINE ST
SAN BERNARDINO CA 92410

A search of FirstSearch Technology Corporation's proprietary database of historical fire insurance map availability confirmed that there are NO MAPS AVAILABLE for the Subject Location as shown above.

FirstSearch Technology Corporation's proprietary database of historical fire insurance map availability represents abstracted information from the Sanborn® Map Company obtained through online access to the U.S. Library of Congress via local libraries.

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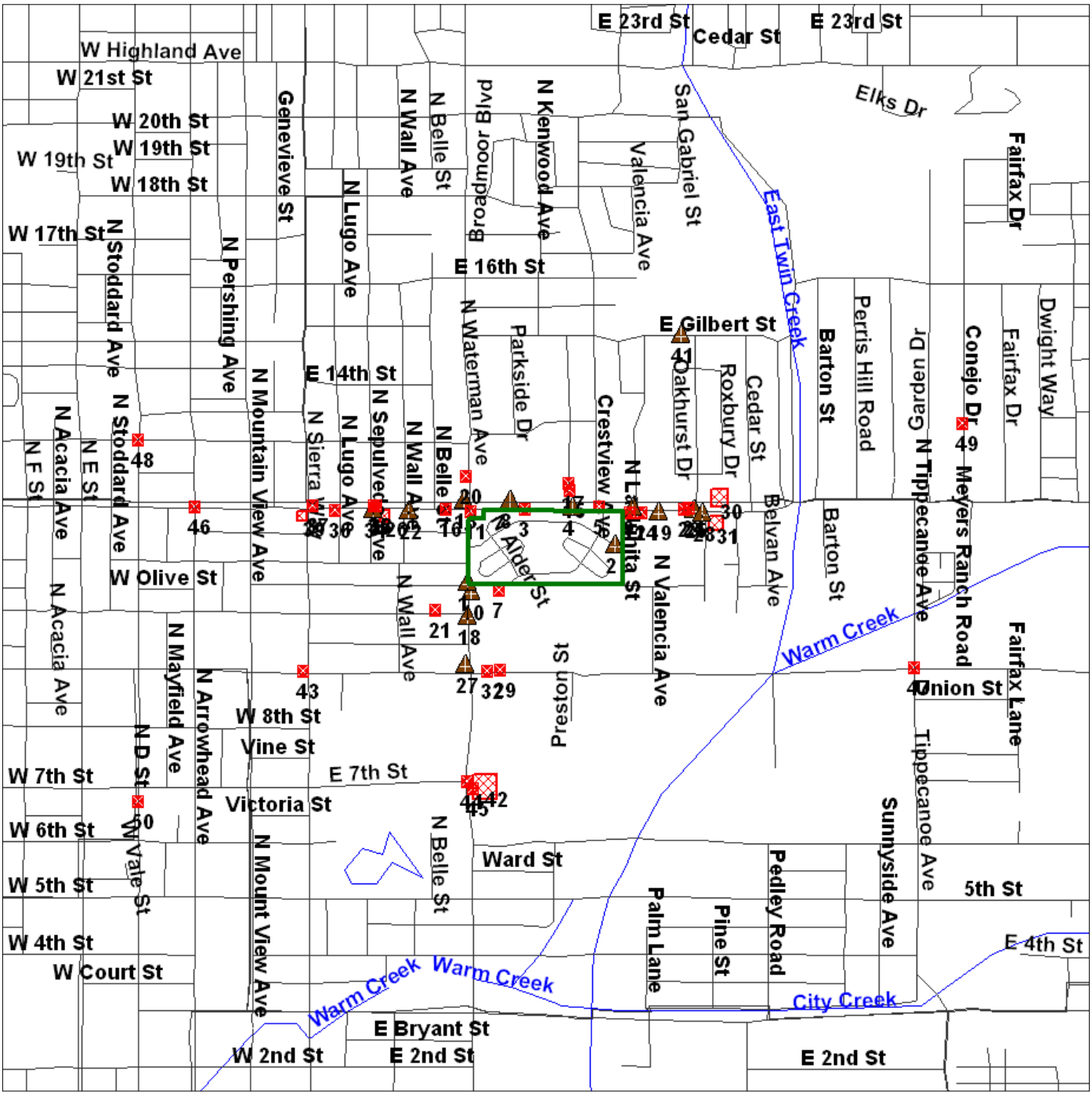
Environmental FirstSearch

1 Mile Radius from Area

Single Map:

SOUTHEAST OF WATERMAN AND BASELINE ST, SAN BERNARDINO C



Source: U.S. Census TIGER Files

Area Polygon .....

Identified Site, Multiple Sites, Receptor .....

NPL, DELNPL, Brownfield, Solid Waste Landfill (SWL), Hazardous Waste

Triballand.....

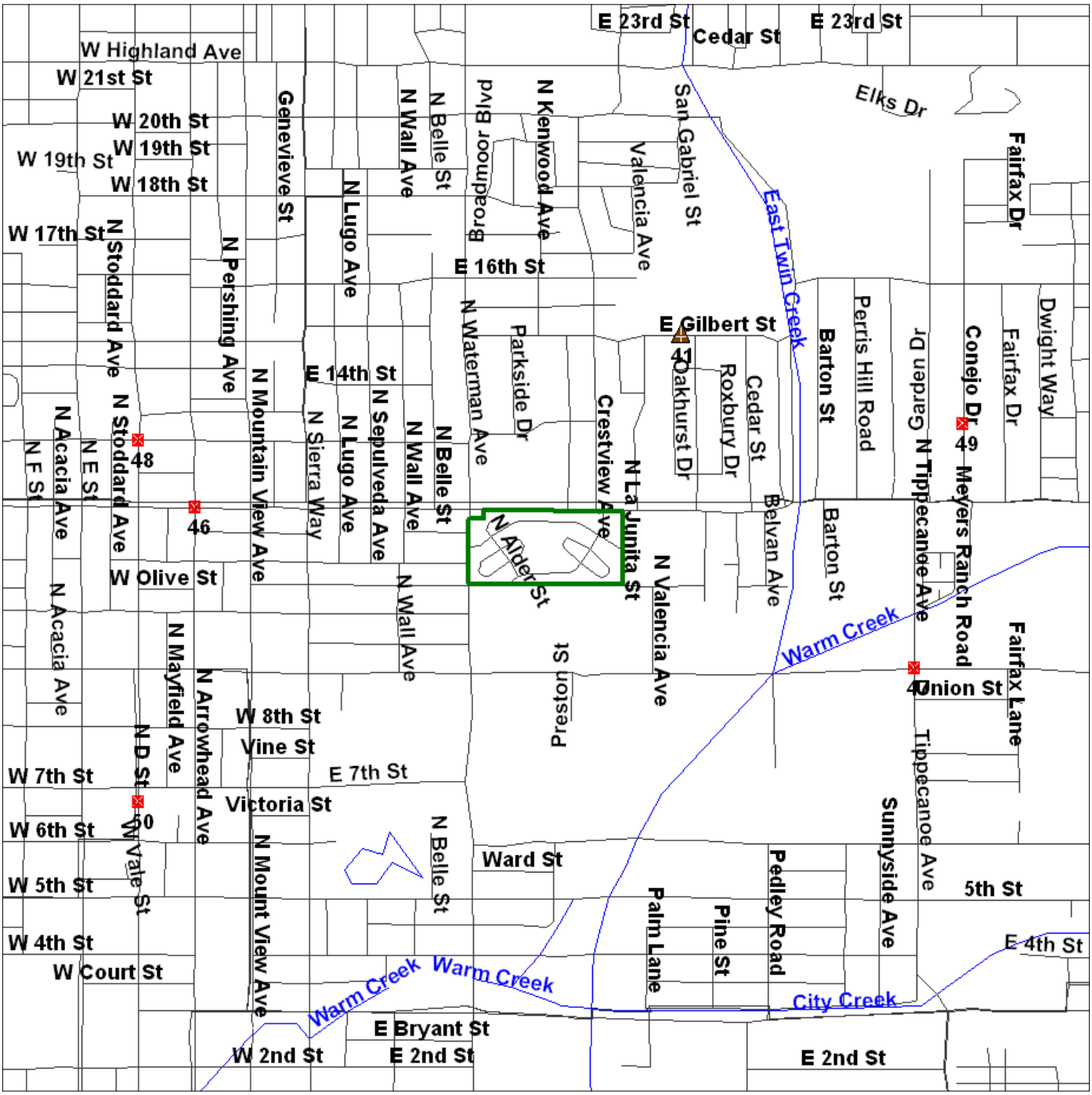
Railroads .....

Environmental FirstSearch

1 Mile Radius from Area

ASTM-05: NPL, RCRACOR, STATE

SOUTHEAST OF WATERMAN AND BASELINE ST, SAN BERNARDINO C



Source: U.S. Census TIGER Files

Area Polygon .....

Identified Site, Multiple Sites, Receptor .....

NPL, DELNPL, Brownfield, Solid Waste Landfill (SWL), Hazardous Waste

Triballand.....

Railroads .....

Environmental FirstSearch

.5 Mile Radius from Area

ASTM-05: Multiple Databases

SOUTHEAST OF WATERMAN AND BASELINE ST, SAN BERNARDINO C

Source: U.S. Census TIGER Files

Area Polygon .....

Identified Site, Multiple Sites, Receptor .....

NPL, DELNPL, Brownfield, Solid Waste Landfill (SWL), Hazardous Waste

Triballand.....

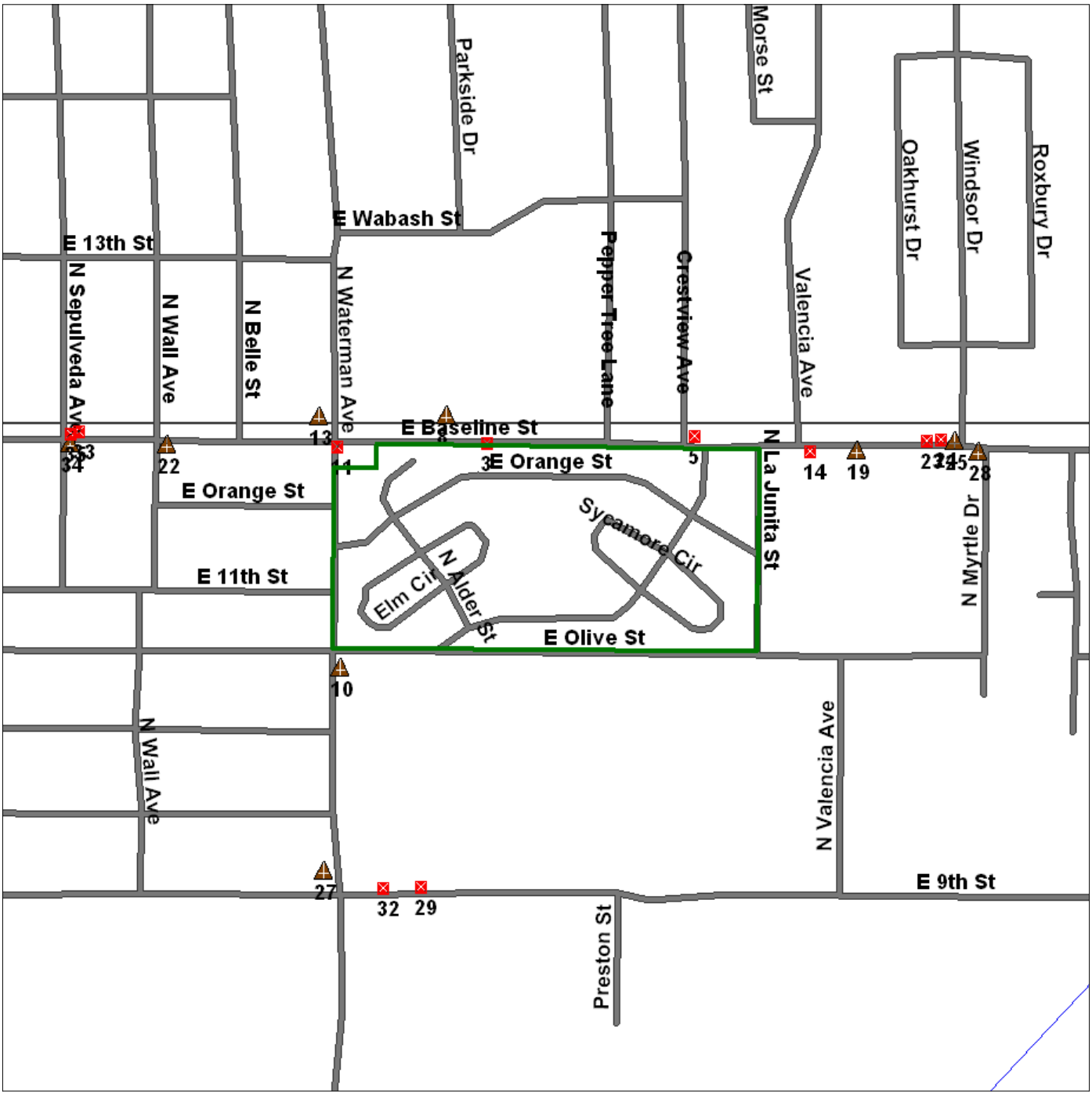
Railroads .....

Environmental FirstSearch

.25 Mile Radius from Area

ASTM-05: RCRAGEN, UST, OTHER

SOUTHEAST OF WATERMAN AND BASELINE ST, SAN BERNARDINO C



Source: U.S. Census TIGER Files

Area Polygon .....

Identified Site, Multiple Sites, Receptor .....

NPL, DELNPL, Brownfield, Solid Waste Landfill (SWL), Hazardous Waste

Triballand.....

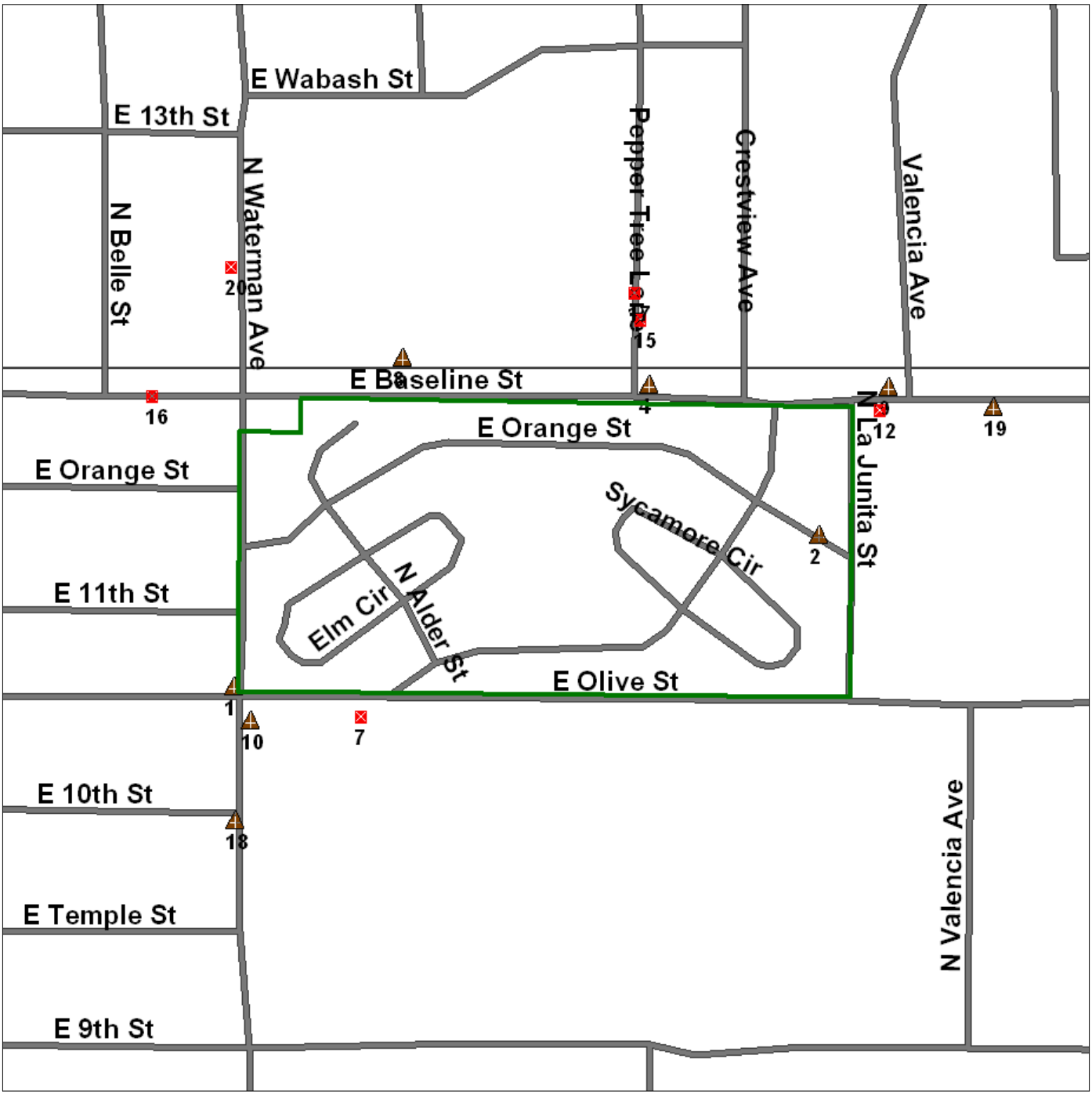
Railroads .....

Environmental FirstSearch

.12 Mile Radius from Area

ASTM-05: Multiple Databases

SOUTHEAST OF WATERMAN AND BASELINE ST, SAN BERNARDINO C



Source: U.S. Census TIGER Files

Area Polygon .....

Identified Site, Multiple Sites, Receptor .....

NPL, DELNPL, Brownfield, Solid Waste Landfill (SWL), Hazardous Waste

Triballand.....

Railroads .....

Environmental FirstSearch
Sites Summary Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

TOTAL: 78 **GEOCODED:** 76 **NON GEOCODED:** 2 **SELECTED:** 75

DB Type	Site Name/ID/Status	Address	Dist/Dir	ElevDiff	Map ID	Page No.
PERMIT	*ACE RADIATOR CO* *89019139/ACTIVE*	*1068 N WATERMAN AVE* *SAN BERNARDINO CA 92410*	*0.00 --*	*N/A*	*1*	*1*
HWMANIFEST	*ACE RADIATOR* *CAL000263515/ACTIVE*	*1068 NORTH WATERMAN AVE* *SAN BERNARDINO CA 92410*	*0.00 --*	*N/A*	*1*	*1*
HWMANIFEST	*HOUSING AUTHORITY OF THE COUNT* *CAL000065916/ACTIVE*	*660 EAST ORANGE ST* *SAN BERNARDINO CA 92410*	*0.00 --*	*N/A*	*2*	*3*
PERMIT	*SAN BDNO CO HOUSING* *FA0002362/ACTIVE*	*660 ORANGE ST* *SAN BERNARDINO CA 92410*	*0.00 --*	*N/A*	*2*	*4*
UST	*FAMILY AUTO CARE CENTER* *TISID-STATE39507/ACTIVE*	*397 BASELINE* *SAN BONO CA 92410*	*0.00 --*	*N/A*	*3*	*5*
PERMIT	*M.K. AUTO REPAIR* *PT0000256/INACTIVE*	*520 E BASELINE ST* *SAN BERNARDINO CA 92410*	*0.01 NE*	*N/A*	*4*	*5*
PERMIT	*M.K. AUTO REPAIR* *01049185/NOT REPORTED*	*520 E BASELINE B* *SAN BERNARDINO CA 92410*	*0.01 NE*	*N/A*	*4*	*6*
PERMIT	*M.K. AUTO REPAIR* *PT0000261/INACTIVE*	*520 E BASELINE ST* *SAN BERNARDINO CA 92410*	*0.01 NE*	*N/A*	*4*	*7*
UST	*GOODYEAR TIRE* *TISID-STATE39702/ACTIVE*	*590 BASELINE* *SAN BERNARDINO CA 92404*	*0.01 NE*	*N/A*	*5*	*7*
FIMAP	FIRE INSURANCE MAP CA-FS-260/SANBORN	SAN BERNARDINO CA	0.01 NE	N/A	6	N/A
HWMANIFEST	*SBCUSD/OLIVE ST ADULT EDUCATIO* *CAL000153662/ACTIVE*	*455 OLIVE ST* *SAN BERNARDINO CA 92410*	*0.01 SW*	*N/A*	*7*	*9*
PERMIT	*ONE HOUR FABRIC CARE* *85004047/ACTIVE*	*382 E BASELINE AVE* *SAN BERNARDINO CA 92410*	*0.02 NE*	*N/A*	*8*	*10*
RCRANLR	*ONE HOUR FABRICARE* *CAD981614829/NLR*	*382 E BASELINE* *SAN BERNARDINO CA 92410*	*0.02 NE*	*N/A*	*8*	*11*
RCRAGN	*ONE HOUR FABRICARE* *CAD981629843/SGN*	*382 BASELINE ST* *SAN BERNARDINO CA 92410*	*0.02 NE*	*N/A*	*8*	*11*
PERMIT	*AUTO ZONE 2831* *00049080/FEE EXEMPT*	*660 E BASELINE* *SAN BERNARDINO CA 92404*	*0.02 NE*	*N/A*	*9*	*12*
HWMANIFEST	*AUTOZONE 2831* *CAL000147979/ACTIVE*	*660 EAST BASELINE ROAD* *SAN BERNARDINO CA 92404*	*0.02 NE*	*N/A*	*9*	*14*
PERMIT	*FOOD N FUEL* *86009185/ACTIVE*	*1055 WATERMAN AVE* *SAN BERNARDINO CA 92410*	*0.02 SW*	*N/A*	*10*	*15*
UST	*VICTORIA GUERNSEY 6* *TISID-STATE40485/ACTIVE*	*1055 WATERMAN* *SAN BERNARDINO CA 92410*	*0.02 SW*	*N/A*	*10*	*15*
LUST	*VICTORIA GUERNSEY 6 (FOOD N F* *T0607199157/COMPLETED - CASE CLO*	*1055 WATERMAN AVE NORTH* *SAN BERNARDINO CA 92410*	*0.02 SW*	*N/A*	*10*	*17*
HWMANIFEST	*FOOD N FUEL INC 6* *CAL000326060/ACTIVE*	*1055 NORTH WATERMAN AVE* *SAN BERNARDINO CA 92410*	*0.02 SW*	*N/A*	*10*	*18*
UST	*FOOD N FUEL* *SANBERDO86009185*	*1055 WATERMAN AVE* *SAN BERNARDINO CA 92410*	*0.02 SW*	*N/A*	*10*	*20*

Environmental FirstSearch
Sites Summary Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

TOTAL: 78 **GEOCODED:** 76 **NON GEOCODED:** 2 **SELECTED:** 75

DB Type	Site Name/ID/Status	Address	Dist/Dir	ElevDiff	Map ID	Page No.
UST	*UNOCAL 76 STN 1842* *TISID-STATE39859/ACTIVE*	*301 BASELINE* *SAN BERNARDINO CA*	*0.02 NE*	*N/A*	*11*	*21*
HWMANIFEST	*AUTO SPOT AUTO BODY* *CAL000287203/ACTIVE*	*675 EAST BASE LINE STE ST* *SAN BERNARDINO CA 92410*	*0.02 SE*	*N/A*	*12*	*21*
UST	*LEE S MOBIL SERVICE CENTER* *TISID-STATE40627/ACTIVE*	*296 BASELINE* *SAN BERNARDINO CA 92404*	*0.04 NW*	*N/A*	*13*	*22*
UST	*K and S ENTERPRISE* *SANBERDO86009168*	*296 E BASELINE* *SAN BERNARDINO CA 92410*	*0.04 NW*	*N/A*	*13*	*24*
LUST	*MOBIL 18-ELG* *T0607100426/COMPLETED - CASE CLO*	*296 BASELINE ST* *SAN BERNARDINO CA 92410*	*0.04 NW*	*N/A*	*13*	*26*
LUST	*MOBIL 18-ELG* *T0607100077/COMPLETED - CASE CLO*	*296 BASELINE ST* *SAN BERNARDINO CA 92410*	*0.04 NW*	*N/A*	*13*	*27*
UST	*QUIK SAVE OIL CO* *TISID-STATE39412/ACTIVE*	*709 BASELINE* *SAN BERNARDINO CA 92410*	*0.04 SE*	*N/A*	*14*	*28*
PERMIT	*ADAN S AUTO REPAIR* *FA0010434/ACTIVE*	*1223 PEPPER TREE LN* *SAN BERNARDINO CA 92410*	*0.05 NE*	*N/A*	*15*	*29*
PERMIT	*IM-PRESS PRINTING* *87013081/ACTIVE*	*265 E BASELINE AVE* *SAN BERNARDINO CA 92410*	*0.05 NW*	*N/A*	*16*	*30*
PERMIT	*M. K. AUTO REPAIR and LUBE* *FA0008319/PENDING*	*1232 N PEPPER TREE LN* *SAN BERNARDINO CA 92410*	*0.06 NE*	*N/A*	*17*	*31*
ERNS	*SOUTHERN CALIFORNIA* *553203/FIXED FACILITY*	*999 NORTH WATERMAN* *SAN BERNARDINO CA*	*0.07 SW*	*N/A*	*18*	*32*
ERNS	*SOUTHERN CA. GAS COMPANY* *232242/PIPELINE RELATED*	*9 TH AND DON JULIAN INTERSE* *SAN BERNARDINO CA*	*0.07 SW*	*N/A*	*18*	*33*
HWMANIFEST	*LORTON S JUICE INC* *CAL000260109/ACTIVE*	*735 EAST BASE LINE ST* *SAN BERNARDINO CA 92410*	*0.08 SE*	*N/A*	*19*	*33*
UST	*VICTORIA GUERNSEY 7* *TISID-STATE7800/INACTIVE*	*735 BASELINE* *SAN BERNARDINO CA 92410*	*0.08 SE*	*N/A*	*19*	*34*
HWMANIFEST	*WALGREENS 10467* *CAL000327753/ACTIVE*	*1236 NORTH WATERMAN AVE* *SAN BERNARDINO CA 92404*	*0.08 NW*	*N/A*	*20*	*34*
NFRAP	*SAN BERNARDINO CHEMICAL* *CA0000195602/NFRAP-N*	*256 E. 10TH ST* *SAN BERNARDINO CA 92410*	*0.10 SW*	*N/A*	*21*	*35*
LUST	*UNITED OIL SS 36 (FAST GAS)* *T0607100197/COMPLETED - CASE CLO*	*235 BASELINE ST* *SAN BERNARDINO CA 92410*	*0.14 NW*	*N/A*	*22*	*37*
UST	*ECONO* *TISID-STATE39604/ACTIVE*	*235 BASE LINE* *SAN BERNARDINO CA 92410*	*0.14 NW*	*N/A*	*22*	*38*
UST	*UNITED OIL 36* *SANBERDO86009169*	*235 E BASELINE* *SAN BERNARDINO CA 92415*	*0.14 NW*	*N/A*	*22*	*40*
UST	*SCHAKELS ARCO* *TISID-STATE7805/INACTIVE*	*782 BASELINE* *SAN BERNARDINO CA 92404*	*0.14 NE*	*N/A*	*23*	*41*

Environmental FirstSearch
Sites Summary Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

TOTAL: 78 **GEOCODED:** 76 **NON GEOCODED:** 2 **SELECTED:** 75

DB Type	Site Name/ID/Status	Address	Dist/Dir	ElevDiff	Map ID	Page No.
UST	*ARCO PETROLEUM PROD 5266* *TISID-STATE40904/ACTIVE*	*790 BASELINE* *SAN BERNARDINO CA 92404*	*0.15 NE*	*N/A*	*24*	*41*
LUST	*ARCO 5266* *T0607100549/COMPLETED - CASE CLO*	*794 BASELINE AVE* *SAN BERNARDINO CA 92410*	*0.16 NE*	*N/A*	*25*	*43*
UST	*ARCO PETROLEUM PROD 5266* *SANBERDO86011373*	*794 BASELINE* *SAN BERNARDINO CA 92404*	*0.16 NE*	*N/A*	*25*	*45*
SWL	*EL TORO II TIRE SHOP* *SWIS36-TI-0934/ACTIVE*	*207 E. BASELINE* *SAN BERNARDINO CA 92410*	*0.18 NW*	*N/A*	*26*	*47*
UST	*BUY RITE GAS* *SANBERDO86009184/NUM OF TANKS: 3*	*906 N WATERMAN AVE* *SAN BERNARDINO CA 92410*	*0.18 SW*	*N/A*	*27*	*48*
LUST	*BUY RITE GAS* *2000032A/PRELIM. SITE ASSES.*	*906 N. WATERMAN AVE* *SAN BERNARDINO CA 92410*	*0.18 SW*	*N/A*	*27*	*48*
LUST	*BUY RITE GAS* *T0607199291/COMPLETED - CASE CLO*	*906 WATERMAN AVE* *SAN BERNARDINO CA 92410*	*0.18 SW*	*N/A*	*27*	*50*
LUST	*BUY RITE GASOLINE* *2000032B/NO ACTION*	*906 N. WATERMAN AVE* *SAN BERNARDINO CA 92415*	*0.18 SW*	*N/A*	*27*	*51*
UST	*SHELL STATION 1229* *TISID-STATE39511/ACTIVE*	*906 WATERMAN* *SAN BERNARDINO CA 92410*	*0.18 SW*	*N/A*	*27*	*52*
UST	*KAM SHELL* *TISID-STATE40078/ACTIVE*	*799 BASELINE* *SAN BERNARDINO CA 92410*	*0.18 SE*	*N/A*	*28*	*52*
LUST	*KAM SHELL* *T0607100564/COMPLETED - CASE CLO*	*799 BASELINE* *SAN BERNARDINO CA 92410*	*0.18 SE*	*N/A*	*28*	*54*
RCRAGN	*MIDNIGHT AUTO RECYCLERS and PI* *CAR000071001/SGN*	*407 E 9TH ST* *SAN BERNARDINO CA 92410*	*0.20 SW*	*N/A*	*29*	*55*
SWL	*UNIVERSAL TIRE SHOP* *SWIS36-TI-0118/ACTIVE*	*826 EAST BASELINE STR* *SAN BERNARDINO CA 92410*	*0.20 NE*	*N/A*	*30*	*57*
SWL	*ZAPATA TIRE and RIM UNLIMITED* *SWIS36-TI-0532/ACTIVE*	*803 E. BASELINE* *SAN BERNARDINO CA 92410*	*0.20 SE*	*N/A*	*31*	*59*
UST	*H T FOOD MART* *SANBERDO88016782*	*337 E 9TH ST* *SAN BERNARDINO CA 92404*	*0.20 SW*	*N/A*	*32*	*61*
RCRAGN	*HONDA WORLD* *CAD981996952/SGN*	*208 E BASELINE* *SAN BERNARDINO CA 92410*	*0.21 NW*	*N/A*	*33*	*62*
UST	*ARCO PETROLEUM PROD 5297* *TISID-STATE40905/ACTIVE*	*199 BASELINE* *SAN BERNARDINO CA 92410*	*0.22 NW*	*N/A*	*34*	*62*
LUST	*ARCO 5297* *T0607100620/COMPLETED - CASE CLO*	*199 BASELINE ST* *SAN BERNARDINO CA 92415*	*0.22 NW*	*N/A*	*34*	*64*
UST	*CUSTOM WINDOW TINTING* *TISID-STATE39202/ACTIVE*	*198 BASELINE* *SAN BERNARDINO CA 92404*	*0.22 NW*	*N/A*	*35*	*65*
SWL	*MORALES TIRE III* *SWIS36-TI-0930/ACTIVE*	*147 E. BASELINE* *SAN BERNARDINO CA 92410*	*0.30 NW*	*N/A*	*36*	*67*

Environmental FirstSearch
Sites Summary Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

TOTAL: 78 **GEOCODED:** 76 **NON GEOCODED:** 2 **SELECTED:** 75

DB Type	Site Name/ID/Status	Address	Dist/Dir	ElevDiff	Map ID	Page No.
LUST	*FAME LIQUORS* *T0607100151/COMPLETED - CASE CLO*	*108 BASELINE ST* *SAN BERNARDINO CA 92410*	*0.36 NW*	*N/A*	*37*	*69*
FIMAP	FIRE INSURANCE MAP CA-FS-248/SANBORN	SAN BERNARDINO CA	0.36 SW	N/A	38	N/A
SWL	*DISCOUNT TIRE CENTERS* *SWIS36-TI-0932/ACTIVE*	*101 WEST BASELINE* *SAN BERNARDINO CA 92410*	*0.37 NW*	*N/A*	*39*	*71*
FIMAP	FIRE INSURANCE MAP CA-FS-257/SANBORN	SAN BERNARDINO CA	0.38 SE	N/A	40	N/A
LUST	*SAN BERNARDINO COUNTY MEDICAL* *T0607100621/COMPLETED - CASE CLO*	*780 GILBERT ST* *SAN BERNARDINO CA 92409*	*0.43 NE*	*N/A*	*41*	*73*
STATE	*ANTON ELEMENTARY SCHOOL* *CAL36010015/NO FURTHER ACTION*	*780 EAST GILBERT ST* *SAN BERNARDINO CA 92410*	*0.43 NE*	*N/A*	*41*	*75*
SWL	*IN and OUT TIRES* *SWIS36-TI-0882/ACTIVE*	*697 NORTH WATERMAN AVE.* *SAN BERNARDINO CA 92410*	*0.43 SW*	*N/A*	*42*	*77*
LUST	*PAULEY PETROLEUM* *T0607100099/COMPLETED - CASE CLO*	*898 SIERRA WAY* *SAN BERNARDINO CA 92410*	*0.43 SW*	*N/A*	*43*	*78*
NFRAP	*SECCOMBE LAKE STATE REC AREA* *CAD981576507/NFRAP-N*	*7TH ST BETW SERRIA AND WATE* *SAN BERNARDINO CA 92410*	*0.45 SW*	*N/A*	*44*	*79*
LUST	*WHITE ROSE DAIRY* *T0607100048/COMPLETED - CASE CLO*	*697 WATERMAN AVE* *SAN BERNARDINO CA 92404*	*0.47 SW*	*N/A*	*45*	*81*
STATE	*LINCOLN II NORTH ELEMENTARY SC* *CAL36000003/INACTIVE - NEEDS EVA*	*ARROWHEAD AVENUE/BASELINE S* *SAN BERNARDINO CA 92410*	*0.62 NW*	*N/A*	*46*	*83*
STATE	*MONTEREY II ELEMENTARY SCHOOL* *CAL36010063/NO FURTHER ACTION*	*9TH STREET/TIPPECANOE AVE* *SAN BERNARDINO CA 92410*	*0.69 SE*	*N/A*	*47*	*85*
STATE	*LINCOLN II NORTH ELEMENTARY SC* *CAL36000004/VOLUNTARY CLEANUP PR*	*WEST 13TH /D ST* *SAN BERNARDINO CA 92410*	*0.77 NW*	*N/A*	*48*	*86*
STATE	*GERALD HOBBS PROPERTY* *CAL60000688/CERTIFIED*	*7194 CONEJO DR* *SAN BERNARDINO CA 92404*	*0.80 NE*	*N/A*	*49*	*88*
STATE	*INLAND BEHAVIORAL and HEALTH S* *CAL33800003/NO ACTION - FOR CALM*	*665 AND 671 NORTH D ST* *SAN BERNARDINO CA 92401*	*0.90 SW*	*N/A*	*50*	*89*

Environmental FirstSearch
Sites Summary Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

TOTAL: 78 **GEOCODED:** 76 **NON GEOCODED:** 2 **SELECTED:** 75

DB Type	Site Name/ID/Status	Address	Dist/Dir	ElevDiff	Map ID	Page No.
TRIBALLAND	*BUREAU OF INDIAN AFFAIRS CONTA BIA-92410*	*UNKNOWN CA 92410*	*NON GC*	*N/A*		*90*
SWL	*SAN BERNARDINO CITY DISPOSAL S SWIS36-CR-0036/CLOSED*	*VICINITY OF SOUTH WATERMAN SAN BERNARDINO CA*	*NON GC*	*N/A*		*91*

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

PERMIT

SEARCH ID: 19 **DIST/DIR:** 0.00 -- **ELEVATION:** 1081 **MAP ID:** 1

NAME: ACE RADIATOR CO
ADDRESS: 1068 N WATERMAN AVE
SAN BERNARDINO CA 92410
SAN BERNARDINO
CONTACT:
SOURCE: SAN BERNARDINO CO HMD

REV: 02/11/04
ID1: 89019139
ID2:
STATUS: ACTIVE
PHONE:

COUNTY OF SAN BERNARDINO HAZARDOUS WASTE GENERATORS PERMITS INFORMATION:

Permit Category:	*SPECIAL HANDLER*
Permit Number:	*PT0004448*
Status:	*ACTIVE*
Expiration Date:	*11/30/2006 12:00:00AM*
Facility Phone:	*714 8853094*
Owner Name:	*ACE RADIATOR CO*
Owner Address:	*1068 N WATERMAN AV*
Owner Address:	*SAN BERNARDINO CA 92410*
Owner Phone:	*714 8853094*

HWMANIFEST

SEARCH ID: 66 **DIST/DIR:** 0.00 -- **ELEVATION:** 1080 **MAP ID:** 1

NAME: ACE RADIATOR
ADDRESS: 1068 NORTH WATERMAN AVE
SAN BERNARDINO CA 92410
SAN BERNARDINO
CONTACT:
SOURCE: CA DTSC

REV: 02/19/10
ID1: CAL000263515
ID2:
STATUS: ACTIVE
PHONE:

DETAILS NOT AVAILABLE

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

HWMANIFEST

SEARCH ID: 70 **DIST/DIR:** 0.00 -- **ELEVATION:** 1084 **MAP ID:** 2

NAME:	HOUSING AUTHORITY OF THE COUNTY OF SAN BERNARDINO	**REV:**	02/19/10
ADDRESS:	660 EAST ORANGE ST	**ID1:**	CAL000065916
	SAN BERNARDINO CA 92410	**ID2:**	
	SAN BERNARDINO	**STATUS:**	ACTIVE
CONTACT:		**PHONE:**	
SOURCE:	CA DTSC		

THE CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL HAZARDOUS WASTE MANIFEST INVENTORY (HWMI)
SITE INFORMATION FROM THE CA EPA AND DTSC HAZARDOUS WASTE TRACKING SYSTEM (HWTS) :

Date Record was Created:	*3/11/1992*
Inactivity Date:	
Facility Mail Name:	*HOUSING AUTHORITY CNTY OF SAN BERNA*
Facility Mailing Address:	*660 E ORANGE ST, SAN BERNARDINO, CA 92410-0000*
Owner Name:	*HOUSING AUTHORITY CNTY OF SAN*
Owner Address:	*660 E ORANGE ST, SAN BERNARDINO, CA 92408-2841*
Contact Name:	*BOB RAMIREZ-LEAD W/H WORKER*
Contact Address:	*660 E ORANGE ST, SAN BERNARDINO, CA 92410-0000*
Contact Phone:	*9093861460*

HWMI WASTE TYPE AND TONNAGE INFORMATION BY YEAR 2005-2009:

2009 Method Type:	
2009 Waste Type:	
2009 Total Tonnage:	
2008 Waste Type:	*Unspecified oil-containing waste*
2008 Total Tonnage:	*0.4587*
2007 Waste Type:	*Unspecified solvent mixture*
2007 Total Tonnage:	*0.4587*
2006 Waste Type:	*Unspecified solvent mixture*
2006 Total Tonnage:	*0.22*
2005 Waste Type:	*Waste oil and mixed oil*
2005 Total Tonnage:	*0.22*

HWMI WASTE TYPE AND TONNAGE INFORMATION BY YEAR 2000-2004:

2004 Waste Type:	
2004 Total Tonnage:	
2003 Waste Type:	*Liquids with pH <= 2*
2003 Total Tonnage:	*0.06*
2002 Waste Type:	
2002 Total Tonnage:	
2001 Waste Type:	
2001 Total Tonnage:	
2000 Waste Type:	
2000 Total Tonnage:	

HWMI WASTE TYPE AND TONNAGE INFORMATION BY YEAR 1993-1999:

1999 Waste Type:	
1999 Total Tonnage:	
1998 Waste Type:	*Tank bottom waste*
1998 Total Tonnage:	*0.834*
1997 Waste Type:	
1997 Total Tonnage:	
1996 Waste Type:	*Unspecified organic liquid mixture*
1996 Total Tonnage:	*0.0125*
1995 Waste Type:	
1995 Total Tonnage:	
1994 Waste Type:	
1994 Total Tonnage:	
1993 Waste Type:	

- Continued on next page -

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

HWMANIFEST

SEARCH ID: 70 **DIST/DIR:** 0.00 -- **ELEVATION:** 1084 **MAP ID:** 2

NAME:	HOUSING AUTHORITY OF THE COUNTY OF SAN BERNARDINO	**REV:**	02/19/10
ADDRESS:	660 EAST ORANGE ST	**ID1:**	CAL000065916
	SAN BERNARDINO CA 92410	**ID2:**	
	SAN BERNARDINO	**STATUS:**	ACTIVE
CONTACT:		**PHONE:**	
SOURCE:	CA DTSC		

1993 Total Tonnage:

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

PERMIT

SEARCH ID: 28 **DIST/DIR:** 0.00 -- **ELEVATION:** 1084 **MAP ID:** 2

NAME: SAN BDNO CO HOUSING
ADDRESS: 660 ORANGE ST
SAN BERNARDINO CA 92410
San Bernardino
CONTACT:
SOURCE: SAN BERNARDINO CO HMD

REV: 09/26/06
ID1: FA0002362
ID2:
STATUS: ACTIVE
PHONE:

COUNTY OF SAN BERNARDINO HAZARDOUS WASTE GENERATORS PERMITS INFORMATION:

Permit Category: *SPECIAL GENERATOR(B)*
Permit Number: *PT0016952*
Status: *ACTIVE*
Expiration Date: *8/31/2007 12:00:00AM*
Facility Phone:
Owner Name: *HOUSING AUTH SAN BDNO CO*
Owner Address:
Owner Address:
Owner Phone:

COUNTY OF SAN BERNARDINO HAZARDOUS WASTE GENERATORS PERMITS INFORMATION:

Permit Category: *SPECIAL HANDLER*
Permit Number: *PT0016953*
Status: *ACTIVE*
Expiration Date: *8/31/2007 12:00:00AM*
Facility Phone:
Owner Name: *HOUSING AUTH SAN BDNO CO*
Owner Address:
Owner Address:
Owner Phone:

COUNTY OF SAN BERNARDINO HAZARDOUS WASTE GENERATORS PERMITS INFORMATION:

Permit Category: *UW HANDLER (WITH ANOTHER CUPA PERMIT)*
Permit Number: *PT0016954*
Status: *ACTIVE*
Expiration Date: *8/31/2006 12:00:00AM*
Facility Phone:
Owner Name: *HOUSING AUTH SAN BDNO CO*
Owner Address:
Owner Address:
Owner Phone:

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

UST

SEARCH ID: 35 **DIST/DIR:** 0.00 -- **ELEVATION:** 1092 **MAP ID:** 3

NAME: FAMILY AUTO CARE CENTER
ADDRESS: 397 BASELINE
SAN BONO CA 92410
San Bernardino
CONTACT:
SOURCE:

REV: 01/01/94
ID1: TISID-STATE39507
ID2:
STATUS: ACTIVE
PHONE:

UST HISTORICAL DATA

This site was listed in the FIDS Zip Code List as a UST site. The Office of Hazardous Data Management produced the FIDS list. The FIDS list is an index of names and locations of sites recorded in various California State environmental agency databases. It is sorted by zip code and as an index, details regarding the sites were never included.
The UST information included in FIDS as provided by the Office of Hazardous Data Management was originally collected from the SWEEPS database. The SWEEPS database recorded Underground Storage Tanks and was maintained by the State Water Resources Control Board (SWRCB). That agency no longer maintains the SWEEPS database and last updated it in 1994. The last release of that 1994 database was in 1997.
Oversight of Underground Storage Tanks within California is now conducted by Certified Unified Program Agencies referred to as CUPA s. There are approximately 102 CUPA s and Local Oversight Programs (LOP s) in the State of California. Most are city or county government agencies. As of 1998, all sites or facilities with underground storage tanks were required by Federal mandate to obtain certification by designated UST oversight agencies (in this case, CUPA s) that the UST/s at their location were upgraded or removed in adherence with the 1998 RCRA standards.
Information from the FIDS/SWEEPS lists were included in this report search to help identify where underground storage tanks may have existed that were not recorded in CUPA databases or lists collected by us. This may occur if a tank was removed prior to development of recent CUPA UST lists or never registered with a CUPA.

PERMIT

SEARCH ID: 26 **DIST/DIR:** 0.01 NE **ELEVATION:** 1091 **MAP ID:** 4

NAME: M.K. AUTO REPAIR
ADDRESS: 520 E BASELINE ST
SAN BERNARDINO CA 92410
SAN BERNARDINO
CONTACT:
SOURCE: SAN BERNARDINO CO HMD

REV: 02/11/04
ID1: PT0000256
ID2:
STATUS: INACTIVE
PHONE:

COUNTY OF SAN BERNARDINO HAZARDOUS WASTE GENERATORS PERMITS INFORMATION:

Permit Category:	*SPECIAL GENERATOR(B)*
Permit Number:	*PT0000256*
Status:	*INACTIVE*
Expiration Date:	*2/28/2005 12:00:00AM*
Facility Phone:	
Owner Name:	*KIM, MARK PETER*
Owner Address:	
Owner Address:	
Owner Phone:	

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

PERMIT

SEARCH ID: 24 **DIST/DIR:** 0.01 NE **ELEVATION:** 1092 **MAP ID:** 4

NAME: M.K. AUTO REPAIR
ADDRESS: 520 E BASELINE B
SAN BERNARDINO CA 92410
SAN BERNARDINO
CONTACT:
SOURCE: SAN BERNARDINO CO HMD

REV: 12/11/01
ID1: 01049185
ID2:
STATUS: NOT REPORTED
PHONE:

Permit Category: *HAZARDOUS MATERIAL HANDLER. SPECIAL HANDLER*
Permit Number: *0101097379*
Facility Phone: *909 3818377*
Owner Name: *MARK KIM*
Owner Address: *13487 OAK MESA*
Owner Address: *YUCAIPA CA 92399*
Owner Phone: *909 7977230*

Permit Category: *HAZARDOUS WASTE GENERATOR. SPECIAL GENERATOR-ALL WASTES RECYCLED.*
Permit Number: *0101097380*
Facility Phone: *909 3818377*
Owner Name: *MARK KIM*
Owner Address: *13487 OAK MESA*
Owner Address: *YUCAIPA CA 92399*
Owner Phone: *909 7977230*

Permit Category: *STATE SERVICE CHARGE. ALL PERMITTED FACILITIES.*
Permit Number: *0101097381*
Facility Phone: *909 3818377*
Owner Name: *MARK KIM*
Owner Address: *13487 OAK MESA*
Owner Address: *YUCAIPA CA 92399*
Owner Phone: *909 7977230*

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

PERMIT

SEARCH ID: 25 **DIST/DIR:** 0.01 NE **ELEVATION:** 1091 **MAP ID:** 4

NAME: M.K. AUTO REPAIR
ADDRESS: 520 E BASELINE ST
SAN BERNARDINO CA 92410
SAN BERNARDINO
CONTACT:
SOURCE: SAN BERNARDINO CO HMD

REV: 02/11/04
ID1: PT0000261
ID2:
STATUS: INACTIVE
PHONE:

COUNTY OF SAN BERNARDINO HAZARDOUS WASTE GENERATORS PERMITS INFORMATION:

Permit Category:	*SPECIAL HANDLER*
Permit Number:	*PT0000261*
Status:	*INACTIVE*
Expiration Date:	*2/28/2005 12:00:00AM*
Facility Phone:	
Owner Name:	*KIM, MARK PETER*
Owner Address:	
Owner Address:	
Owner Phone:	

UST

SEARCH ID: 37 **DIST/DIR:** 0.01 NE **ELEVATION:** 1092 **MAP ID:** 5

NAME: GOODYEAR TIRE
ADDRESS: 590 BASELINE
SAN BERNARDINO CA
San Bernardino
CONTACT:
SOURCE:

REV: 01/01/94
ID1: TISID-STATE39702
ID2:
STATUS: ACTIVE
PHONE:

UST HISTORICAL DATA

This site was listed in the FIDS Zip Code List as a UST site. The Office of Hazardous Data Management produced the FIDS list. The FIDS list is an index of names and locations of sites recorded in various California State environmental agency databases. It is sorted by zip code and as an index, details regarding the sites were never included.

The UST information included in FIDS as provided by the Office of Hazardous Data Management was originally collected from the SWEEPS database. The SWEEPS database recorded Underground Storage Tanks and was maintained by the State Water Resources Control Board (SWRCB). That agency no longer maintains the SWEEPS database and last updated it in 1994. The last release of that 1994 database was in 1997.

Oversight of Underground Storage Tanks within California is now conducted by Certified Unified Program Agencies referred to as CUPA s. There are approximately 102 CUPA s and Local Oversight Programs (LOP s) in the State of California. Most are city or county government agencies. As of 1998, all sites or facilities with underground storage tanks were required by Federal mandate to obtain certification by designated UST oversight agencies (in this case, CUPA s) that the UST/s at their location were upgraded or removed in adherence with the 1998 RCRA standards.

Information from the FIDS/SWEEPS lists were included in this report search to help identify where underground storage tanks may have existed that were not recorded in CUPA databases or lists collected by us. This may occur if a tank was removed prior to development of recent CUPA UST lists or never registered with a CUPA.

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST
SAN BERNARDINO CA 92410

JOB: PYA1001

HWMANIFEST

SEARCH ID: 72 **DIST/DIR:** 0.01 SW **ELEVATION:** 1079 **MAP ID:** 7

NAME: SBCUSD/OLIVE ST ADULT EDUCATION
ADDRESS: 455 OLIVE ST
SAN BERNARDINO CA 92410
SAN BERNARDINO
CONTACT:
SOURCE: CA DTSC

REV: 02/19/10
ID1: CAL000153662
ID2:
STATUS: ACTIVE
PHONE:

THE CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL HAZARDOUS WASTE MANIFEST INVENTORY (HWMI) SITE INFORMATION FROM THE CA EPA AND DTSC HAZARDOUS WASTE TRACKING SYSTEM (HWTS) :

Date Record was Created: *11/4/1999*
Inactivity Date:
Facility Mail Name: *ENVTL SAFETY OFFICE*
Facility Mailing Address: *777 N F ST, SAN BERNARDINO, CA 92410-0000*
Owner Name: *SAN BERNARDINO CITY USD*
Owner Address: *777 F STREET, SAN BERNARDINO, CA 92410-0000*
Contact Name: *WARREN CRAIG/ENV SAFETY OFCR*
Contact Address: *777 NORTH F STREET, SAN BERNARDINO, CA 92410-0000*
Contact Phone: *9093811193*

HWMI WASTE TYPE AND TONNAGE INFORMATION BY YEAR 2005-2009:

2009 Method Type:
2009 Waste Type:
2009 Total Tonnage:
2008 Waste Type:
2008 Total Tonnage:
2007 Waste Type:
2007 Total Tonnage:
2006 Waste Type:
2006 Total Tonnage:
2005 Waste Type:
2005 Total Tonnage:

HWMI WASTE TYPE AND TONNAGE INFORMATION BY YEAR 2000-2004:

2004 Waste Type:
2004 Total Tonnage:
2003 Waste Type:
2003 Total Tonnage:
2002 Waste Type:
2002 Total Tonnage:
2001 Waste Type:
2001 Total Tonnage:
2000 Waste Type:
2000 Total Tonnage:

HWMI WASTE TYPE AND TONNAGE INFORMATION BY YEAR 1993-1999:

1999 Waste Type:
1999 Total Tonnage:
1998 Waste Type:
1998 Total Tonnage:
1997 Waste Type:
1997 Total Tonnage:
1996 Waste Type:
1996 Total Tonnage:
1995 Waste Type:
1995 Total Tonnage:
1994 Waste Type:
1994 Total Tonnage:
1993 Waste Type:

- Continued on next page -

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

HWMANIFEST

SEARCH ID: 72 **DIST/DIR:** 0.01 SW **ELEVATION:** 1079 **MAP ID:** 7

NAME: SBCUSD/OLIVE ST ADULT EDUCATION
ADDRESS: 455 OLIVE ST
SAN BERNARDINO CA 92410
SAN BERNARDINO
CONTACT:
SOURCE: CA DTSC

REV: 02/19/10
ID1: CAL000153662
ID2:
STATUS: ACTIVE
PHONE:

1993 Total Tonnage:

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

PERMIT

SEARCH ID: 27 **DIST/DIR:** 0.02 NE **ELEVATION:** 1092 **MAP ID:** 8

NAME:	ONE HOUR FABRIC CARE	**REV:**	02/11/04
ADDRESS:	382 E BASELINE AVE	**ID1:**	85004047
	SAN BERNARDINO CA 92410	**ID2:**	
	SAN BERNARDINO	**STATUS:**	ACTIVE
CONTACT:		**PHONE:**	
SOURCE:	SAN BERNARDINO CO HMD		

COUNTY OF SAN BERNARDINO HAZARDOUS WASTE GENERATORS PERMITS INFORMATION:

Permit Category:	*SPECIAL HANDLER*
Permit Number:	*PT0001455*
Status:	*ACTIVE*
Expiration Date:	*11/30/2006 12:00:00AM*
Facility Phone:	*909 8840558*
Owner Name:	*PATEL, KIRIT C*
Owner Address:	*382 E BASELINE*
Owner Address:	*SAN BERNARDINO CA 92410*
Owner Phone:	*909 8840558*

COUNTY OF SAN BERNARDINO HAZARDOUS WASTE GENERATORS PERMITS INFORMATION:

Permit Category:	*SPECIAL GENERATOR(B)*
Permit Number:	*PT0001456*
Status:	*ACTIVE*
Expiration Date:	*11/30/2006 12:00:00AM*
Facility Phone:	*909 8840558*
Owner Name:	*PATEL, KIRIT C*
Owner Address:	*382 E BASELINE*
Owner Address:	*SAN BERNARDINO CA 92410*
Owner Phone:	*909 8840558*

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

RCRANLR

SEARCH ID: 6 **DIST/DIR:** 0.02 NE **ELEVATION:** 1092 **MAP ID:** 8

NAME: ONE HOUR FABRICARE
ADDRESS: 382 E BASELINE
SAN BERNARDINO CA 92410
SAN BERNARDINO
CONTACT:
SOURCE: EPA

REV: 9/14/10
ID1: CAD981614829
ID2:
STATUS: NLR
PHONE:

SITE INFORMATION

UNIVERSE INFORMATION:

NAIC INFORMATION

ENFORCEMENT INFORMATION:

VIOLATION INFORMATION:

RCRAGN

SEARCH ID: 5 **DIST/DIR:** 0.02 NE **ELEVATION:** 1092 **MAP ID:** 8

NAME: ONE HOUR FABRICARE
ADDRESS: 382 BASELINE ST
SAN BERNARDINO CA 92410
SAN BERNARDINO
CONTACT:
SOURCE: EPA

REV: 7/14/10
ID1: CAD981629843
ID2:
STATUS: SGN
PHONE:

SITE INFORMATION

UNIVERSE INFORMATION:

NAIC INFORMATION

ENFORCEMENT INFORMATION:

VIOLATION INFORMATION:

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

PERMIT

SEARCH ID: 21 **DIST/DIR:** 0.02 NE **ELEVATION:** 1092 **MAP ID:** 9

NAME:	AUTO ZONE 2831	**REV:**	02/11/04
ADDRESS:	660 E BASELINE	**ID1:**	00049080
	SAN BERNARDINO CA 92404	**ID2:**	
	SAN BERNARDINO	**STATUS:**	FEE EXEMPT
CONTACT:		**PHONE:**	
SOURCE:	SAN BERNARDINO CO HMD		

COUNTY OF SAN BERNARDINO HAZARDOUS WASTE GENERATORS PERMITS INFORMATION:

Permit Category:	*HAZMAT HANDLER - USED OIL COLLECTION CENTERS*
Permit Number:	*PT0000787*
Status:	*FEE EXEMPT*
Expiration Date:	*12/31/2006 12:00:00AM*
Facility Phone:	*909 8848433*
Owner Name:	*AUTO ZONE INC*
Owner Address:	*123 S FRONT ST 123*
Owner Address:	*MEMPHIS TN 38103*
Owner Phone:	*901 4956500*

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST
SAN BERNARDINO CA 92410

JOB: PYA1001

HWMANIFEST

SEARCH ID: 68 **DIST/DIR:** 0.02 NE **ELEVATION:** 1092 **MAP ID:** 9

NAME: AUTOZONE 2831
ADDRESS: 660 EAST BASELINE ROAD
SAN BERNARDINO CA 92404
SAN BERNARDINO
CONTACT:
SOURCE: CA DTSC

REV: 02/19/10
ID1: CAL000147979
ID2:
STATUS: ACTIVE
PHONE:

THE CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL HAZARDOUS WASTE MANIFEST INVENTORY (HWMI)
SITE INFORMATION FROM THE CA EPA AND DTSC HAZARDOUS WASTE TRACKING SYSTEM (HWTS) :

Date Record was Created: *1/5/1999*
Inactivity Date:
Facility Mail Name: *FARLON WILLIAMS/AUTOZONE INC*
Facility Mailing Address: *123 S FRONT ST DEPT 8190, MEMPHIS, TN 38103-0000*
Owner Name: *AUTOZONE STORES INC*
Owner Address: *123 FRONT ST, MEMPHIS, TN 38101-9842*
Contact Name: *JIM DAVIS - DEPT 8190*
Contact Address: *PO BOX 2198, MEMPHIS, TN 38101-9842*
Contact Phone: *9014957240*

HWMI WASTE TYPE AND TONNAGE INFORMATION BY YEAR 2005-2009:

2009 Method Type: *LANDFILL OR SURFACE IMPOUNDMENT THAT WILL BE CLOSED AS LANDFILL(TO INCLUDE ON-SITE TREATMENT AND/OR STABILIZATION)*
2009 Waste Type: *Other organic solids*
2009 Total Tonnage: *0.245*
2008 Waste Type: *Other organic solids*
2008 Total Tonnage: *0.1*
2007 Waste Type: *Other organic solids*
2007 Total Tonnage: *0.2*
2006 Waste Type:
2006 Total Tonnage:
2005 Waste Type:
2005 Total Tonnage:

HWMI WASTE TYPE AND TONNAGE INFORMATION BY YEAR 2000-2004:

2004 Waste Type:
2004 Total Tonnage:
2003 Waste Type:
2003 Total Tonnage:
2002 Waste Type:
2002 Total Tonnage:
2001 Waste Type:
2001 Total Tonnage:
2000 Waste Type:
2000 Total Tonnage:

HWMI WASTE TYPE AND TONNAGE INFORMATION BY YEAR 1993-1999:

1999 Waste Type:
1999 Total Tonnage:
1998 Waste Type:
1998 Total Tonnage:
1997 Waste Type:
1997 Total Tonnage:
1996 Waste Type:
1996 Total Tonnage:
1995 Waste Type:
1995 Total Tonnage:
1994 Waste Type:
1994 Total Tonnage:

- Continued on next page -

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

HWMANIFEST

SEARCH ID: 68 **DIST/DIR:** 0.02 NE **ELEVATION:** 1092 **MAP ID:** 9

NAME: AUTOZONE 2831
ADDRESS: 660 EAST BASELINE ROAD
SAN BERNARDINO CA 92404
SAN BERNARDINO
CONTACT:
SOURCE: CA DTSC

REV: 02/19/10
ID1: CAL000147979
ID2:
STATUS: ACTIVE
PHONE:

1993 Waste Type:
1993 Total Tonnage:

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

PERMIT

SEARCH ID: 22 **DIST/DIR:** 0.02 SW **ELEVATION:** 1080 **MAP ID:** 10

NAME: FOOD N FUEL
ADDRESS: 1055 WATERMAN AVE
SAN BERNARDINO CA 92410
SAN BERNARDINO
CONTACT:
SOURCE: SAN BERNARDINO CO HMD

REV: 02/11/04
ID1: 86009185
ID2:
STATUS: ACTIVE
PHONE:

COUNTY OF SAN BERNARDINO HAZARDOUS WASTE GENERATORS PERMITS INFORMATION:

Permit Category:	*HAZMAT HANDLER - UST ONLY*
Permit Number:	*PT0002416*
Status:	*ACTIVE*
Expiration Date:	*7/31/2007 12:00:00AM*
Facility Phone:	*909 8890828*
Owner Name:	*VICTORIA GUERNSEY INC*
Owner Address:	*P O BOX 5607*
Owner Address:	*SAN BERNARDINO CA 92412*
Owner Phone:	*909 8890828*

UST

SEARCH ID: 47 **DIST/DIR:** 0.02 SW **ELEVATION:** 1080 **MAP ID:** 10

NAME: VICTORIA GUERNSEY 6
ADDRESS: 1055 WATERMAN
SAN BERNARDINO CA 92410
San Bernardino
CONTACT:
SOURCE:

REV: 01/01/94
ID1: TISID-STATE40485
ID2:
STATUS: ACTIVE
PHONE:

UST HISTORICAL DATA

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Information from the FIDS/SWEEPS lists were included in this report search to help identify where underground storage tanks may have existed that were not recorded in CUPA databases or lists collected by us. This may occur if a tank was removed prior to development of recent CUPA UST lists or never registered with a CUPA.

LUST

SEARCH ID: 61 **DIST/DIR:** 0.02 SW **ELEVATION:** 1080 **MAP ID:** 10

NAME: VICTORIA GUERNSEY 6 (FOOD N FUEL)
ADDRESS: 1055 WATERMAN AVE NORTH
SAN BERNARDINO CA 92410
SAN BERNARDINO
CONTACT:
SOURCE: CA SWRCB

REV: 10/13/10
ID1: T0607199157
ID2:
STATUS: COMPLETED - CASE CLOSED
PHONE:

RELEASE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

Please note that some data previously provided by the State Water Resources Control Board in the LUSTIS database is not currently being provided by the agency in the most recent edition. Incidents that occurred after the year 2000 may not have much information. Field headers with blank information following after should be interpreted as unreported by the agency.

LEAD AGENCY: *SAN BERNARDINO COUNTY LOP*
REGIONAL BOARD CASE NUMBER: *083603696T*
LOCAL AGENCY: *SAN BERNARDINO COUNTY LOP*
LOCAL CASE NUMBER: *2000014*
RESPONSIBLE PARTY:
ADDRESS OF RESPONSIBLE PARTY:
SITE OPERATOR:
WATER SYSTEM:

CASE TYPE: *LUST Cleanup Site*
POTENTIAL CONTAMINANTS OF CONCERN: ** ETHYL TERT-BUTYL ETHER (ETBE), * * ETHYL TERT-BUTYL ETHER (ETBE), Gasoline, Fuel Oxygenates*
POTENTIAL MEDIA AFFECTED: *Soil*
LEAK CAUSE:
LEAK SOURCE:
HOW LEAK WAS DISCOVERED:
DATE DISCOVERED (blank if not reported):
HOW LEAK WAS STOPPED:
STOP DATE (blank if not reported):
STATUS: *Completed - Case Closed*
STATUS DATE: *2006-07-10*
ABATEMENT METHOD (please note that not all code translations have been provided by the reporting agency):
ENFORCEMENT TYPE (please note that not all code translations have been provided by the reporting agency):
DATE OF ENFORCEMENT (blank if not reported):
SITE HISTORY (blank if not reported):

ACTION TYPE (blank if not reported): *Other*
DATE (blank if not reported): *1950-01-01 00:00:00*
ACTION (blank if not reported): *Leak Discovery*

ACTION TYPE (blank if not reported): *Other*
DATE (blank if not reported): *1950-01-01 00:00:00*
ACTION (blank if not reported): *Leak Reported*

ACTION TYPE (blank if not reported): *Other*
DATE (blank if not reported): *1950-01-01 00:00:00*
ACTION (blank if not reported): *Leak Stopped*

ACTION TYPE (blank if not reported): *REMEDIATION*
DATE (blank if not reported): *1950-01-01 00:00:00*
ACTION (blank if not reported): *Excavate and Dispose*

ACTION TYPE (blank if not reported): *REMEDIATION*
DATE (blank if not reported): *1950-01-01 00:00:00*
ACTION (blank if not reported): *Vacuum Extract*

- Continued on next page -

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

LUST

SEARCH ID: 61 **DIST/DIR:** 0.02 SW **ELEVATION:** 1080 **MAP ID:** 10

NAME: VICTORIA GUERNSEY 6 (FOOD N FUEL)
ADDRESS: 1055 WATERMAN AVE NORTH
SAN BERNARDINO CA 92410
SAN BERNARDINO
CONTACT:
SOURCE: CA SWRCB

REV: 10/13/10
ID1: T0607199157
ID2:
STATUS: COMPLETED - CASE CLOSED
PHONE:

MTBE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

MTBE DATE(Date of historical maximum MTBE concentration):
MTBE GROUNDWATER CONCENTRATION (parts per billion):
MTBE SOIL CONCENTRATION (parts per million):
MTBE CNTS:
MTBE FUEL:
MTBE TESTED:
MTBE CLASS:

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

HWMANIFEST

SEARCH ID: 69 **DIST/DIR:** 0.02 SW **ELEVATION:** 1080 **MAP ID:** 10

NAME: FOOD N FUEL INC 6
ADDRESS: 1055 NORTH WATERMAN AVE
SAN BERNARDINO CA 92410
SAN BERNARDINO
CONTACT:
SOURCE: CA DTSC

REV: 02/19/10
ID1: CAL000326060
ID2:
STATUS: ACTIVE
PHONE:

DETAILS NOT AVAILABLE

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST
SAN BERNARDINO CA 92410

JOB: PYA1001

UST

SEARCH ID: 36 **DIST/DIR:** 0.02 SW **ELEVATION:** 1080 **MAP ID:** 10

NAME: FOOD N FUEL
ADDRESS: 1055 WATERMAN AVE
SAN BERNARDINO CA 92410
SAN BERNARDINO
CONTACT: VICTORIA GUERNSEY INC
SOURCE:

REV: 04/03/2002
ID1: SANBERDO86009185
ID2:
STATUS:
PHONE: 8890828

SAN BERNARDINO COUNTY TANKS LIST INFORMATION
According to the San Bernardino County Fire Dept. the following information is current as of 02/11/04

Number of Tanks: *3*
Permit Category: *UST OWNERSHIP/OPERATING PERMIT (PER UST)*
Permit Number: *PT0011981*
Description: *UST Ownership/Operating Permit (per UST)*
Status: *ACTIVE*
Expiration Date: *7/31/2004*
Owner Name: *VICTORIA GUERNSEY INC*
Owner Phone Number: *8890828*
Owner Address: *P O BOX 5607 SAN BERNARDINO, CA 92412*

SAN BERNARDINO COUNTY TANKS LIST INFORMATION
According to the San Bernardino County Fire Dept. the following information is current as of 02/11/04

Number of Tanks: *3*
Permit Category: *UST OWNERSHIP/OPERATING PERMIT (PER UST)*
Permit Number: *PT0011982*
Description: *UST Ownership/Operating Permit (per UST)*
Status: *ACTIVE*
Expiration Date: *7/31/2004*
Owner Name: *VICTORIA GUERNSEY INC*
Owner Phone Number: *8890828*
Owner Address: *P O BOX 5607 SAN BERNARDINO, CA 92412*

SAN BERNARDINO COUNTY TANKS LIST INFORMATION
According to the San Bernardino County Fire Dept. the following information is current as of 02/11/04

Number of Tanks: *3*
Permit Category: *UST OWNERSHIP/OPERATING PERMIT (PER UST)*
Permit Number: *PT0011983*
Description: *UST Ownership/Operating Permit (per UST)*
Status: *ACTIVE*
Expiration Date: *7/31/2004*
Owner Name: *VICTORIA GUERNSEY INC*
Owner Phone Number: *8890828*
Owner Address: *P O BOX 5607 SAN BERNARDINO, CA 92412*

- Continued on next page -

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

UST

SEARCH ID: 36 **DIST/DIR:** 0.02 SW **ELEVATION:** 1080 **MAP ID:** 10

NAME:	FOOD N FUEL	**REV:**	04/03/2002
ADDRESS:	1055 WATERMAN AVE	**ID1:**	SANBERDO86009185
	SAN BERNARDINO CA 92410	**ID2:**	
	SAN BERNARDINO	**STATUS:**	
CONTACT:	VICTORIA GUERNSEY INC	**PHONE:**	8890828
SOURCE:			

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

UST

SEARCH ID: 46 **DIST/DIR:** 0.02 NE **ELEVATION:** 1092 **MAP ID:** 11

NAME: UNOCAL 76 STN 1842
ADDRESS: 301 BASELINE
SAN BERNARDINO CA
San Bernardino
CONTACT:
SOURCE:

REV: 01/01/94
ID1: TISID-STATE39859
ID2:
STATUS: ACTIVE
PHONE:

UST HISTORICAL DATA

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HWMANIFEST

SEARCH ID: 67 **DIST/DIR:** 0.02 SE **ELEVATION:** 1092 **MAP ID:** 12

NAME: AUTO SPOT AUTO BODY
ADDRESS: 675 EAST BASE LINE STE ST
SAN BERNARDINO CA 92410
SAN BERNARDINO
CONTACT:
SOURCE: CA DTSC

REV: 02/19/10
ID1: CAL000287203
ID2:
STATUS: ACTIVE
PHONE:

DETAILS NOT AVAILABLE

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

UST

SEARCH ID: 41 **DIST/DIR:** 0.04 NW **ELEVATION:** 1092 **MAP ID:** 13

NAME:	LEE S MOBIL SERVICE CENTER	**REV:**	01/01/94
ADDRESS:	296 BASELINE	**ID1:**	TISID-STATE40627
	SAN BERNARDINO CA 91505	**ID2:**	
	San Bernardino	**STATUS:**	ACTIVE
CONTACT:		**PHONE:**	
SOURCE:			

UST HISTORICAL DATA

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Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

UST

SEARCH ID: 39 **DIST/DIR:** 0.04 NW **ELEVATION:** 1092 **MAP ID:** 13

NAME:	K and S ENTERPRISE	**REV:**	04/03/2002
ADDRESS:	296 E BASELINE	**ID1:**	SANBERDO86009168
	SAN BERNARDINO CA 92410	**ID2:**	
	SAN BERNARDINO	**STATUS:**	
CONTACT:	K/S ENT INC	**PHONE:**	8887976
SOURCE:			

SAN BERNARDINO COUNTY TANKS LIST INFORMATION

According to the San Bernardino County Fire Dept. the following information is current as of 02/11/04

Number of Tanks:	*4*
Permit Category:	*UST OWNERSHIP/OPERATING PERMIT (PER UST)*
Permit Number:	*PT0011964*
Description:	*UST Ownership/Operating Permit (per UST)*
Status:	*ACTIVE*
Expiration Date:	*11/30/2001*
Owner Name:	*BASELINE K/S ENTERPRISES, INC.*
Owner Phone Number:	
Owner Address:	*906 N WATERMAN AVE SAN BERNARDINO, CA 92410*

SAN BERNARDINO COUNTY TANKS LIST INFORMATION

According to the San Bernardino County Fire Dept. the following information is current as of 02/11/04

Number of Tanks:	*4*
Permit Category:	*UST OWNERSHIP/OPERATING PERMIT (PER UST)*
Permit Number:	*PT0011965*
Description:	*UST Ownership/Operating Permit (per UST)*
Status:	*ACTIVE*
Expiration Date:	*11/30/2001*
Owner Name:	*BASELINE K/S ENTERPRISES, INC.*
Owner Phone Number:	
Owner Address:	*906 N WATERMAN AVE SAN BERNARDINO, CA 92410*

SAN BERNARDINO COUNTY TANKS LIST INFORMATION

According to the San Bernardino County Fire Dept. the following information is current as of 02/11/04

Number of Tanks:	*4*
Permit Category:	*UST OWNERSHIP/OPERATING PERMIT (PER UST)*
Permit Number:	*PT0011966*
Description:	*UST Ownership/Operating Permit (per UST)*
Status:	*ACTIVE*
Expiration Date:	*11/30/2001*
Owner Name:	*BASELINE K/S ENTERPRISES, INC.*
Owner Phone Number:	
Owner Address:	*906 N WATERMAN AVE SAN BERNARDINO, CA 92410*

- Continued on next page -

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST
SAN BERNARDINO CA 92410

JOB: PYA1001

UST

SEARCH ID: 39 **DIST/DIR:** 0.04 NW **ELEVATION:** 1092 **MAP ID:** 13

NAME:	K and S ENTERPRISE	**REV:**	04/03/2002
ADDRESS:	296 E BASELINE	**ID1:**	SANBERDO86009168
	SAN BERNARDINO CA 92410	**ID2:**	
	SAN BERNARDINO	**STATUS:**	
CONTACT:	K/S ENT INC	**PHONE:**	8887976
SOURCE:			

SAN BERNARDINO COUNTY TANKS LIST INFORMATION
According to the San Bernardino County Fire Dept. the following information is current as of 02/11/04

Number of Tanks:	*4*
Permit Category:	*UST OWNERSHIP/OPERATING PERMIT (PER UST)*
Permit Number:	*PT0011967*
Description:	*UST Ownership/Operating Permit (per UST)*
Status:	*ACTIVE*
Expiration Date:	*11/30/2001*
Owner Name:	*BASELINE K/S ENTERPRISES, INC.*
Owner Phone Number:	
Owner Address:	*906 N WATERMAN AVE SAN BERNARDINO, CA 92410*

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

LUST

SEARCH ID: 56 **DIST/DIR:** 0.04 NW **ELEVATION:** 1092 **MAP ID:** 13

NAME: MOBIL 18-ELG
ADDRESS: 296 BASELINE ST
SAN BERNARDINO CA 92410
SAN BERNARDINO
CONTACT:
SOURCE: CA SWRCB

REV: 10/13/10
ID1: T0607100426
ID2:
STATUS: COMPLETED - CASE CLOSED
PHONE:

RELEASE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

Please note that some data previously provided by the State Water Resources Control Board in the LUSTIS database is not currently being provided by the agency in the most recent edition. Incidents that occurred after the year 2000 may not have much information. Field headers with blank information following after should be interpreted as unreported by the agency.

LEAD AGENCY: *SAN BERNARDINO COUNTY LOP*
REGIONAL BOARD CASE NUMBER: *083602896T*
LOCAL AGENCY: *SAN BERNARDINO COUNTY LOP*
LOCAL CASE NUMBER: *95017*
RESPONSIBLE PARTY:
ADDRESS OF RESPONSIBLE PARTY:
SITE OPERATOR:
WATER SYSTEM:

CASE TYPE: *LUST Cleanup Site*
POTENTIAL CONTAMINANTS OF CONCERN: *Gasoline, Fuel Oxygenates*
POTENTIAL MEDIA AFFECTED: *Aquifer used for drinking water supply*
LEAK CAUSE:
LEAK SOURCE:
HOW LEAK WAS DISCOVERED:
DATE DISCOVERED (blank if not reported):
HOW LEAK WAS STOPPED:
STOP DATE (blank if not reported):
STATUS: *Completed - Case Closed*
STATUS DATE: *2007-03-07*
ABATEMENT METHOD (please note that not all code translations have been provided by the reporting agency):
ENFORCEMENT TYPE (please note that not all code translations have been provided by the reporting agency):
DATE OF ENFORCEMENT (blank if not reported):
SITE HISTORY (blank if not reported):

ACTION TYPE (blank if not reported): *Other*
DATE (blank if not reported): *1950-01-01 00:00:00*
ACTION (blank if not reported): *Leak Discovery*

ACTION TYPE (blank if not reported): *Other*
DATE (blank if not reported): *1950-01-01 00:00:00*
ACTION (blank if not reported): *Leak Reported*

ACTION TYPE (blank if not reported): *REMEDIATION*
DATE (blank if not reported): *1950-01-01 00:00:00*
ACTION (blank if not reported): *Excavate and Dispose*

MTBE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

MTBE DATE(Date of historical maximum MTBE concentration):
MTBE GROUNDWATER CONCENTRATION (parts per billion):
MTBE SOIL CONCENTRATION (parts per million):
MTBE CNTS:
MTBE FUEL:
MTBE TESTED:
MTBE CLASS:

- Continued on next page -

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

LUST

SEARCH ID: 56 **DIST/DIR:** 0.04 NW **ELEVATION:** 1092 **MAP ID:** 13

NAME:	MOBIL 18-ELG	**REV:**	10/13/10
ADDRESS:	296 BASELINE ST	**ID1:**	T0607100426
	SAN BERNARDINO CA 92410	**ID2:**	
	SAN BERNARDINO	**STATUS:**	COMPLETED - CASE CLOSED
CONTACT:		**PHONE:**	
SOURCE:	CA SWRCB		

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

LUST

SEARCH ID: 57 **DIST/DIR:** 0.04 NW **ELEVATION:** 1092 **MAP ID:** 13

NAME: MOBIL 18-ELG
ADDRESS: 296 BASELINE ST
SAN BERNARDINO CA 92410
SAN BERNARDINO
CONTACT:
SOURCE: CA SWRCB

REV: 10/13/10
ID1: T0607100077
ID2:
STATUS: COMPLETED - CASE CLOSED
PHONE:

RELEASE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

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LEAD AGENCY: *SAN BERNARDINO COUNTY LOP*
REGIONAL BOARD CASE NUMBER: *083600735T*
LOCAL AGENCY: *SAN BERNARDINO COUNTY LOP*
LOCAL CASE NUMBER: *90206*
RESPONSIBLE PARTY:
ADDRESS OF RESPONSIBLE PARTY:
SITE OPERATOR:
WATER SYSTEM:

CASE TYPE: *LUST Cleanup Site*
POTENTIAL CONTAMINANTS OF CONCERN: *Gasoline*
POTENTIAL MEDIA AFFECTED: *Soil*
LEAK CAUSE:
LEAK SOURCE:
HOW LEAK WAS DISCOVERED:
DATE DISCOVERED (blank if not reported):
HOW LEAK WAS STOPPED:
STOP DATE (blank if not reported):
STATUS: *Completed - Case Closed*
STATUS DATE: *1991-10-28*
ABATEMENT METHOD (please note that not all code translations have been provided by the reporting agency):
ENFORCEMENT TYPE (please note that not all code translations have been provided by the reporting agency):
DATE OF ENFORCEMENT (blank if not reported):
SITE HISTORY (blank if not reported):

ACTION TYPE (blank if not reported): *Other*
DATE (blank if not reported): *1950-01-01 00:00:00*
ACTION (blank if not reported): *Leak Discovery*

ACTION TYPE (blank if not reported): *Other*
DATE (blank if not reported): *1950-01-01 00:00:00*
ACTION (blank if not reported): *Leak Reported*

MTBE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

MTBE DATE(Date of historical maximum MTBE concentration):
MTBE GROUNDWATER CONCENTRATION (parts per billion):
MTBE SOIL CONCENTRATION (parts per million):
MTBE CNTS:
MTBE FUEL:
MTBE TESTED:
MTBE CLASS:

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

UST

SEARCH ID: 42 **DIST/DIR:** 0.04 SE **ELEVATION:** 1090 **MAP ID:** 14

NAME:	QUIK SAVE OIL CO	**REV:**	01/01/94
ADDRESS:	709 BASELINE	**ID1:**	TISID-STATE39412
	SAN BERNARDINO CA 92412	**ID2:**	
	San Bernardino	**STATUS:**	ACTIVE
CONTACT:		**PHONE:**	
SOURCE:			

UST HISTORICAL DATA

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Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

PERMIT

SEARCH ID: 20 **DIST/DIR:** 0.05 NE **ELEVATION:** 1093 **MAP ID:** 15

NAME: ADAN S AUTO REPAIR
ADDRESS: 1223 PEPPER TREE LN
SAN BERNARDINO CA 92410
San Bernardino
CONTACT:
SOURCE: SAN BERNARDINO CO HMD

REV: 09/26/06
ID1: FA0010434
ID2:
STATUS: ACTIVE
PHONE:

COUNTY OF SAN BERNARDINO HAZARDOUS WASTE GENERATORS PERMITS INFORMATION:

Permit Category: *SPECIAL HANDLER*
Permit Number: *PT0017745*
Status: *ACTIVE*
Expiration Date: *5/31/2007 12:00:00AM*
Facility Phone:
Owner Name: *MARTINEZ, ADAN ALVARADO*
Owner Address:
Owner Address:
Owner Phone:

COUNTY OF SAN BERNARDINO HAZARDOUS WASTE GENERATORS PERMITS INFORMATION:

Permit Category: *SPECIAL GENERATOR(B)*
Permit Number: *PT0017746*
Status: *ACTIVE*
Expiration Date: *5/31/2007 12:00:00AM*
Facility Phone:
Owner Name: *MARTINEZ, ADAN ALVARADO*
Owner Address:
Owner Address:
Owner Phone:

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

PERMIT

SEARCH ID: 23 **DIST/DIR:** 0.05 NW **ELEVATION:** 1092 **MAP ID:** 16

NAME:	IM-PRESS PRINTING	**REV:**	02/11/04
ADDRESS:	265 E BASELINE AVE	**ID1:**	87013081
	SAN BERNARDINO CA 92410	**ID2:**	
	SAN BERNARDINO	**STATUS:**	ACTIVE
CONTACT:		**PHONE:**	
SOURCE:	SAN BERNARDINO CO HMD		

COUNTY OF SAN BERNARDINO HAZARDOUS WASTE GENERATORS PERMITS INFORMATION:

Permit Category:	*HAZMAT HANDLER 0-10 EMPLOYEES*
Permit Number:	*PT0003248*
Status:	*ACTIVE*
Expiration Date:	*8/31/2007 12:00:00AM*
Facility Phone:	*909 8841121*
Owner Name:	*IM-PRESS PRINTING*
Owner Address:	*265 E BASELINE AV*
Owner Address:	*SAN BERNARDINO CA 92410*
Owner Phone:	*0000000*

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

PERMIT

SEARCH ID: 77 **DIST/DIR:** 0.06 NE **ELEVATION:** **MAP ID:** 17

NAME:	M. K. AUTO REPAIR and LUBE	**REV:**	09/26/06
ADDRESS:	1232 N PEPPER TREE LN	**ID1:**	FA0008319
	SAN BERNARDINO CA 92410	**ID2:**	
	SAN BERNARDINO	**STATUS:**	PENDING
CONTACT:		**PHONE:**	
SOURCE:	SAN BERNARDINO CO HMD		

COUNTY OF SAN BERNARDINO HAZARDOUS WASTE GENERATORS PERMITS INFORMATION:

Permit Category:	*SPECIAL GENERATOR(B)*
Permit Number:	*PT0014550*
Status:	*PENDING*
Expiration Date:	*1/31/2006 12:00:00AM*
Facility Phone:	
Owner Name:	*SALAZAR, CESAR G.*
Owner Address:	
Owner Address:	
Owner Phone:	

COUNTY OF SAN BERNARDINO HAZARDOUS WASTE GENERATORS PERMITS INFORMATION:

Permit Category:	*SPECIAL HANDLER*
Permit Number:	*PT0014551*
Status:	*PENDING*
Expiration Date:	*1/31/2006 12:00:00AM*
Facility Phone:	
Owner Name:	*SALAZAR, CESAR G.*
Owner Address:	
Owner Address:	
Owner Phone:	

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

ERNS

SEARCH ID: 8 **DIST/DIR:** 0.07 SW **ELEVATION:** 1076 **MAP ID:** 18

NAME: SOUTHERN CALIFORNIA
ADDRESS: 999 NORTH WATERMAN
SAN BERNARDINO CA
San Bernardino
CONTACT:
SOURCE: EPA

REV: 9/25/97
ID1: 553203
ID2:
STATUS: FIXED FACILITY
PHONE:

SPILL INFORMATION

DATE OF SPILL: 9/25/1997 **TIME OF SPILL:** 2225

PRODUCT RELEASED (1): OIL, MISC: TRANSFORMER
QUANTITY (1): 150
UNITS (1): GAL

PRODUCT RELEASED (2):
QUANTITY (2):
UNITS (2):

PRODUCT RELEASED (3):
QUANTITY (3):
UNITS (3):

MEDIUM/MEDIA AFFECTED

AIR: NO **GROUNDWATER:** NO
LAND: NO **FIXED FACILITY:** NO
WATER: NO **OTHER:** YES
WATERBODY AFFECTED BY RELEASE: SOIL / STORM SEWER

CAUSE OF RELEASE

DUMPING: NO **EQUIPMENT FAILURE:** NO
NATURAL PHENOMENON: NO **OPERATOR ERROR:** NO
OTHER CAUSE: NO **TRANSP. ACCIDENT:** NO
UNKNOWN: NO

ACTIONS TAKEN: DEPLOYING SORBENTS TO SOAK UP MATERIAL
RELEASE DETECTION: 3 TRANSFORMERS ON AN H SHAPED STRUCTURE WERE KNOCKED DOWN DUE TO AN UNKNOWN CAUSE
MISC. NOTES: SOME MATERIAL WAS WASHED DOWN THE STORM SEWER BECAUSE OF RAIN TRANSFORMER OIL WAS NON PCB

DISCHARGER INFORMATION

DISCHARGER ID: 553203 **DUN and BRADSTREET :**
TYPE OF DISCHARGER: PRIVATE ENTERPRISE
NAME OF DISCHARGER: SOUTHERN CALIFORNIA
ADDRESS: 2244 WALNUT GROVE AVE
ROSEMEADE CA 91770

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

ERNS

SEARCH ID: 7 **DIST/DIR:** 0.07 SW **ELEVATION:** 1076 **MAP ID:** 18

NAME: SOUTHERN CA. GAS COMPANY
ADDRESS: 9 TH AND DON JULIAN INTERSECTION AVE
SAN BERNARDINO CA
SAN BERNARDINO
CONTACT:
SOURCE: EPA

REV: 9/24/1991
ID1: 232242
ID2:
STATUS: PIPELINE RELATED
PHONE:

SPILL INFORMATION
DATE OF SPILL: 9/24/1991 **TIME OF SPILL:** 1830

PRODUCT RELEASED (1): NATURAL GAS
QUANTITY (1): 0
UNITS (1):
CAUSE OF RELEASE
DUMPING: NO **EQUIPMENT FAILURE:** NO
NATURAL PHENOMENON: NO **OPERATOR ERROR:** NO
OTHER CAUSE: NO **TRANSP**

HWMANIFEST

SEARCH ID: 71 **DIST/DIR:** 0.08 SE **ELEVATION:** 1090 **MAP ID:** 19

NAME: LORTON S JUICE INC
ADDRESS: 735 EAST BASE LINE ST
SAN BERNARDINO CA 92410
SAN BERNARDINO
CONTACT:
SOURCE: CA DTSC

REV: 02/19/10
ID1: CAL000260109
ID2:
STATUS: ACTIVE
PHONE:

DETAILS NOT AVAILABLE

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

UST

SEARCH ID: 48 **DIST/DIR:** 0.08 SE **ELEVATION:** 1090 **MAP ID:** 19

NAME: VICTORIA GUERNSEY 7
ADDRESS: 735 BASELINE
SAN BERNARDINO CA 92410
San Bernardino
CONTACT:
SOURCE:

REV: 01/01/94
ID1: TISID-STATE7800
ID2:
STATUS: INACTIVE
PHONE:

UST HISTORICAL DATA

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HWMANIFEST

SEARCH ID: 73 **DIST/DIR:** 0.08 NW **ELEVATION:** 1096 **MAP ID:** 20

NAME: WALGREENS 10467
ADDRESS: 1236 NORTH WATERMAN AVE
SAN BERNARDINO CA 92404
SAN BERNARDINO
CONTACT:
SOURCE: CA DTSC

REV: 02/19/10
ID1: CAL000327753
ID2:
STATUS: ACTIVE
PHONE:

DETAILS NOT AVAILABLE

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

NFRAP

SEARCH ID: 1 **DIST/DIR:** 0.10 SW **ELEVATION:** 1076 **MAP ID:** 21

NAME: SAN BERNARDINO CHEMICAL
ADDRESS: 256 E. 10TH ST
SAN BERNARDINO CA 92410
SAN BERNARDINO
CONTACT:
SOURCE: EPA

REV: 8/31/10
ID1: CA0000195602
ID2: 0904998
STATUS: NFRAP-N
PHONE:

DESCRIPTION:
HAZARDOUS SUBSTANCES DISCOVERED AT RESIDENTIAL PROPERTY IN SOUTHERN CALIFORNIA.

ACTION/QUALITY	AGENCY/RPS	START/RAA	END
Notice Letters Issued	Federal Enforcement		4/8/1994
ISSUE REQ LTTRS (104e)	Federal Enforcement		4/26/1994
ARCHIVE SITE	EPA In-House		1/23/1996
ADMIN/VOLUNTARY COST RECOVERY	Federal Enforcement		2/2/1995
ADMINISTRATIVE RECORDS	EPA Fund-Financed	/1-94-4/23	4/23/1994
ADMIN RECORD COMPILED FOR A REMOVAL EVENT		Primary	
REMOVAL	EPA Fund-Financed	19-94-4/7/	4/15/1994
CLEANED UP	Primary		

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

LUST

SEARCH ID: 60 **DIST/DIR:** 0.14 NW **ELEVATION:** 1094 **MAP ID:** 22

NAME: UNITED OIL SS 36 (FAST GAS)
ADDRESS: 235 BASELINE ST
SAN BERNARDINO CA 92410
SAN BERNARDINO
CONTACT:
SOURCE: CA SWRCB

REV: 10/13/10
ID1: T0607100197
ID2:
STATUS: COMPLETED - CASE CLOSED
PHONE:

RELEASE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

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LEAD AGENCY: *SAN BERNARDINO COUNTY LOP*
REGIONAL BOARD CASE NUMBER: *083601661T*
LOCAL AGENCY: *SAN BERNARDINO COUNTY LOP*
LOCAL CASE NUMBER: *90205*
RESPONSIBLE PARTY:
ADDRESS OF RESPONSIBLE PARTY:
SITE OPERATOR:
WATER SYSTEM:

CASE TYPE: *LUST Cleanup Site*
POTENTIAL CONTAMINANTS OF CONCERN: *Gasoline*
POTENTIAL MEDIA AFFECTED: *Aquifer used for drinking water supply*
LEAK CAUSE:
LEAK SOURCE:
HOW LEAK WAS DISCOVERED:
DATE DISCOVERED (blank if not reported):
HOW LEAK WAS STOPPED:
STOP DATE (blank if not reported):
STATUS: *Completed - Case Closed*
STATUS DATE: *2002-11-20*
ABATEMENT METHOD (please note that not all code translations have been provided by the reporting agency):
ENFORCEMENT TYPE (please note that not all code translations have been provided by the reporting agency):
DATE OF ENFORCEMENT (blank if not reported):
SITE HISTORY (blank if not reported):

ACTION TYPE (blank if not reported): *ENFORCEMENT*
DATE (blank if not reported): *1989-02-14 00:00:00*
ACTION (blank if not reported): *Notice of Violation*

ACTION TYPE (blank if not reported): *ENFORCEMENT*
DATE (blank if not reported): *1988-08-14 00:00:00*
ACTION (blank if not reported): *Notice of Responsibility*

ACTION TYPE (blank if not reported): *ENFORCEMENT*
DATE (blank if not reported): *2002-11-20 00:00:00*
ACTION (blank if not reported): *Closure/No Further Action Letter*

ACTION TYPE (blank if not reported): *Other*
DATE (blank if not reported): *1950-01-01 00:00:00*
ACTION (blank if not reported): *Leak Discovery*

ACTION TYPE (blank if not reported): *Other*
DATE (blank if not reported): *1950-01-01 00:00:00*
ACTION (blank if not reported): *Leak Reported*

ACTION TYPE (blank if not reported): *REMEDIATION*

- Continued on next page -

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

LUST

SEARCH ID: 60 **DIST/DIR:** 0.14 NW **ELEVATION:** 1094 **MAP ID:** 22

NAME: UNITED OIL SS 36 (FAST GAS)
ADDRESS: 235 BASELINE ST
SAN BERNARDINO CA 92410
SAN BERNARDINO
CONTACT:
SOURCE: CA SWRCB

REV: 10/13/10
ID1: T0607100197
ID2:
STATUS: COMPLETED - CASE CLOSED
PHONE:

DATE (blank if not reported): *1950-01-01 00:00:00*
ACTION (blank if not reported): *Vacuum Extract*

MTBE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE
MTBE DATE(Date of historical maximum MTBE concentration):
MTBE GROUNDWATER CONCENTRATION (parts per billion):
MTBE SOIL CONCENTRATION (parts per million):
MTBE CNTS:
MTBE FUEL:
MTBE TESTED:
MTBE CLASS:

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

UST

SEARCH ID: 34 **DIST/DIR:** 0.14 NW **ELEVATION:** 1094 **MAP ID:** 22

NAME:	ECONO	**REV:**	01/01/94
ADDRESS:	235 BASE LINE	**ID1:**	TISID-STATE39604
	SAN BERNARDINO CA 92410	**ID2:**	
	San Bernardino	**STATUS:**	ACTIVE
CONTACT:		**PHONE:**	
SOURCE:			

UST HISTORICAL DATA

This site was listed in the FIDS Zip Code List as a UST site. The Office of Hazardous Data Management produced the FIDS list. The FIDS list is an index of names and locations of sites recorded in various California State environmental agency databases. It is sorted by zip code and as an index, details regarding the sites were never included.

The UST information included in FIDS as provided by the Office of Hazardous Data Management was originally collected from the SWEEPS database. The SWEEPS database recorded Underground Storage Tanks and was maintained by the State Water Resources Control Board (SWRCB). That agency no longer maintains the SWEEPS database and last updated it in 1994. The last release of that 1994 database was in 1997.

Oversight of Underground Storage Tanks within California is now conducted by Certified Unified Program Agencies referred to as CUPA s. There are approximately 102 CUPA s and Local Oversight Programs (LOP s) in the State of California. Most are city or county government agencies. As of 1998, all sites or facilities with underground storage tanks were required by Federal mandate to obtain certification by designated UST oversight agencies (in this case, CUPA s) that the UST/s at their location were upgraded or removed in adherence with the 1998 RCRA standards.

Information from the FIDS/SWEEPS lists were included in this report search to help identify where underground storage tanks may have existed that were not recorded in CUPA databases or lists collected by us. This may occur if a tank was removed prior to development of recent CUPA UST lists or never registered with a CUPA.

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST
SAN BERNARDINO CA 92410

JOB: PYA1001

UST

SEARCH ID: 45 **DIST/DIR:** 0.14 NW **ELEVATION:** 1094 **MAP ID:** 22

NAME: UNITED OIL 36
ADDRESS: 235 E BASELINE
SAN BERNARDINO CA 92415
SAN BERNARDINO
CONTACT: UNITED OIL
SOURCE:

REV: 04/03/2002
ID1: SANBERDO86009169
ID2:
STATUS:
PHONE: 8881544

SAN BERNARDINO COUNTY TANKS LIST INFORMATION
According to the San Bernardino County Fire Dept. the following information is current as of 02/11/04

Number of Tanks: *3*
Permit Category: *UST OWNERSHIP/OPERATING PERMIT (PER UST)*
Permit Number: *PT0011968*
Description: *UST Ownership/Operating Permit (per UST)*
Status: *ACTIVE*
Expiration Date: *7/31/2004*
Owner Name: *RAPID GAS, INC.*
Owner Phone Number: *3233992*
Owner Address: *18525 S MAIN ST GARDENA, CA 90248*

SAN BERNARDINO COUNTY TANKS LIST INFORMATION
According to the San Bernardino County Fire Dept. the following information is current as of 02/11/04

Number of Tanks: *3*
Permit Category: *UST OWNERSHIP/OPERATING PERMIT (PER UST)*
Permit Number: *PT0011969*
Description: *UST Ownership/Operating Permit (per UST)*
Status: *ACTIVE*
Expiration Date: *7/31/2004*
Owner Name: *RAPID GAS, INC.*
Owner Phone Number: *3233992*
Owner Address: *18525 S MAIN ST GARDENA, CA 90248*

SAN BERNARDINO COUNTY TANKS LIST INFORMATION
According to the San Bernardino County Fire Dept. the following information is current as of 02/11/04

Number of Tanks: *3*
Permit Category: *UST OWNERSHIP/OPERATING PERMIT (PER UST)*
Permit Number: *PT0011970*
Description: *UST Ownership/Operating Permit (per UST)*
Status: *ACTIVE*
Expiration Date: *7/31/2004*
Owner Name: *RAPID GAS, INC.*
Owner Phone Number: *3233992*
Owner Address: *18525 S MAIN ST GARDENA, CA 90248*

- Continued on next page -

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

UST

SEARCH ID: 45 **DIST/DIR:** 0.14 NW **ELEVATION:** 1094 **MAP ID:** 22

NAME:	UNITED OIL 36	**REV:**	04/03/2002
ADDRESS:	235 E BASELINE	**ID1:**	SANBERDO86009169
	SAN BERNARDINO CA 92415	**ID2:**	
	SAN BERNARDINO	**STATUS:**	
CONTACT:	UNITED OIL	**PHONE:**	8881544
SOURCE:			

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

UST

SEARCH ID: 43 **DIST/DIR:** 0.14 NE **ELEVATION:** 1090 **MAP ID:** 23

NAME: SCHAKELS ARCO
ADDRESS: 782 BASELINE
SAN BERNARDINO CA
San Bernardino
CONTACT:
SOURCE:

REV: 01/01/94
ID1: TISID-STATE7805
ID2:
STATUS: INACTIVE
PHONE:

UST HISTORICAL DATA

This site was listed in the FIDS Zip Code List as a UST site. The Office of Hazardous Data Management produced the FIDS list. The FIDS list is an index of names and locations of sites recorded in various California State environmental agency databases. It is sorted by zip code and as an index, details regarding the sites were never included.
The UST information included in FIDS as provided by the Office of Hazardous Data Management was originally collected from the SWEEPS database. The SWEEPS database recorded Underground Storage Tanks and was maintained by the State Water Resources Control Board (SWRCB). That agency no longer maintains the SWEEPS database and last updated it in 1994. The last release of that 1994 database was in 1997.
Oversight of Underground Storage Tanks within California is now conducted by Certified Unified Program Agencies referred to as CUPA s. There are approximately 102 CUPA s and Local Oversight Programs (LOP s) in the State of California. Most are city or county government agencies. As of 1998, all sites or facilities with underground storage tanks were required by Federal mandate to obtain certification by designated UST oversight agencies (in this case, CUPA s) that the UST/s at their location were upgraded or removed in adherence with the 1998 RCRA standards.
Information from the FIDS/SWEEPS lists were included in this report search to help identify where underground storage tanks may have existed that were not recorded in CUPA databases or lists collected by us. This may occur if a tank was removed prior to development of recent CUPA UST lists or never registered with a CUPA.

UST

SEARCH ID: 29 **DIST/DIR:** 0.15 NE **ELEVATION:** 1090 **MAP ID:** 24

NAME: ARCO PETROLEUM PROD 5266
ADDRESS: 790 BASELINE
SAN BERNARDINO CA
San Bernardino
CONTACT:
SOURCE:

REV: 01/01/94
ID1: TISID-STATE40904
ID2:
STATUS: ACTIVE
PHONE:

UST HISTORICAL DATA

This site was listed in the FIDS Zip Code List as a UST site. The Office of Hazardous Data Management produced the FIDS list. The FIDS list is an index of names and locations of sites recorded in various California State environmental agency databases. It is sorted by zip code and as an index, details regarding the sites were never included.
The UST information included in FIDS as provided by the Office of Hazardous Data Management was originally collected from the SWEEPS database. The SWEEPS database recorded Underground Storage Tanks and was maintained by the State Water Resources Control Board (SWRCB). That agency no longer maintains the SWEEPS database and last updated it in 1994. The last release of that 1994 database was in 1997.
Oversight of Underground Storage Tanks within California is now conducted by Certified Unified Program Agencies referred to as CUPA s. There are approximately 102 CUPA s and Local Oversight Programs (LOP s) in the State of California. Most are city or county government agencies. As of 1998, all sites or facilities with underground storage tanks were required by Federal mandate to obtain certification by designated UST oversight agencies (in this case, CUPA s) that the UST/s at their location were upgraded or removed in adherence with the 1998 RCRA standards.
Information from the FIDS/SWEEPS lists were included in this report search to help identify where underground storage tanks may have existed that were not recorded in CUPA databases or lists collected by us. This may occur if a tank was removed prior to development of recent CUPA UST lists or never registered with a CUPA.

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

LUST

SEARCH ID: 49 **DIST/DIR:** 0.16 NE **ELEVATION:** 1090 **MAP ID:** 25

NAME: ARCO 5266
ADDRESS: 794 BASELINE AVE
SAN BERNARDINO CA 92410
SAN BERNARDINO
CONTACT:
SOURCE: CA SWRCB

REV: 10/13/10
ID1: T0607100549
ID2:
STATUS: COMPLETED - CASE CLOSED
PHONE:

RELEASE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

Please note that some data previously provided by the State Water Resources Control Board in the LUSTIS database is not currently being provided by the agency in the most recent edition. Incidents that occurred after the year 2000 may not have much information. Field headers with blank information following after should be interpreted as unreported by the agency.

LEAD AGENCY: *SAN BERNARDINO COUNTY LOP*
REGIONAL BOARD CASE NUMBER: *083603392T*
LOCAL AGENCY: *SAN BERNARDINO COUNTY LOP*
LOCAL CASE NUMBER: *99034*
RESPONSIBLE PARTY:
ADDRESS OF RESPONSIBLE PARTY:
SITE OPERATOR:
WATER SYSTEM:

CASE TYPE: *LUST Cleanup Site*
POTENTIAL CONTAMINANTS OF CONCERN: *Gasoline*
POTENTIAL MEDIA AFFECTED: *Soil*
LEAK CAUSE:
LEAK SOURCE:
HOW LEAK WAS DISCOVERED:
DATE DISCOVERED (blank if not reported):
HOW LEAK WAS STOPPED:
STOP DATE (blank if not reported):
STATUS: *Completed - Case Closed*
STATUS DATE: *2008-10-21*
ABATEMENT METHOD (please note that not all code translations have been provided by the reporting agency):
ENFORCEMENT TYPE (please note that not all code translations have been provided by the reporting agency):
DATE OF ENFORCEMENT (blank if not reported):
SITE HISTORY (blank if not reported):

ACTION TYPE (blank if not reported): *ENFORCEMENT*
DATE (blank if not reported): *2008-07-03 00:00:00*
ACTION (blank if not reported): *Closure/No Further Action Letter*

ACTION TYPE (blank if not reported): *ENFORCEMENT*
DATE (blank if not reported): *2008-10-20 00:00:00*
ACTION (blank if not reported): *Closure/No Further Action Letter*

ACTION TYPE (blank if not reported): *ENFORCEMENT*
DATE (blank if not reported): *2008-06-19 00:00:00*
ACTION (blank if not reported): *LOP Case Closure Summary to RB*

ACTION TYPE (blank if not reported): *Other*
DATE (blank if not reported): *1950-01-01 00:00:00*
ACTION (blank if not reported): *Leak Discovery*

ACTION TYPE (blank if not reported): *Other*
DATE (blank if not reported): *1950-01-01 00:00:00*
ACTION (blank if not reported): *Leak Reported*

ACTION TYPE (blank if not reported): *REMEDIATION*

- Continued on next page -

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

LUST

SEARCH ID: 49 **DIST/DIR:** 0.16 NE **ELEVATION:** 1090 **MAP ID:** 25

NAME: ARCO 5266
ADDRESS: 794 BASELINE AVE
SAN BERNARDINO CA 92410
SAN BERNARDINO
CONTACT:
SOURCE: CA SWRCB

REV: 10/13/10
ID1: T0607100549
ID2:
STATUS: COMPLETED - CASE CLOSED
PHONE:

DATE (blank if not reported): *1950-01-01 00:00:00*
ACTION (blank if not reported): *Soil Vapor Extraction w/Other*

MTBE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE
MTBE DATE(Date of historical maximum MTBE concentration):
MTBE GROUNDWATER CONCENTRATION (parts per billion):
MTBE SOIL CONCENTRATION (parts per million):
MTBE CNTS:
MTBE FUEL:
MTBE TESTED:
MTBE CLASS:

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST
SAN BERNARDINO CA 92410

JOB: PYA1001

UST

SEARCH ID: 30 **DIST/DIR:** 0.16 NE **ELEVATION:** 1090 **MAP ID:** 25

NAME: ARCO PETROLEUM PROD 5266
ADDRESS: 794 BASELINE
SAN BERNARDINO CA 92408
SAN BERNARDINO
CONTACT: ARCO PETROLEUM PROD CO
SOURCE:

REV: 04/03/2002
ID1: SANBERDO86011373
ID2:
STATUS:
PHONE: 0000000

SAN BERNARDINO COUNTY TANKS LIST INFORMATION
According to the San Bernardino County Fire Dept. the following information is current as of 02/11/04

Number of Tanks: *3*
Permit Category: *UST OWNERSHIP/OPERATING PERMIT (PER UST)*
Permit Number: *PT0011461*
Description: *UST Ownership/Operating Permit (per UST)*
Status: *ACTIVE*
Expiration Date: *7/31/2004*
Owner Name: *BP WEST COAST PRODUCTS LLC*
Owner Phone Number: *6705402*
Owner Address: *P O BOX 6038 ARTESIA, CA 907026038*

SAN BERNARDINO COUNTY TANKS LIST INFORMATION
According to the San Bernardino County Fire Dept. the following information is current as of 02/11/04

Number of Tanks: *3*
Permit Category: *UST OWNERSHIP/OPERATING PERMIT (PER UST)*
Permit Number: *PT0011462*
Description: *UST Ownership/Operating Permit (per UST)*
Status: *ACTIVE*
Expiration Date: *7/31/2004*
Owner Name: *BP WEST COAST PRODUCTS LLC*
Owner Phone Number: *6705402*
Owner Address: *P O BOX 6038 ARTESIA, CA 907026038*

SAN BERNARDINO COUNTY TANKS LIST INFORMATION
According to the San Bernardino County Fire Dept. the following information is current as of 02/11/04

Number of Tanks: *3*
Permit Category: *UST OWNERSHIP/OPERATING PERMIT (PER UST)*
Permit Number: *PT0011463*
Description: *UST Ownership/Operating Permit (per UST)*
Status: *ACTIVE*
Expiration Date: *7/31/2004*
Owner Name: *BP WEST COAST PRODUCTS LLC*
Owner Phone Number: *6705402*
Owner Address: *P O BOX 6038 ARTESIA, CA 907026038*

- Continued on next page -

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

UST

SEARCH ID: 30 **DIST/DIR:** 0.16 NE **ELEVATION:** 1090 **MAP ID:** 25

NAME:	ARCO PETROLEUM PROD 5266	**REV:**	04/03/2002
ADDRESS:	794 BASELINE	**ID1:**	SANBERDO86011373
	SAN BERNARDINO CA 92408	**ID2:**	
	SAN BERNARDINO	**STATUS:**	
CONTACT:	ARCO PETROLEUM PROD CO	**PHONE:**	0000000
SOURCE:			

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

SWL

SEARCH ID: 15 **DIST/DIR:** 0.18 NW **ELEVATION:** **MAP ID:** 26

NAME: EL TORO II TIRE SHOP
ADDRESS: 207 E. BASELINE
SAN BERNARDINO CA 92410
SAN BERNARDINO
CONTACT:
SOURCE:

REV: 01/19/05
ID1: SWIS36-TI-0934
ID2:
STATUS: ACTIVE
PHONE:

SITE OPERATOR INFORMATION:

SITE OPERATOR INFORMATION:

Operator: *El Toro Ii Tire Shop*
Operator Address: *207 E. Baseline Street San Bernardino CA 92410*
Permit Date:
Permit Status:
Land Use Name:
GIS Source for LAT and LONG: *Map*

Operator: *El Toro Ii Tire Shop*
Operator Address: *207 E. Baseline Street San Bernardino CA 92410*
Permit Date:
Permit Status:
Land Use Name:
GIS Source for LAT and LONG: *Map*

SITE ACTIVITY INFORMATION:

SITE ACTIVITY INFORMATION:

Activity: *Tire Dealer*
Accepted Waste: *Tires*
Operational Status: *Active*
Regulatory Status *Unpermitted*
Closure Date:
Closure Type:
Permitted Throughput with Units: *0 Tires*
Permitted Capacity with Units: *0*
Remaining Capacity with Units (landfills only):
Permitted Total Acreage: *0*
Permitted Disposal Acreage:
Last Tire Inspection Count: *0*
Last Tire Inspection Count Date: *12/17/1998*
Original Tire Inspection Count: *1700*
Last Tire Inspection Count Date: *12/17/1998*
Inspection Frequency: *None*

Activity: *Tire Dealer*
Accepted Waste: *Tires*
Operational Status: *Active*
Regulatory Status *Unpermitted*
Closure Date:
Closure Type:
Permitted Throughput with Units: *0 Tires*
Permitted Capacity with Units: *0*

- Continued on next page -

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

SWL

SEARCH ID: 15 **DIST/DIR:** 0.18 NW **ELEVATION:** **MAP ID:** 26

NAME: EL TORO II TIRE SHOP
ADDRESS: 207 E. BASELINE
SAN BERNARDINO CA 92410
SAN BERNARDINO
CONTACT:
SOURCE:

REV: 01/19/05
ID1: SWIS36-TI-0934
ID2:
STATUS: ACTIVE
PHONE:

Remaining Capacity with Units (landfills only):
Permitted Total Acreage: *0*
Permitted Disposal Acreage:
Last Tire Inspection Count: *0*
Last Tire Inspection Count Date: *12/17/1998*
Original Tire Inspection Count: *1700*
Last Tire Inspection Count Date: *12/17/1998*
Inspection Frequency: *None*

SITE OWNER INFORMATION:

SITE OWNER INFORMATION:

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

UST

SEARCH ID: 32 **DIST/DIR:** 0.18 SW **ELEVATION:** 1066 **MAP ID:** 27

NAME: BUY RITE GAS
ADDRESS: 906 N WATERMAN AVE
SAN BERNARDINO CA 92410
San Bernardino
CONTACT: KHOURI, VICTOR J
SOURCE:

REV: 07/06/2000
ID1: SANBERDO86009184
ID2:
STATUS: NUM OF TANKS: 3
PHONE: 909 8887279

SAN BERNARDINO COUNTY TANKS LIST INFORMATION

Number of Tanks: *3*
Permit Number: *9212021858*
Permit Category: *222800*
Owner Name: *KHOURI, VICTOR J*
Owner Phone Number:
Owner Address: *27281 E BASELINE ST HIGHLAND, CA 92346*

LUST

SEARCH ID: 51 **DIST/DIR:** 0.18 SW **ELEVATION:** 1066 **MAP ID:** 27

NAME: BUY RITE GAS
ADDRESS: 906 N. WATERMAN AVE
SAN BERNARDINO CA 92410
SAN BERNARDINO
CONTACT:
SOURCE: CA SWRCB

REV: 06/31/01
ID1: 2000032A
ID2:
STATUS: PRELIM. SITE ASSES. WKPLN SUBM
PHONE:

CASE TYPE: *UNDEFINED*
SUBSTANCE LEAKED: *GASOLINE*
SUBSTANCE QUANTITY:
LEAD AGENCY: *REGIONAL BOARD*
REGIONAL BOARD: *SANTA ANA REGION*
STATUS: *PRELIM. SITE ASSES. WKPLN SUBMITTED*
ABATEMENT METHOD:
REVIEW DATE:
DATE OF LEAK CONFIRMATION:
DATE PRELIMINARY SITE ASSESSMENT PLAN WAS SUBMITTED: *5/23/01*
DATE PRELIMINARY SITE ASSESSMENT PLAN BEGAN:
DATE POLLUTION CHARACTERIZATION PLAN BEGAN:

DATE REMEDIATION PLAN WAS SUBMITTED:

DATE REMEDIAL ACTION UNDERWAY:
DATE POST REMEDIAL ACTION MONITORING BEGAN:
DATE CLOSURE LETTER ISSUED (SITE CLOSED):
REPORT DATE: *10/25/00*

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST
SAN BERNARDINO CA 92410

JOB: PYA1001

LUST

SEARCH ID: 52 **DIST/DIR:** 0.18 SW **ELEVATION:** 1066 **MAP ID:** 27

NAME: BUY RITE GAS
ADDRESS: 906 WATERMAN AVE
SAN BERNARDINO CA 92410
SAN BERNARDINO
CONTACT:
SOURCE: CA SWRCB

REV: 10/13/10
ID1: T0607199291
ID2:
STATUS: COMPLETED - CASE CLOSED
PHONE:

RELEASE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

Please note that some data previously provided by the State Water Resources Control Board in the LUSTIS database is not currently being provided by the agency in the most recent edition. Incidents that occurred after the year 2000 may not have much information. Field headers with blank information following after should be interpreted as unreported by the agency.

LEAD AGENCY: *SAN BERNARDINO COUNTY LOP*
REGIONAL BOARD CASE NUMBER: *083603802T*
LOCAL AGENCY: *SAN BERNARDINO COUNTY LOP*
LOCAL CASE NUMBER: *2000032*
RESPONSIBLE PARTY:
ADDRESS OF RESPONSIBLE PARTY:
SITE OPERATOR:
WATER SYSTEM:

CASE TYPE: *LUST Cleanup Site*
POTENTIAL CONTAMINANTS OF CONCERN: *Gasoline, Fuel Oxygenates*
POTENTIAL MEDIA AFFECTED: *Aquifer used for drinking water supply*
LEAK CAUSE:
LEAK SOURCE:
HOW LEAK WAS DISCOVERED:
DATE DISCOVERED (blank if not reported):
HOW LEAK WAS STOPPED:
STOP DATE (blank if not reported):
STATUS: *Completed - Case Closed*
STATUS DATE: *2009-02-05*
ABATEMENT METHOD (please note that not all code translations have been provided by the reporting agency):
ENFORCEMENT TYPE (please note that not all code translations have been provided by the reporting agency):
DATE OF ENFORCEMENT (blank if not reported):
SITE HISTORY (blank if not reported):

ACTION TYPE (blank if not reported): *ENFORCEMENT*
DATE (blank if not reported): *2008-11-17 00:00:00*
ACTION (blank if not reported): *Staff Letter*

ACTION TYPE (blank if not reported): *ENFORCEMENT*
DATE (blank if not reported): *2008-11-05 00:00:00*
ACTION (blank if not reported): *Notification - Fee Title Owners Notice*

ACTION TYPE (blank if not reported): *ENFORCEMENT*
DATE (blank if not reported): *2009-02-05 00:00:00*
ACTION (blank if not reported): *Closure/No Further Action Letter - 2000032*

ACTION TYPE (blank if not reported): *Other*
DATE (blank if not reported): *1950-01-01 00:00:00*
ACTION (blank if not reported): *Leak Discovery*

ACTION TYPE (blank if not reported): *Other*
DATE (blank if not reported): *1950-01-01 00:00:00*
ACTION (blank if not reported): *Leak Reported*

ACTION TYPE (blank if not reported): *Other*

- Continued on next page -

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

LUST

SEARCH ID: 52 **DIST/DIR:** 0.18 SW **ELEVATION:** 1066 **MAP ID:** 27

NAME: BUY RITE GAS
ADDRESS: 906 WATERMAN AVE
SAN BERNARDINO CA 92410
SAN BERNARDINO
CONTACT:
SOURCE: CA SWRCB

REV: 10/13/10
ID1: T0607199291
ID2:
STATUS: COMPLETED - CASE CLOSED
PHONE:

DATE (blank if not reported): *1950-01-01 00:00:00*
ACTION (blank if not reported): *Leak Stopped*

ACTION TYPE (blank if not reported): *REMEDIATION*
DATE (blank if not reported): *1950-01-01 00:00:00*
ACTION (blank if not reported): *Soil Vapor Extraction w/Catalytic Oxidation*

ACTION TYPE (blank if not reported): *REMEDIATION*
DATE (blank if not reported): *1950-01-01 00:00:00*
ACTION (blank if not reported): *Soil Vapor Extraction w/Catalytic Oxidation*

ACTION TYPE (blank if not reported): *REMEDIATION*
DATE (blank if not reported): *1950-01-01 00:00:00*
ACTION (blank if not reported): *Excavate and Dispose*

ACTION TYPE (blank if not reported): *RESPONSE*
DATE (blank if not reported): *2008-10-31 00:00:00*
ACTION (blank if not reported): *CASE CLOSURE EVALUATION*

MTBE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE
MTBE DATE(Date of historical maximum MTBE concentration):
MTBE GROUNDWATER CONCENTRATION (parts per billion):
MTBE SOIL CONCENTRATION (parts per million):
MTBE CNTS:
MTBE FUEL:
MTBE TESTED:
MTBE CLASS:

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

LUST

SEARCH ID: 53 **DIST/DIR:** 0.18 SW **ELEVATION:** 1066 **MAP ID:** 27

NAME: BUY RITE GASOLINE
ADDRESS: 906 N. WATERMAN AVE
SAN BERNARDINO CA 92415
SAN BERNARDINO
CONTACT:
SOURCE: CA SWRCB

REV: 06/31/01
ID1: 2000032B
ID2:
STATUS: NO ACTION
PHONE:

CASE TYPE: *UNDEFINED*
SUBSTANCE LEAKED: *GASOLINE*
SUBSTANCE QUANTITY:
LEAD AGENCY: *REGIONAL BOARD*
REGIONAL BOARD: *SANTA ANA REGION*
STATUS: *NO ACTION*
ABATEMENT METHOD:
REVIEW DATE:
DATE OF LEAK CONFIRMATION:
DATE PRELIMINARY SITE ASSESSMENT PLAN WAS SUBMITTED:
DATE PRELIMINARY SITE ASSESSMENT PLAN BEGAN:
DATE POLLUTION CHARACTERIZATION PLAN BEGAN:

DATE REMEDIATION PLAN WAS SUBMITTED:

DATE REMEDIAL ACTION UNDERWAY:
DATE POST REMEDIAL ACTION MONITORING BEGAN:
DATE CLOSURE LETTER ISSUED (SITE CLOSED):
REPORT DATE: *5/16/01*

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

UST

SEARCH ID: 44 **DIST/DIR:** 0.18 SW **ELEVATION:** 1066 **MAP ID:** 27

NAME: SHELL STATION 1229
ADDRESS: 906 WATERMAN
SAN BERNARDINO CA 92410
San Bernardino
CONTACT:
SOURCE:

REV: 01/01/94
ID1: TISID-STATE39511
ID2:
STATUS: ACTIVE
PHONE:

UST HISTORICAL DATA

This site was listed in the FIDS Zip Code List as a UST site. The Office of Hazardous Data Management produced the FIDS list. The FIDS list is an index of names and locations of sites recorded in various California State environmental agency databases. It is sorted by zip code and as an index, details regarding the sites were never included.
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Information from the FIDS/SWEEPS lists were included in this report search to help identify where underground storage tanks may have existed that were not recorded in CUPA databases or lists collected by us. This may occur if a tank was removed prior to development of recent CUPA UST lists or never registered with a CUPA.

UST

SEARCH ID: 40 **DIST/DIR:** 0.18 SE **ELEVATION:** 1088 **MAP ID:** 28

NAME: KAM SHELL
ADDRESS: 799 BASELINE
SAN BERNADINO CA 90749
Los Angeles
CONTACT:
SOURCE:

REV: 01/01/94
ID1: TISID-STATE40078
ID2:
STATUS: ACTIVE
PHONE:

UST HISTORICAL DATA

This site was listed in the FIDS Zip Code List as a UST site. The Office of Hazardous Data Management produced the FIDS list. The FIDS list is an index of names and locations of sites recorded in various California State environmental agency databases. It is sorted by zip code and as an index, details regarding the sites were never included.
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Information from the FIDS/SWEEPS lists were included in this report search to help identify where underground storage tanks may have existed that were not recorded in CUPA databases or lists collected by us. This may occur if a tank was removed prior to development of recent CUPA UST lists or never registered with a CUPA.

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

LUST

SEARCH ID: 55 **DIST/DIR:** 0.18 SE **ELEVATION:** 1091 **MAP ID:** 28

NAME: KAM SHELL
ADDRESS: 799 BASELINE
SAN BERNARDINO CA 92410
SAN BERNARDINO
CONTACT:
SOURCE: CA SWRCB

REV: 10/13/10
ID1: T0607100564
ID2:
STATUS: COMPLETED - CASE CLOSED
PHONE:

RELEASE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

Please note that some data previously provided by the State Water Resources Control Board in the LUSTIS database is not currently being provided by the agency in the most recent edition. Incidents that occurred after the year 2000 may not have much information. Field headers with blank information following after should be interpreted as unreported by the agency.

LEAD AGENCY: *SAN BERNARDINO COUNTY LOP*
REGIONAL BOARD CASE NUMBER: *083603422T*
LOCAL AGENCY: *SAN BERNARDINO COUNTY LOP*
LOCAL CASE NUMBER: *99045*
RESPONSIBLE PARTY:
ADDRESS OF RESPONSIBLE PARTY:
SITE OPERATOR:
WATER SYSTEM:

CASE TYPE: *LUST Cleanup Site*
POTENTIAL CONTAMINANTS OF CONCERN: *Gasoline, Fuel Oxygenates*
POTENTIAL MEDIA AFFECTED: *Soil*
LEAK CAUSE:
LEAK SOURCE:
HOW LEAK WAS DISCOVERED:
DATE DISCOVERED (blank if not reported):
HOW LEAK WAS STOPPED:
STOP DATE (blank if not reported):
STATUS: *Completed - Case Closed*
STATUS DATE: *2007-06-01*
ABATEMENT METHOD (please note that not all code translations have been provided by the reporting agency):
ENFORCEMENT TYPE (please note that not all code translations have been provided by the reporting agency):
DATE OF ENFORCEMENT (blank if not reported):
SITE HISTORY (blank if not reported):

ACTION TYPE (blank if not reported): *Other*
DATE (blank if not reported): *1950-01-01 00:00:00*
ACTION (blank if not reported): *Leak Discovery*

ACTION TYPE (blank if not reported): *Other*
DATE (blank if not reported): *1950-01-01 00:00:00*
ACTION (blank if not reported): *Leak Reported*

ACTION TYPE (blank if not reported): *Other*
DATE (blank if not reported): *1950-01-01 00:00:00*
ACTION (blank if not reported): *Leak Stopped*

ACTION TYPE (blank if not reported): *REMEDIATION*
DATE (blank if not reported): *1950-01-01 00:00:00*
ACTION (blank if not reported): *Vacuum Extract*

MTBE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

MTBE DATE(Date of historical maximum MTBE concentration):
MTBE GROUNDWATER CONCENTRATION (parts per billion):
MTBE SOIL CONCENTRATION (parts per million):
MTBE CNTS:

- Continued on next page -

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

LUST

SEARCH ID: 55 **DIST/DIR:** 0.18 SE **ELEVATION:** 1091 **MAP ID:** 28

NAME: KAM SHELL
ADDRESS: 799 BASELINE
SAN BERNARDINO CA 92410
SAN BERNARDINO
CONTACT:
SOURCE: CA SWRCB

REV: 10/13/10
ID1: T0607100564
ID2:
STATUS: COMPLETED - CASE CLOSED
PHONE:

MTBE FUEL:
MTBE TESTED:
MTBE CLASS:

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

RCRAGN

SEARCH ID: 4 **DIST/DIR:** 0.20 SW **ELEVATION:** 1063 **MAP ID:** 29

NAME:	MIDNIGHT AUTO RECYCLERS and PICK-A-PART SB	**REV:**	7/14/10
ADDRESS:	407 E 9TH ST SAN BERNARDINO CA 92410 SAN BERNARDINO	**ID1:**	CAR000071001
		ID2:	
		STATUS:	SGN
CONTACT:		**PHONE:**	
SOURCE:	EPA		

SITE INFORMATION

CONTACT INFORMATION: VICTOR LABRECQUE
407 E 9TH ST
SAN BERNARDINO CA 92410

PHONE: 9098845308

UNIVERSE INFORMATION:

NAIC INFORMATION

44131 - AUTOMOTIVE PARTS AND ACCESSORIES STORES

ENFORCEMENT INFORMATION:

VIOLATION INFORMATION:

HAZARDOUS WASTE INFORMATION:

Tetrachloroethylene
D000

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

SWL

SEARCH ID: 17 **DIST/DIR:** 0.20 NE **ELEVATION:** **MAP ID:** 30

NAME: UNIVERSAL TIRE SHOP
ADDRESS: 826 EAST BASELINE STR
SAN BERNARDINO CA 92410
SAN BERNARDINO
CONTACT:
SOURCE:

REV: 01/19/05
ID1: SWIS36-TI-0118
ID2:
STATUS: ACTIVE
PHONE:

SITE OPERATOR INFORMATION:

SITE OPERATOR INFORMATION:

Operator: *Universal Tire Shop*
Operator Address: *826 East Baseline Str San Bernardino CA 92410-3915*
Permit Date: *6/16/1998*
Permit Status: *Revoked*
Land Use Name: *Commercial*
GIS Source for LAT and LONG: *Map*

Operator: *Universal Tire Shop*
Operator Address: *826 East Baseline Str San Bernardino CA 92410-3915*
Permit Date: *6/16/1998*
Permit Status: *Revoked*
Land Use Name: *Commercial*
GIS Source for LAT and LONG: *Map*

SITE ACTIVITY INFORMATION:

SITE ACTIVITY INFORMATION:

Activity: *Tire Dealer*
Accepted Waste: *Tires, Cut,Tires, Passenger,Tires, Split,Tires, Truck*
Operational Status: *Active*
Regulatory Status *Excluded*
Closure Date:
Closure Type:
Permitted Throughput with Units: *1500 Tires*
Permitted Capacity with Units: *0 Tires*
Remaining Capacity with Units (landfills only):
Permitted Total Acreage: *0*
Permitted Disposal Acreage:
Last Tire Inspection Count: *0*
Last Tire Inspection Count Date: *3/2/1995*
Original Tire Inspection Count: *1500*
Last Tire Inspection Count Date: *3/22/1995*
Inspection Frequency: *30 Months*

Activity: *Tire Dealer*
Accepted Waste: *Tires, Cut,Tires, Passenger,Tires, Split,Tires, Truck*
Operational Status: *Active*
Regulatory Status *Excluded*
Closure Date:
Closure Type:
Permitted Throughput with Units: *1500 Tires*
Permitted Capacity with Units: *0 Tires*

- Continued on next page -

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

SWL

SEARCH ID: 17 **DIST/DIR:** 0.20 NE **ELEVATION:** **MAP ID:** 30

NAME: UNIVERSAL TIRE SHOP
ADDRESS: 826 EAST BASELINE STR
SAN BERNARDINO CA 92410
SAN BERNARDINO
CONTACT:
SOURCE:

REV: 01/19/05
ID1: SWIS36-TI-0118
ID2:
STATUS: ACTIVE
PHONE:

Remaining Capacity with Units (landfills only):
Permitted Total Acreage: *0*
Permitted Disposal Acreage:
Last Tire Inspection Count: *0*
Last Tire Inspection Count Date: *3/2/1995*
Original Tire Inspection Count: *1500*
Last Tire Inspection Count Date: *3/22/1995*
Inspection Frequency: *30 Months*

SITE OWNER INFORMATION:

SITE OWNER INFORMATION:

Owner: *Universal Tire Shop*
Owner Phone: *9098862531*
Owner Address: *747 Grendamn Way*

Owner: *Universal Tire Shop*
Owner Phone: *9098862531*
Owner Address: *747 Grendamn Way*

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

SWL

SEARCH ID: 18 **DIST/DIR:** 0.20 SE **ELEVATION:** **MAP ID:** 31

NAME: ZAPATA TIRE and RIM UNLIMITED
ADDRESS: 803 E. BASELINE
SAN BERNARDINO CA 92410
SAN BERNARDINO
CONTACT:
SOURCE:

REV: 01/19/05
ID1: SWIS36-TI-0532
ID2:
STATUS: ACTIVE
PHONE:

SITE OPERATOR INFORMATION:

SITE OPERATOR INFORMATION:

Operator: *Zapata Tire and Rim Unlimited*
Operator Address: *803 E. Baseline San Bernardino CA 92410*
Permit Date:
Permit Status:
Land Use Name: *Residential,Commercial*
GIS Source for LAT and LONG: *Map*

Operator: *Zapata Tire and Rim Unlimited*
Operator Address: *803 E. Baseline San Bernardino CA 92410*
Permit Date:
Permit Status:
Land Use Name: *Residential,Commercial*
GIS Source for LAT and LONG: *Map*

SITE ACTIVITY INFORMATION:

SITE ACTIVITY INFORMATION:

Activity: *Tire Dealer*
Accepted Waste: *Tires, Passenger*
Operational Status: *Active*
Regulatory Status *Excluded*
Closure Date:
Closure Type:
Permitted Throughput with Units: *1500 Tires*
Permitted Capacity with Units: *0*
Remaining Capacity with Units (landfills only):
Permitted Total Acreage: *0*
Permitted Disposal Acreage:
Last Tire Inspection Count: *0*
Last Tire Inspection Count Date: *12/17/1998*
Original Tire Inspection Count: *501*
Last Tire Inspection Count Date: *2/18/1999*
Inspection Frequency: *30 Months*

Activity: *Tire Dealer*
Accepted Waste: *Tires, Passenger*
Operational Status: *Active*
Regulatory Status *Excluded*
Closure Date:
Closure Type:
Permitted Throughput with Units: *1500 Tires*
Permitted Capacity with Units: *0*

- Continued on next page -

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

SWL

SEARCH ID: 18 **DIST/DIR:** 0.20 SE **ELEVATION:** **MAP ID:** 31

NAME: ZAPATA TIRE and RIM UNLIMITED
ADDRESS: 803 E. BASELINE
SAN BERNARDINO CA 92410
SAN BERNARDINO
CONTACT:
SOURCE:

REV: 01/19/05
ID1: SWIS36-TI-0532
ID2:
STATUS: ACTIVE
PHONE:

Remaining Capacity with Units (landfills only):
Permitted Total Acreage: *0*
Permitted Disposal Acreage:
Last Tire Inspection Count: *0*
Last Tire Inspection Count Date: *12/17/1998*
Original Tire Inspection Count: *501*
Last Tire Inspection Count Date: *2/18/1999*
Inspection Frequency: *30 Months*

SITE OWNER INFORMATION:

SITE OWNER INFORMATION:

Owner: *Zapata Tires*
Owner Phone:
Owner Address: *P.O.Box 1308*

Owner: *Zapata Tires*
Owner Phone:
Owner Address: *P.O.Box 1308*

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST
SAN BERNARDINO CA 92410

JOB: PYA1001

UST

SEARCH ID: 38 **DIST/DIR:** 0.20 SW **ELEVATION:** 1066 **MAP ID:** 32

NAME: H T FOOD MART
ADDRESS: 337 E 9TH ST
SAN BERNARDINO CA 92404
SAN BERNARDINO
CONTACT: HUYN, TONNY
SOURCE:

REV: 04/03/2002
ID1: SANBERDO88016782
ID2:
STATUS:
PHONE: 3821563

SAN BERNARDINO COUNTY TANKS LIST INFORMATION
According to the San Bernardino County Fire Dept. the following information is current as of 02/11/04

Number of Tanks:	*3*
Permit Category:	*UST OWNERSHIP/OPERATING PERMIT (PER UST)*
Permit Number:	*PT0010964*
Description:	*UST Ownership/Operating Permit (per UST)*
Status:	*ACTIVE*
Expiration Date:	*8/31/2003*
Owner Name:	*SOKHA, LIM*
Owner Phone Number:	*3831263*
Owner Address:	*337 E 9TH ST SAN BERNARDINO, CA 92410*

SAN BERNARDINO COUNTY TANKS LIST INFORMATION
According to the San Bernardino County Fire Dept. the following information is current as of 02/11/04

Number of Tanks:	*3*
Permit Category:	*UST OWNERSHIP/OPERATING PERMIT (PER UST)*
Permit Number:	*PT0010965*
Description:	*UST Ownership/Operating Permit (per UST)*
Status:	*ACTIVE*
Expiration Date:	*8/31/2003*
Owner Name:	*SOKHA, LIM*
Owner Phone Number:	*3831263*
Owner Address:	*337 E 9TH ST SAN BERNARDINO, CA 92410*

SAN BERNARDINO COUNTY TANKS LIST INFORMATION
According to the San Bernardino County Fire Dept. the following information is current as of 02/11/04

Number of Tanks:	*3*
Permit Category:	*UST OWNERSHIP/OPERATING PERMIT (PER UST)*
Permit Number:	*PT0010966*
Description:	*UST Ownership/Operating Permit (per UST)*
Status:	*ACTIVE*
Expiration Date:	*8/31/2003*
Owner Name:	*SOKHA, LIM*
Owner Phone Number:	*3831263*
Owner Address:	*337 E 9TH ST SAN BERNARDINO, CA 92410*

- Continued on next page -

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

UST

SEARCH ID: 38 **DIST/DIR:** 0.20 SW **ELEVATION:** 1066 **MAP ID:** 32

NAME:	H T FOOD MART	**REV:**	04/03/2002
ADDRESS:	337 E 9TH ST	**ID1:**	SANBERDO88016782
	SAN BERNARDINO CA 92404	**ID2:**	
	SAN BERNARDINO	**STATUS:**	
CONTACT:	HUYN, TONNY	**PHONE:**	3821563
SOURCE:			

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

RCRAGN

SEARCH ID: 3 **DIST/DIR:** 0.21 NW **ELEVATION:** 1095 **MAP ID:** 33

NAME: HONDA WORLD
ADDRESS: 208 E BASELINE
SAN BERNARDINO CA 92410
SAN BERNARDINO
CONTACT:
SOURCE: EPA

REV: 7/14/10
ID1: CAD981996952
ID2:
STATUS: SGN
PHONE:

SITE INFORMATION

UNIVERSE INFORMATION:

NAIC INFORMATION

ENFORCEMENT INFORMATION:

VIOLATION INFORMATION:

UST

SEARCH ID: 31 **DIST/DIR:** 0.22 NW **ELEVATION:** 1092 **MAP ID:** 34

NAME: ARCO PETROLEUM PROD 5297
ADDRESS: 199 BASELINE
SAN BERNARDINO CA 92410
San Bernardino
CONTACT:
SOURCE:

REV: 01/01/94
ID1: TISID-STATE40905
ID2:
STATUS: ACTIVE
PHONE:

UST HISTORICAL DATA

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LUST

SEARCH ID: 50 **DIST/DIR:** 0.22 NW **ELEVATION:** 1096 **MAP ID:** 34

NAME: ARCO 5297
ADDRESS: 199 BASELINE ST
SAN BERNARDINO CA 92415
SAN BERNARDINO
CONTACT:
SOURCE: CA SWRCB

REV: 10/13/10
ID1: T0607100620
ID2:
STATUS: COMPLETED - CASE CLOSED
PHONE:

RELEASE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

Please note that some data previously provided by the State Water Resources Control Board in the LUSTIS database is not currently being provided by the agency in the most recent edition. Incidents that occurred after the year 2000 may not have much information. Field headers with blank information following after should be interpreted as unreported by the agency.

LEAD AGENCY: *SAN BERNARDINO COUNTY LOP*
REGIONAL BOARD CASE NUMBER: *083603595T*
LOCAL AGENCY: *SAN BERNARDINO COUNTY LOP*
LOCAL CASE NUMBER: *99139*
RESPONSIBLE PARTY:
ADDRESS OF RESPONSIBLE PARTY:
SITE OPERATOR:
WATER SYSTEM:

CASE TYPE: *LUST Cleanup Site*
POTENTIAL CONTAMINANTS OF CONCERN: *Gasoline, Fuel Oxygenates*
POTENTIAL MEDIA AFFECTED: *Soil*
LEAK CAUSE:
LEAK SOURCE:
HOW LEAK WAS DISCOVERED:
DATE DISCOVERED (blank if not reported):
HOW LEAK WAS STOPPED:
STOP DATE (blank if not reported):
STATUS: *Completed - Case Closed*
STATUS DATE: *2003-10-01*
ABATEMENT METHOD (please note that not all code translations have been provided by the reporting agency):
ENFORCEMENT TYPE (please note that not all code translations have been provided by the reporting agency):
DATE OF ENFORCEMENT (blank if not reported):
SITE HISTORY (blank if not reported):

ACTION TYPE (blank if not reported): *Other*
DATE (blank if not reported): *1950-01-01 00:00:00*
ACTION (blank if not reported): *Leak Discovery*

ACTION TYPE (blank if not reported): *Other*
DATE (blank if not reported): *1950-01-01 00:00:00*
ACTION (blank if not reported): *Leak Reported*

ACTION TYPE (blank if not reported): *Other*
DATE (blank if not reported): *1950-01-01 00:00:00*
ACTION (blank if not reported): *Leak Stopped*

ACTION TYPE (blank if not reported): *REMEDIATION*
DATE (blank if not reported): *1950-01-01 00:00:00*
ACTION (blank if not reported): *Excavate and Dispose*

ACTION TYPE (blank if not reported): *REMEDIATION*
DATE (blank if not reported): *1950-01-01 00:00:00*
ACTION (blank if not reported): *Soil Vapor Extraction w/Other*

MTBE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

- Continued on next page -

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

LUST

SEARCH ID: 50 **DIST/DIR:** 0.22 NW **ELEVATION:** 1096 **MAP ID:** 34

NAME: ARCO 5297
ADDRESS: 199 BASELINE ST
SAN BERNARDINO CA 92415
SAN BERNARDINO
CONTACT:
SOURCE: CA SWRCB

REV: 10/13/10
ID1: T0607100620
ID2:
STATUS: COMPLETED - CASE CLOSED
PHONE:

MTBE DATE(Date of historical maximum MTBE concentration):
MTBE GROUNDWATER CONCENTRATION (parts per billion):
MTBE SOIL CONCENTRATION (parts per million):
MTBE CNTS:
MTBE FUEL:
MTBE TESTED:
MTBE CLASS:

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

UST

SEARCH ID: 33 **DIST/DIR:** 0.22 NW **ELEVATION:** 1096 **MAP ID:** 35

NAME:	CUSTOM WINDOW TINTING	**REV:**	01/01/94
ADDRESS:	198 BASELINE	**ID1:**	TISID-STATE39202
	SAN BERNARDINO CA 92410	**ID2:**	
	San Bernardino	**STATUS:**	ACTIVE
CONTACT:		**PHONE:**	
SOURCE:			

UST HISTORICAL DATA

This site was listed in the FIDS Zip Code List as a UST site. The Office of Hazardous Data Management produced the FIDS list. The FIDS list is an index of names and locations of sites recorded in various California State environmental agency databases. It is sorted by zip code and as an index, details regarding the sites were never included.

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Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

SWL

SEARCH ID: 75 **DIST/DIR:** 0.30 NW **ELEVATION:** **MAP ID:** 36

NAME: MORALES TIRE III
ADDRESS: 147 E. BASELINE
SAN BERNARDINO CA 92410
SAN BERNARDINO
CONTACT:
SOURCE:

REV: 01/19/05
ID1: SWIS36-TI-0930
ID2:
STATUS: ACTIVE
PHONE:

SITE OPERATOR INFORMATION:

SITE OPERATOR INFORMATION:

Operator: *Morales Tires Iii*
Operator Address: *147 East Baseline San Bernardino CA 92410*
Permit Date:
Permit Status:
Land Use Name:
GIS Source for LAT and LONG: *Map*

Operator: *Morales Tires Iii*
Operator Address: *147 East Baseline San Bernardino CA 92410*
Permit Date:
Permit Status:
Land Use Name:
GIS Source for LAT and LONG: *Map*

SITE ACTIVITY INFORMATION:

SITE ACTIVITY INFORMATION:

Activity: *Tire Dealer*
Accepted Waste: *Tires*
Operational Status: *Active*
Regulatory Status *Excluded*
Closure Date:
Closure Type:
Permitted Throughput with Units: *1500 Tires*
Permitted Capacity with Units: *0*
Remaining Capacity with Units (landfills only):
Permitted Total Acreage: *0*
Permitted Disposal Acreage:
Last Tire Inspection Count: *0*
Last Tire Inspection Count Date: *12/11/1998*
Original Tire Inspection Count: *750*
Last Tire Inspection Count Date: *2/18/1999*
Inspection Frequency: *30 Months*

Activity: *Tire Dealer*
Accepted Waste: *Tires*
Operational Status: *Active*
Regulatory Status *Excluded*
Closure Date:
Closure Type:
Permitted Throughput with Units: *1500 Tires*
Permitted Capacity with Units: *0*

- Continued on next page -

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

SWL

SEARCH ID: 75 **DIST/DIR:** 0.30 NW **ELEVATION:** **MAP ID:** 36

NAME: MORALES TIRE III
ADDRESS: 147 E. BASELINE
SAN BERNARDINO CA 92410
SAN BERNARDINO
CONTACT:
SOURCE:

REV: 01/19/05
ID1: SWIS36-TI-0930
ID2:
STATUS: ACTIVE
PHONE:

Remaining Capacity with Units (landfills only):
Permitted Total Acreage: *0*
Permitted Disposal Acreage:
Last Tire Inspection Count: *0*
Last Tire Inspection Count Date: *12/11/1998*
Original Tire Inspection Count: *750*
Last Tire Inspection Count Date: *2/18/1999*
Inspection Frequency: *30 Months*

SITE OWNER INFORMATION:

SITE OWNER INFORMATION:

LUST

SEARCH ID: 54 **DIST/DIR:** 0.36 NW **ELEVATION:** 1096 **MAP ID:** 37

NAME: FAME LIQUORS
ADDRESS: 108 BASELINE ST
SAN BERNARDINO CA 92410
SAN BERNARDINO
CONTACT:
SOURCE: CA SWRCB

REV: 10/13/10
ID1: T0607100151
ID2:
STATUS: COMPLETED - CASE CLOSED
PHONE:

RELEASE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

Please note that some data previously provided by the State Water Resources Control Board in the LUSTIS database is not currently being provided by the agency in the most recent edition. Incidents that occurred after the year 2000 may not have much information. Field headers with blank information following after should be interpreted as unreported by the agency.

LEAD AGENCY: *SAN BERNARDINO COUNTY LOP*
REGIONAL BOARD CASE NUMBER: *083601297T*
LOCAL AGENCY: *SAN BERNARDINO COUNTY LOP*
LOCAL CASE NUMBER: *90028*
RESPONSIBLE PARTY:
ADDRESS OF RESPONSIBLE PARTY:
SITE OPERATOR:
WATER SYSTEM:

CASE TYPE: *LUST Cleanup Site*
POTENTIAL CONTAMINANTS OF CONCERN: *Gasoline*
POTENTIAL MEDIA AFFECTED: *Soil*
LEAK CAUSE:
LEAK SOURCE:
HOW LEAK WAS DISCOVERED:
DATE DISCOVERED (blank if not reported):
HOW LEAK WAS STOPPED:
STOP DATE (blank if not reported):
STATUS: *Completed - Case Closed*
STATUS DATE: *2005-01-06*
ABATEMENT METHOD (please note that not all code translations have been provided by the reporting agency):
ENFORCEMENT TYPE (please note that not all code translations have been provided by the reporting agency):
DATE OF ENFORCEMENT (blank if not reported):
SITE HISTORY (blank if not reported):

ACTION TYPE (blank if not reported): *ENFORCEMENT*
DATE (blank if not reported): *2005-08-11 00:00:00*
ACTION (blank if not reported): *Closure/No Further Action Letter*

ACTION TYPE (blank if not reported): *ENFORCEMENT*
DATE (blank if not reported): *2005-08-11 00:00:00*
ACTION (blank if not reported): *Closure/No Further Action Letter*

ACTION TYPE (blank if not reported): *Other*
DATE (blank if not reported): *1950-01-01 00:00:00*
ACTION (blank if not reported): *Leak Discovery*

ACTION TYPE (blank if not reported): *Other*
DATE (blank if not reported): *1950-01-01 00:00:00*
ACTION (blank if not reported): *Leak Reported*

ACTION TYPE (blank if not reported): *REMEDIATION*
DATE (blank if not reported): *1950-01-01 00:00:00*
ACTION (blank if not reported): *Excavate and Dispose*

ACTION TYPE (blank if not reported): *REMEDIATION*

- Continued on next page -

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

LUST

SEARCH ID: 54 **DIST/DIR:** 0.36 NW **ELEVATION:** 1096 **MAP ID:** 37

NAME: FAME LIQUORS
ADDRESS: 108 BASELINE ST
SAN BERNARDINO CA 92410
SAN BERNARDINO
CONTACT:
SOURCE: CA SWRCB

REV: 10/13/10
ID1: T0607100151
ID2:
STATUS: COMPLETED - CASE CLOSED
PHONE:

DATE (blank if not reported): *1950-01-01 00:00:00*
ACTION (blank if not reported): *Vacuum Extract*

MTBE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE
MTBE DATE(Date of historical maximum MTBE concentration):
MTBE GROUNDWATER CONCENTRATION (parts per billion):
MTBE SOIL CONCENTRATION (parts per million):
MTBE CNTS:
MTBE FUEL:
MTBE TESTED:
MTBE CLASS:

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

SWL

SEARCH ID: 14 **DIST/DIR:** 0.37 NW **ELEVATION:** 1096 **MAP ID:** 39

NAME: DISCOUNT TIRE CENTERS
ADDRESS: 101 WEST BASELINE
SAN BERNARDINO CA 92410
SAN BERNARDINO
CONTACT:
SOURCE:

REV: 01/19/05
ID1: SWIS36-TI-0932
ID2:
STATUS: ACTIVE
PHONE:

SITE OPERATOR INFORMATION:

SITE OPERATOR INFORMATION:

Operator: *Discount Tire Center*
Operator Address: *101 West Baseline San Bernardino CA 92410*
Permit Date:
Permit Status:
Land Use Name:
GIS Source for LAT and LONG: *Map*

Operator: *Discount Tire Center*
Operator Address: *101 West Baseline San Bernardino CA 92410*
Permit Date:
Permit Status:
Land Use Name:
GIS Source for LAT and LONG: *Map*

SITE ACTIVITY INFORMATION:

SITE ACTIVITY INFORMATION:

Activity: *Tire Dealer*
Accepted Waste: *Tires*
Operational Status: *Active*
Regulatory Status *Excluded*
Closure Date:
Closure Type:
Permitted Throughput with Units: *1500 Tires*
Permitted Capacity with Units: *0*
Remaining Capacity with Units (landfills only):
Permitted Total Acreage: *0*
Permitted Disposal Acreage:
Last Tire Inspection Count: *0*
Last Tire Inspection Count Date: *12/11/1998*
Original Tire Inspection Count: *400*
Last Tire Inspection Count Date: *12/11/1998*
Inspection Frequency: *30 Months*

Activity: *Tire Dealer*
Accepted Waste: *Tires*
Operational Status: *Active*
Regulatory Status *Excluded*
Closure Date:
Closure Type:
Permitted Throughput with Units: *1500 Tires*
Permitted Capacity with Units: *0*

- Continued on next page -

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

SWL

SEARCH ID: 14 **DIST/DIR:** 0.37 NW **ELEVATION:** 1096 **MAP ID:** 39

NAME: DISCOUNT TIRE CENTERS
ADDRESS: 101 WEST BASELINE
SAN BERNARDINO CA 92410
SAN BERNARDINO
CONTACT:
SOURCE:

REV: 01/19/05
ID1: SWIS36-TI-0932
ID2:
STATUS: ACTIVE
PHONE:

Remaining Capacity with Units (landfills only):
Permitted Total Acreage: *0*
Permitted Disposal Acreage:
Last Tire Inspection Count: *0*
Last Tire Inspection Count Date: *12/11/1998*
Original Tire Inspection Count: *400*
Last Tire Inspection Count Date: *12/11/1998*
Inspection Frequency: *30 Months*

SITE OWNER INFORMATION:

SITE OWNER INFORMATION:

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

LUST

SEARCH ID: 59 **DIST/DIR:** 0.43 NE **ELEVATION:** 1118 **MAP ID:** 41

NAME: SAN BERNARDINO COUNTY MEDICAL CENTER
ADDRESS: 780 GILBERT ST
SAN BERNARDINO CA 92409
SAN BERNARDINO
CONTACT:
SOURCE: CA SWRCB

REV: 10/13/10
ID1: T0607100621
ID2:
STATUS: COMPLETED - CASE CLOSED
PHONE:

RELEASE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

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LEAD AGENCY: *SAN BERNARDINO COUNTY LOP*
REGIONAL BOARD CASE NUMBER: *083603596T*
LOCAL AGENCY: *SAN BERNARDINO COUNTY LOP*
LOCAL CASE NUMBER: *99134*
RESPONSIBLE PARTY:
ADDRESS OF RESPONSIBLE PARTY:
SITE OPERATOR:
WATER SYSTEM:

CASE TYPE: *LUST Cleanup Site*
POTENTIAL CONTAMINANTS OF CONCERN: *Diesel*
POTENTIAL MEDIA AFFECTED: *Soil*
LEAK CAUSE:
LEAK SOURCE:
HOW LEAK WAS DISCOVERED:
DATE DISCOVERED (blank if not reported):
HOW LEAK WAS STOPPED:
STOP DATE (blank if not reported):
STATUS: *Completed - Case Closed*
STATUS DATE: *2001-06-11*
ABATEMENT METHOD (please note that not all code translations have been provided by the reporting agency):
ENFORCEMENT TYPE (please note that not all code translations have been provided by the reporting agency):
DATE OF ENFORCEMENT (blank if not reported):
SITE HISTORY (blank if not reported):

ACTION TYPE (blank if not reported): *Other*
DATE (blank if not reported): *1950-01-01 00:00:00*
ACTION (blank if not reported): *Leak Discovery*

ACTION TYPE (blank if not reported): *Other*
DATE (blank if not reported): *1950-01-01 00:00:00*
ACTION (blank if not reported): *Leak Reported*

ACTION TYPE (blank if not reported): *Other*
DATE (blank if not reported): *1950-01-01 00:00:00*
ACTION (blank if not reported): *Leak Stopped*

MTBE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

MTBE DATE(Date of historical maximum MTBE concentration):
MTBE GROUNDWATER CONCENTRATION (parts per billion):
MTBE SOIL CONCENTRATION (parts per million):
MTBE CNTS:
MTBE FUEL:
MTBE TESTED:
MTBE CLASS:

- Continued on next page -

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

LUST

SEARCH ID: 59 **DIST/DIR:** 0.43 NE **ELEVATION:** 1118 **MAP ID:** 41

NAME:	SAN BERNARDINO COUNTY MEDICAL CENTER	**REV:**	10/13/10
ADDRESS:	780 GILBERT ST	**ID1:**	T0607100621
	SAN BERNARDINO CA 92409	**ID2:**	
	SAN BERNARDINO	**STATUS:**	COMPLETED - CASE CLOSED
CONTACT:		**PHONE:**	
SOURCE:	CA SWRCB		

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

STATE

SEARCH ID: 9 **DIST/DIR:** 0.43 NE **ELEVATION:** 1119 **MAP ID:** 41

NAME: ANTON ELEMENTARY SCHOOL
ADDRESS: 780 EAST GILBERT ST
SAN BERNARDINO CA 92410
SAN BERNARDINO
CONTACT:
SOURCE: CA DTSC

REV: 08/04/10
ID1: CAL36010015
ID2: SCHOOL
STATUS: NO FURTHER ACTION
PHONE:

GENERAL SITE INFORMATION

Site Type:	*School Investigation*
Status:	*No Further Action*
Status Date:	*2003-04-01*
NPL Site:	*NO*
Funding:	*School District*
Regulatory Agencies Involved:	*SMBRP*
Lead Agency:	*NONE SPECIFIED*
Project Manager:	
Supervisor:	*Javier Hinojosa*
Branch:	*Cypress*
Acres:	*12*
Assessor s Parcel Number:	*NONE SPECIFIED*
Past Uses:	*AGRICULTURAL - ROW CROPS*
Potential Contaminants:	*30014 30593 30550 30272*
Confirmed Contaminants:	*NONE SPECIFIED*
Potential Media Affected:	*SOIL*
Restricted Use:	*NO*
Site Management Required:	*NONE SPECIFIED*
Special Programs Associated with this Site:	

OTHER SITE NAMES (blank below = not reported by agency)

ANTON ELEMENTARY SCHOOL

SAN BERNARDINO CITY UNIFIED SCHOOL DIST.

SAN BERNARDINO CUSD-PRPSED ANTON ELEM.

404207

36010015

COMPLETED ACTIVITIES AND DTSC COMMENTS REGARDING THIS SITE (blank below = not reported by agency)

Area Name:	***PROJECT WIDE***
Sub- Area Name:	
Document Type:	***Preliminary Endangerment Assessment Report***
Completion Date:	***2003-04-01 00:00:00***
Comments:	

Area Name:	***PROJECT WIDE***
Sub- Area Name:	
Document Type:	***Technical Report***
Completion Date:	***2002-10-14 00:00:00***
Comments:	*approved additional sampling*

Area Name:	***PROJECT WIDE***
Sub- Area Name:	
Document Type:	***Cost Recovery Closeout Memo***

- Continued on next page -

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

STATE

SEARCH ID: 9 **DIST/DIR:** 0.43 NE **ELEVATION:** 1119 **MAP ID:** 41

NAME: ANTON ELEMENTARY SCHOOL
ADDRESS: 780 EAST GILBERT ST
SAN BERNARDINO CA 92410
SAN BERNARDINO
CONTACT:
SOURCE: CA DTSC

REV: 08/04/10
ID1: CAL36010015
ID2: SCHOOL
STATUS: NO FURTHER ACTION
PHONE:

Completion Date: *2003-05-01 00:00:00*
Comments:

Area Name: *PROJECT WIDE*
Sub- Area Name:
Document Type: *Site Inspections/Visit (Non LUR)*
Completion Date: *2002-10-15 00:00:00*
Comments:

Area Name: *PROJECT WIDE*
Sub- Area Name:
Document Type: *Environmental Oversight Agreement*
Completion Date: *2001-02-23 00:00:00*
Comments:

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

SWL

SEARCH ID: 16 **DIST/DIR:** 0.43 SW **ELEVATION:** **MAP ID:** 42

NAME: IN and OUT TIRES
ADDRESS: 697 NORTH WATERMAN AVE.
SAN BERNARDINO CA 92410
SAN BERNARDINO
CONTACT:
SOURCE:

REV: 01/19/05
ID1: SWIS36-TI-0882
ID2:
STATUS: ACTIVE
PHONE:

SITE OPERATOR INFORMATION:

SITE OPERATOR INFORMATION:

Operator: *In and Out Tires*
Operator Address: *697 North Waterman Ave. San Bernardino CA 92410*
Permit Date:
Permit Status:
Land Use Name:
GIS Source for LAT and LONG: *Map*

Operator: *In and Out Tires*
Operator Address: *697 North Waterman Ave. San Bernardino CA 92410*
Permit Date:
Permit Status:
Land Use Name:
GIS Source for LAT and LONG: *Map*

SITE ACTIVITY INFORMATION:

SITE ACTIVITY INFORMATION:

Activity: *Tire Dealer*
Accepted Waste: *Tires*
Operational Status: *Active*
Regulatory Status *Excluded*
Closure Date:
Closure Type:
Permitted Throughput with Units: *1500 Tires*
Permitted Capacity with Units: *0*
Remaining Capacity with Units (landfills only):
Permitted Total Acreage: *0*
Permitted Disposal Acreage:
Last Tire Inspection Count: *600*
Last Tire Inspection Count Date: *10/26/1998*
Original Tire Inspection Count: *600*
Last Tire Inspection Count Date: *10/26/1998*
Inspection Frequency: *30 Months*

Activity: *Tire Dealer*
Accepted Waste: *Tires*
Operational Status: *Active*
Regulatory Status *Excluded*
Closure Date:
Closure Type:
Permitted Throughput with Units: *1500 Tires*
Permitted Capacity with Units: *0*

- Continued on next page -

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

SWL

SEARCH ID: 16 **DIST/DIR:** 0.43 SW **ELEVATION:** **MAP ID:** 42

NAME: IN and OUT TIRES
ADDRESS: 697 NORTH WATERMAN AVE.
SAN BERNARDINO CA 92410
SAN BERNARDINO
CONTACT:
SOURCE:

REV: 01/19/05
ID1: SWIS36-TI-0882
ID2:
STATUS: ACTIVE
PHONE:

Remaining Capacity with Units (landfills only):
Permitted Total Acreage: *0*
Permitted Disposal Acreage:
Last Tire Inspection Count: *600*
Last Tire Inspection Count Date: *10/26/1998*
Original Tire Inspection Count: *600*
Last Tire Inspection Count Date: *10/26/1998*
Inspection Frequency: *30 Months*

SITE OWNER INFORMATION:

SITE OWNER INFORMATION:

Owner: *In and Out Tires*
Owner Phone:
Owner Address: *3664 Hemlock Dr.*

Owner: *In and Out Tires*
Owner Phone:
Owner Address: *3664 Hemlock Dr.*

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

LUST

SEARCH ID: 58 **DIST/DIR:** 0.43 SW **ELEVATION:** 1070 **MAP ID:** 43

NAME: PAULEY PETROLEUM
ADDRESS: 898 SIERRA WAY
SAN BERNARDINO CA 92410
SAN BERNARDINO
CONTACT:
SOURCE: CA SWRCB

REV: 10/13/10
ID1: T0607100099
ID2:
STATUS: COMPLETED - CASE CLOSED
PHONE:

RELEASE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

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LEAD AGENCY: *SAN BERNARDINO COUNTY LOP*
REGIONAL BOARD CASE NUMBER: *083600940T*
LOCAL AGENCY:
LOCAL CASE NUMBER: *87058*
RESPONSIBLE PARTY:
ADDRESS OF RESPONSIBLE PARTY:
SITE OPERATOR:
WATER SYSTEM:

CASE TYPE: *LUST Cleanup Site*
POTENTIAL CONTAMINANTS OF CONCERN: *Gasoline*
POTENTIAL MEDIA AFFECTED: *Soil*
LEAK CAUSE:
LEAK SOURCE:
HOW LEAK WAS DISCOVERED:
DATE DISCOVERED (blank if not reported):
HOW LEAK WAS STOPPED:
STOP DATE (blank if not reported):
STATUS: *Completed - Case Closed*
STATUS DATE: *1986-06-06*
ABATEMENT METHOD (please note that not all code translations have been provided by the reporting agency):
ENFORCEMENT TYPE (please note that not all code translations have been provided by the reporting agency):
DATE OF ENFORCEMENT (blank if not reported):
SITE HISTORY (blank if not reported):

ACTION TYPE (blank if not reported): *ENFORCEMENT*
DATE (blank if not reported): *1986-06-06 00:00:00*
ACTION (blank if not reported): *Closure/No Further Action Letter*

ACTION TYPE (blank if not reported): *Other*
DATE (blank if not reported): *1950-01-01 00:00:00*
ACTION (blank if not reported): *Leak Reported*

MTBE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

MTBE DATE(Date of historical maximum MTBE concentration):
MTBE GROUNDWATER CONCENTRATION (parts per billion):
MTBE SOIL CONCENTRATION (parts per million):
MTBE CNTS:
MTBE FUEL:
MTBE TESTED:
MTBE CLASS:

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

NFRAP

SEARCH ID: 2 **DIST/DIR:** 0.45 SW **ELEVATION:** 1045 **MAP ID:** 44

NAME: SECCOMBE LAKE STATE REC AREA
ADDRESS: 7TH ST BETW SERRIA AND WATERMAN
SAN BERNARDINO CA 92410
SAN BERNARDINO
CONTACT:
SOURCE: EPA

REV: 8/31/10
ID1: CAD981576507
ID2: 0902457
STATUS: NFRAP-N
PHONE:

DESCRIPTION:

ACTION/QUALITY	AGENCY/RPS	START/RAA	END
ARCHIVE SITE	EPA In-House		2/1/1988
DISCOVERY	State, Fund Financed		11/1/1986
PRELIMINARY ASSESSMENT LOW PRIORITY FOR FURTHER ASSESSMENT	State, Fund Financed	/1-86-11/1	6/1/1987
PRELIMINARY ASSESSMENT NFRAP: NO FURTHER REMEDIAL ACTION PLANNED	EPA Fund-Financed		2/1/1988

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

LUST

SEARCH ID: 62 **DIST/DIR:** 0.47 SW **ELEVATION:** 1044 **MAP ID:** 45

NAME: WHITE ROSE DAIRY
ADDRESS: 697 WATERMAN AVE
SAN BERNARDINO CA 92404
SAN BERNARDINO
CONTACT:
SOURCE: CA SWRCB

REV: 10/13/10
ID1: T0607100048
ID2:
STATUS: COMPLETED - CASE CLOSED
PHONE:

RELEASE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

Please note that some data previously provided by the State Water Resources Control Board in the LUSTIS database is not currently being provided by the agency in the most recent edition. Incidents that occurred after the year 2000 may not have much information. Field headers with blank information following after should be interpreted as unreported by the agency.

LEAD AGENCY: *SAN BERNARDINO COUNTY LOP*
REGIONAL BOARD CASE NUMBER: *083600445T*
LOCAL AGENCY:
LOCAL CASE NUMBER: *87061*
RESPONSIBLE PARTY:
ADDRESS OF RESPONSIBLE PARTY:
SITE OPERATOR:
WATER SYSTEM:

CASE TYPE: *LUST Cleanup Site*
POTENTIAL CONTAMINANTS OF CONCERN: *Gasoline*
POTENTIAL MEDIA AFFECTED: *Soil*
LEAK CAUSE:
LEAK SOURCE:
HOW LEAK WAS DISCOVERED:
DATE DISCOVERED (blank if not reported):
HOW LEAK WAS STOPPED:
STOP DATE (blank if not reported):
STATUS: *Completed - Case Closed*
STATUS DATE: *1998-02-11*
ABATEMENT METHOD (please note that not all code translations have been provided by the reporting agency):
ENFORCEMENT TYPE (please note that not all code translations have been provided by the reporting agency):
DATE OF ENFORCEMENT (blank if not reported):
SITE HISTORY (blank if not reported):

ACTION TYPE (blank if not reported): *ENFORCEMENT*
DATE (blank if not reported): *1998-02-11 00:00:00*
ACTION (blank if not reported): *Closure/No Further Action Letter*

ACTION TYPE (blank if not reported): *Other*
DATE (blank if not reported): *1950-01-01 00:00:00*
ACTION (blank if not reported): *Leak Stopped*

ACTION TYPE (blank if not reported): *Other*
DATE (blank if not reported): *1950-01-01 00:00:00*
ACTION (blank if not reported): *Leak Reported*

ACTION TYPE (blank if not reported): *Other*
DATE (blank if not reported): *1950-01-01 00:00:00*
ACTION (blank if not reported): *Leak Discovery*

MTBE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

MTBE DATE(Date of historical maximum MTBE concentration):
MTBE GROUNDWATER CONCENTRATION (parts per billion):
MTBE SOIL CONCENTRATION (parts per million):
MTBE CNTS:

- Continued on next page -

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

LUST

SEARCH ID: 62 **DIST/DIR:** 0.47 SW **ELEVATION:** 1044 **MAP ID:** 45

NAME: WHITE ROSE DAIRY
ADDRESS: 697 WATERMAN AVE
SAN BERNARDINO CA 92404
SAN BERNARDINO
CONTACT:
SOURCE: CA SWRCB

REV: 10/13/10
ID1: T0607100048
ID2:
STATUS: COMPLETED - CASE CLOSED
PHONE:

MTBE FUEL:
MTBE TESTED:
MTBE CLASS:

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

STATE

SEARCH ID: 13 **DIST/DIR:** 0.62 NW **ELEVATION:** 1099 **MAP ID:** 46

NAME: LINCOLN II NORTH ELEMENTARY SCHOOL
ADDRESS: ARROWHEAD AVENUE/BASELINE ST
SAN BERNARDINO CA 92405
SAN BERNARDINO
CONTACT:
SOURCE: CA DTSC

REV: 08/04/10
ID1: CAL36000003
ID2: SCHOOL
STATUS: INACTIVE - NEEDS EVALUATION
PHONE:

GENERAL SITE INFORMATION

Site Type:	*School Investigation*
Status:	*Inactive - Needs Evaluation*
Status Date:	*2006-01-26*
NPL Site:	*NO*
Funding:	*School District*
Regulatory Agencies Involved:	*SMBRP*
Lead Agency:	*SMBRP*
Project Manager:	*RANA GEORGES*
Supervisor:	** Tawfiq Deek*
Branch:	*Cypress*
Acres:	*11*
Assessor s Parcel Number:	*NONE SPECIFIED*
Past Uses:	** UNKNOWN*
Potential Contaminants:	*NONE SPECIFIED*
Confirmed Contaminants:	*NONE SPECIFIED*
Potential Media Affected:	*NONE SPECIFIED*
Restricted Use:	*NO*
Site Management Required:	*NONE SPECIFIED*
Special Programs Associated with this Site:	*Voluntary Cleanup Program*

OTHER SITE NAMES (blank below = not reported by agency)

LINCOLN II NORTH ELEMENTARY SCHOOL

SAN BERNARDINO CITY UNIFIED

SAN BERNARDINO CITY USD-PRPSD LNCLN II E

404547

36000003

COMPLETED ACTIVITIES AND DTSC COMMENTS REGARDING THIS SITE (blank below = not reported by agency)

Area Name:	***PROJECT WIDE***
Sub- Area Name:	
Document Type:	***Phase 1***
Completion Date:	***2004-06-29 00:00:00***
Comments:	

Area Name:	***PROJECT WIDE***
Sub- Area Name:	
Document Type:	***Preliminary Endangerment Assessment Workplan***
Completion Date:	***2005-03-04 00:00:00***
Comments:	

Area Name:	***PROJECT WIDE***
Sub- Area Name:	
Document Type:	***Inactive Status Letter***

- Continued on next page -

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

STATE

SEARCH ID: 13 **DIST/DIR:** 0.62 NW **ELEVATION:** 1099 **MAP ID:** 46

NAME: LINCOLN II NORTH ELEMENTARY SCHOOL
ADDRESS: ARROWHEAD AVENUE/BASELINE ST
SAN BERNARDINO CA 92405
SAN BERNARDINO
CONTACT:
SOURCE: CA DTSC

REV: 08/04/10
ID1: CAL36000003
ID2: SCHOOL
STATUS: INACTIVE - NEEDS EVALUATION
PHONE:

Completion Date: *2005-06-17 00:00:00*
Comments:

Area Name: *PROJECT WIDE*
Sub- Area Name:
Document Type: *Inactive Status Letter*
Completion Date: *2005-12-08 00:00:00*
Comments:

Area Name: *PROJECT WIDE*
Sub- Area Name:
Document Type: *Cost Recovery Closeout Memo*
Completion Date: *2006-01-26 00:00:00*
Comments:

Area Name: *PROJECT WIDE*
Sub- Area Name:
Document Type: *Environmental Oversight Agreement*
Completion Date: *2004-08-19 00:00:00*
Comments:

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

STATE

SEARCH ID: 74 **DIST/DIR:** 0.69 SE **ELEVATION:** **MAP ID:** 47

NAME: MONTEREY II ELEMENTARY SCHOOL
ADDRESS: 9TH STREET/TIPPECANOE AVE
SAN BERNARDINTO CA 92410
SAN BERNARDINO
CONTACT:
SOURCE: CA DTSC

REV: 08/04/10
ID1: CAL36010063
ID2: SCHOOL
STATUS: NO FURTHER ACTION
PHONE:

GENERAL SITE INFORMATION

Site Type:	*School Investigation*
Status:	*No Further Action*
Status Date:	*2004-08-19*
NPL Site:	*NO*
Funding:	*School District*
Regulatory Agencies Involved:	*DTSC*
Lead Agency:	*NONE SPECIFIED*
Project Manager:	
Supervisor:	** Rafat Abbasi*
Branch:	*Cypress*
Acres:	*17*
Assessor s Parcel Number:	*NONE SPECIFIED*
Past Uses:	*AGRICULTURAL - ROW CROPS*
Potential Contaminants:	*30006 30007 30008 30023*
Confirmed Contaminants:	*30023 30006 30007 30008*
Potential Media Affected:	*SOIL*
Restricted Use:	*NO*
Site Management Required:	*NONE SPECIFIED*
Special Programs Associated with this Site:	

OTHER SITE NAMES (blank below = not reported by agency)

SAN BERNARDINO CITY UNIFIED SCHOOL DISTR

SAN BERNARDINO CITY USD-PRPSD MNTREY ES

404545

36010063

COMPLETED ACTIVITIES AND DTSC COMMENTS REGARDING THIS SITE (blank below = not reported by agency)

Area Name:	***PROJECT WIDE***
Sub- Area Name:	
Document Type:	***Preliminary Endangerment Assessment Report***
Completion Date:	***2004-12-20 00:00:00***
Comments:	

Area Name:	***PROJECT WIDE***
Sub- Area Name:	
Document Type:	***Technical Report***
Completion Date:	***2004-07-27 00:00:00***
Comments:	

Area Name:	***PROJECT WIDE***
Sub- Area Name:	
Document Type:	***Cost Recovery Closeout Memo***
Completion Date:	***2005-01-03 00:00:00***
Comments:	

- Continued on next page -

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

STATE

SEARCH ID: 74 **DIST/DIR:** 0.69 SE **ELEVATION:** **MAP ID:** 47

NAME: MONTEREY II ELEMENTARY SCHOOL
ADDRESS: 9TH STREET/TIPPECANOE AVE
SAN BERNARDINTO CA 92410
SAN BERNARDINO
CONTACT:
SOURCE: CA DTSC

REV: 08/04/10
ID1: CAL36010063
ID2: SCHOOL
STATUS: NO FURTHER ACTION
PHONE:

Area Name: ***PROJECT WIDE***
Sub- Area Name:
Document Type: ***Site Inspections/Visit (Non LUR)***
Completion Date: ***2004-07-15 00:00:00***
Comments:

Area Name: ***PROJECT WIDE***
Sub- Area Name:
Document Type: ***Environmental Oversight Agreement***
Completion Date: ***2004-08-19 00:00:00***
Comments:

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

STATE

SEARCH ID: 12 **DIST/DIR:** 0.77 NW **ELEVATION:** 1112 **MAP ID:** 48

NAME: LINCOLN II NORTH ELEMENTARY SCHOOL
ADDRESS: WEST 13TH /D ST
SAN BERNARDINO CA 92410
SAN BERNARDINO
CONTACT:
SOURCE: CA EPA

REV: 07/18/05
ID1: CAL36000004
ID2:
STATUS: VOLUNTARY CLEANUP PROGRAM
PHONE:

OTHER SITE NAMES (blank below = not reported by agency)
LINCOLN II NORTH ELEMENTARY SCHOOL

GENERAL SITE INFORMATION
File Name (if different than site name):

Status: *VOLUNTARY CLEANUP PROGRAM*
AWP Site Type: *PROPOSED SCHOOL SITE PROPERTY*
NPL Site: *U*
Fund:
Status Date: *08192004*
Lead: *DEPT OF TOXIC SUBSTANCES CONTROL*
Staff: *MCHAKRAB*
DTSC Region and RWQCB : *CYPRESS*
Branch: *SCHOOL EVALUATION*
RWQCB:
Site Access:
Groundwater Contamination:
Number of Sources Contributing to Contamination at the Site:

OTHER AGENCY ID NUMBERS (blank below = not reported by agency)
ID SOURCE NAME, and VALUE: *CALSTARS CODE 404547-11*

BACKGROUND INFORMATION (blank below = not reported by agency)
The Site has historically been an industrial property utilized for a gas station, dry cleaners and other light industrial usage.

DTSC COMMENTS REGARDING THIS SITE (blank below = not reported by agency)
Comments Date: ***08192004***
: *DTSC entered into an Environmental Oversight Agreement (Docket Number HSA-A 04/05-004) with the San Bernardino City Unified School District to provide oversight for a Preliminary Endangerment Assessment for the proposed Lincoln II North Elementary School.*

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

STATE

SEARCH ID: 10 **DIST/DIR:** 0.80 NE **ELEVATION:** 1100 **MAP ID:** 49

NAME: GERALD HOBBS PROPERTY
ADDRESS: 7194 CONEJO DR
SAN BERNARDINO CA 92404
SAN BERNARDINO
CONTACT:
SOURCE: CA DTSC

REV: 08/04/10
ID1: CAL60000688
ID2: STATE RESPONSE
STATUS: CERTIFIED
PHONE:

GENERAL SITE INFORMATION

Site Type:	*State Response*
Status:	*Certified*
Status Date:	*2009-02-03*
NPL Site:	*NO*
Funding:	*Orphan Funds*
Regulatory Agencies Involved:	*SMBRP*
Lead Agency:	*SMBRP*
Project Manager:	*MAJED AL SHAMI*
Supervisor:	*Emad Yemut*
Branch:	*Cypress*
Acres:	*0.46*
Assessor s Parcel Number:	*0273-211-07*
Past Uses:	*RESIDENTIAL AREA*
Potential Contaminants:	*Arsenic*
Confirmed Contaminants:	*Arsenic*
Potential Media Affected:	*SOIL*
Restricted Use:	*NO*
Site Management Required:	*NONE SPECIFIED*
Special Programs Associated with this Site:	

OTHER SITE NAMES (blank below = not reported by agency)

0273-211-07

110033619840

401374

60000688

COMPLETED ACTIVITIES AND DTSC COMMENTS REGARDING THIS SITE (blank below = not reported by agency)

Area Name: ***PROJECT WIDE***
Sub- Area Name:
Document Type: ***CEQA - Notice of Exemption***
Completion Date: ***2008-01-16 00:00:00***
Comments: *DTSC prepared the Public Notice and the Work Notice, and prepared to publish it in the local newspapers and distribute it to the neighborhoods.*

Area Name: ***PROJECT WIDE***
Sub- Area Name:
Document Type: ***Consent Order***
Completion Date: ***2007-08-24 00:00:00***
Comments: *An Imminent and Substantial Endangerment Determination and Consent Order was fully executed for the subject property.*

Area Name: ***PROJECT WIDE***
Sub- Area Name:
Document Type: ***Certification***

- Continued on next page -

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

STATE

SEARCH ID: 10 **DIST/DIR:** 0.80 NE **ELEVATION:** 1100 **MAP ID:** 49

NAME: GERALD HOBBS PROPERTY
ADDRESS: 7194 CONEJO DR
SAN BERNARDINO CA 92404
SAN BERNARDINO
CONTACT:
SOURCE: CA DTSC

REV: 08/04/10
ID1: CAL60000688
ID2: STATE RESPONSE
STATUS: CERTIFIED
PHONE:

Completion Date: ***2009-02-03 00:00:00***
Comments: *Completed*

Area Name: ***PROJECT WIDE***
Sub- Area Name:
Document Type: ***Lien***
Completion Date: ***2008-08-07 00:00:00***
Comments: *lien recorded on the property.*

Area Name: ***PROJECT WIDE***
Sub- Area Name:
Document Type: ***Remedial Investigation Report***
Completion Date: ***2008-06-17 00:00:00***
Comments:

Area Name: ***PROJECT WIDE***
Sub- Area Name:
Document Type: ***Removal Action Completion Report***
Completion Date: ***2009-01-27 00:00:00***
Comments:

Area Name: ***PROJECT WIDE***
Sub- Area Name:
Document Type: ***Public Notice***
Completion Date: ***2008-01-15 00:00:00***
Comments: *Completed for public review and published in the local newspapers.*

Area Name: ***PROJECT WIDE***
Sub- Area Name:
Document Type: ***Removal Action Workplan***
Completion Date: ***2008-01-14 00:00:00***
Comments:

Area Name: ***PROJECT WIDE***
Sub- Area Name:
Document Type: ***Other Report***
Completion Date: ***2008-03-27 00:00:00***
Comments: *Work Order is issued to contractor for the removal action.*

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

STATE

SEARCH ID: 11 **DIST/DIR:** 0.90 SW **ELEVATION:** 1066 **MAP ID:** 50

NAME: INLAND BEHAVIORAL and HEALTH SVCS. - SAN B
ADDRESS: 665 AND 671 NORTH D ST
SAN BERNARDINO CA 92401
RIVERSIDE
CONTACT:
SOURCE: CA EPA

REV: 07/18/05
ID1: CAL33800003
ID2:
STATUS: NO ACTION - FOR CALMORTGAGE
PHONE:

OTHER SITE NAMES (blank below = not reported by agency)

INLAND BEHAVIORAL and HEALTH SVCS. - SAN B

INLAND BEHAVIORAL and HEALTH SVCS.

GENERAL SITE INFORMATION

File Name (if different than site name): *INLAND BEHAVIORAL and HEALTH SVCS.*

Status: *NO ACTION - FOR CALMORTGAGE ONLY*
AWP Site Type: *CALMORTGAGE ONLY*
NPL Site: *N*
Fund:
Status Date: *06042002*
Lead: *DEPT OF TOXIC SUBSTANCES CONTROL*
Staff: *SKARINEN*
DTSC Region and RWQCB : *CYPRESS*
Branch: *CALMORTGAGE*
RWQCB: *SANTA ANA*
Site Access:
Groundwater Contamination:
Number of Sources Contributing to Contamination at the Site: *0*

OTHER AGENCY ID NUMBERS (blank below = not reported by agency)

ID SOURCE NAME, and VALUE: *CALSTARS CODE 401041*

PROJECTED ACTIVITIES (blank below = not reported by agency)

Activity: ***PHASE 1 - CALMORTGAGE AND SCHOOL SITE PROPERTIES***
Activity Status: *NO ACTION - FOR CALMORTGAGE ONLY*
Completion Due Date:
Revised Completion Due Date:
Date Activity Actually Completed: *06042002*
Yards of Solids Removed: *0*
Yards of Solids Treated: *0*
Gallons of Liquid Removed: *0*
Gallons of Liquid Treated: *0*

DTSC COMMENTS REGARDING THIS SITE (blank below = not reported by agency)

Comments Date:

: *Pursuant to the MOU, DTSC has reviewed a Phase I Environmental Site Assessment Report and other documents for Inland Behavioral and Health Services, Inc. (IBHS). The subject property is currently vacant. IBHS is proposing to construct a new health center on the subject property. A Supplemental Phase I Environmental Assessment Report was prepared by DTSC and concluded that no action was needed for this property; there is no contamination on the property.*

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

TRIBALLAND

SEARCH ID: 78 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: BUREAU OF INDIAN AFFAIRS CONTACT INFORMATION
ADDRESS: UNKNOWN
CA 92410
SAN BERNARDINO
CONTACT:
SOURCE: BIA

REV: 01/15/08
ID1: BIA-92410
ID2:
STATUS:
PHONE:

BUREAU OF INDIAN AFFAIRS CONTACT INFORMATION

OFFICE: Pacific Regional Office
CONTACT: CLAY GREGORY,REGIONAL DIRECTOR

ADDRESS: 2800 Cottage Way
Sacramento CA 95825
PHONE: Phone: 916-978-6000
FAX: Fax: 916-978-6099

The Native American Consultation Database (NACD) is a tool for identifying consultation contacts for Indian tribes, Alaska Native villages and corporations, and Native Hawaiian organizations. The database is not a comprehensive source of information, but it does provide a starting point for the consultation process by identifying tribal leaders and NAGPRA contacts. This database can be accessed online at the following web address http://home.nps.gov/nacd/

Environmental FirstSearch
Site Detail Report

Target Property: SOUTHEAST OF WATERMAN AND BASELINE ST

SAN BERNARDINO CA 92410

JOB: PYA1001

SWL

SEARCH ID: 76 **DIST/DIR:** NON GC **ELEVATION:** **MAP ID:**

NAME: SAN BERNARDINO CITY DISPOSAL SITE
ADDRESS: VICINITY OF SOUTH WATERMAN AVE
SAN BERNARDINO CA
SAN BERNARDINO
CONTACT:
SOURCE:

REV: 03/21/00
ID1: SWIS36-CR-0036
ID2:
STATUS: CLOSED
PHONE:

Activity: *Solid Waste Disposal Site*
Accepted Waste:
Operational Status: *Closed*
Regulatory Status *Pre-regulations*
Closure Date:
Closure Type:
Permitted Throughput with Units: *0*
Permitted Capacity with Units: *0*
Remaining Capacity with Units (landfills only): *0*
Permitted Total Acreage: *0*
Permitted Disposal Acreage: *0*
Last Tire Inspection Count: *0*
Last Tire Inspection Count Date:
Original Tire Inspection Count: *0*
Last Tire Inspection Count Date:
Inspection Frequency: *None*

Environmental FirstSearch Descriptions

NPL: ***EPA*** NATIONAL PRIORITY LIST - The National Priorities List is a list of the worst hazardous waste sites that have been identified by Superfund. Sites are only put on the list after they have been scored using the Hazard Ranking System (HRS), and have been subjected to public comment. Any site on the NPL is eligible for cleanup using Superfund Trust money.
A Superfund site is any land in the United States that has been contaminated by hazardous waste and identified by the Environmental Protection Agency (EPA) as a candidate for cleanup because it poses a risk to human health and/or the environment.
FINAL - Currently on the Final NPL
PROPOSED - Proposed for NPL

NPL DELISTED: ***EPA*** NATIONAL PRIORITY LIST Subset - Database of delisted NPL sites. The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.
DELISTED - Deleted from the Final NPL

CERCLIS: ***EPA*** COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY INFORMATION SYSTEM (CERCLIS)- CERCLIS is a database of potential and confirmed hazardous waste sites at which the EPA Superfund program has some involvement. It contains sites that are either proposed to be or are on the National Priorities List (NPL) as well as sites that are in the screening and assessment phase for possible inclusion on the NPL.
PART OF NPL- Site is part of NPL site
DELETED - Deleted from the Final NPL
FINAL - Currently on the Final NPL
NOT PROPOSED - Not on the NPL
NOT VALID - Not Valid Site or Incident
PROPOSED - Proposed for NPL
REMOVED - Removed from Proposed NPL
SCAN PLAN - Pre-proposal Site
WITHDRAWN - Withdrawn

NFRAP: ***EPA*** COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY INFORMATION SYSTEM ARCHIVED SITES - database of Archive designated CERCLA sites that, to the best of EPA's knowledge, assessment has been completed and has determined no further steps will be taken to list this site on the National Priorities List (NPL). This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.
NFRAP – No Further Remedial Action Plan
P - Site is part of NPL site
D - Deleted from the Final NPL
F - Currently on the Final NPL
N - Not on the NPL
O - Not Valid Site or Incident
P - Proposed for NPL
R - Removed from Proposed NPL
S - Pre-proposal Site
W – Withdrawn

RCRA COR ACT: ***EPA*** RESOURCE CONSERVATION AND RECOVERY INFORMATION SYSTEM SITES - Database of hazardous waste information contained in the Resource Conservation and Recovery Act Information (RCRAInfo), a national program management and inventory system about hazardous waste handlers. In general, all generators, transporters, treaters, storers, and disposers of hazardous waste are required to provide information about their activities to state environmental agencies. These agencies, in turn pass on the information to regional and national EPA offices. This regulation is governed by the Resource Conservation and Recovery Act (RCRA), as amended by the Hazardous and Solid Waste Amendments of 1984.
RCRAInfo facilities that have reported violations and subject to corrective actions.

RCRA TSD: ***EPA*** RESOURCE CONSERVATION AND RECOVERY INFORMATION SYSTEM TREATMENT, STORAGE, and DISPOSAL FACILITIES. - Database of hazardous waste information contained in the Resource Conservation and Recovery Act Information (RCRAInfo), a national program management and inventory system about hazardous waste handlers. In general, all generators, transporters, treaters, storers, and disposers of hazardous waste are required to provide information about their activities to state environmental agencies. These agencies, in turn pass on the information to regional and national EPA offices. This regulation is governed by the Resource Conservation and Recovery Act (RCRA), as amended by the Hazardous and Solid Waste Amendments of 1984.
Facilities that treat, store, dispose, or incinerate hazardous waste.

RCRA GEN: ***EPA/MA DEP/CT DEP*** RESOURCE CONSERVATION AND RECOVERY INFORMATION SYSTEM GENERATORS - Database of hazardous waste information contained in the Resource Conservation and Recovery Act Information (RCRAInfo), a national program management and inventory system about hazardous waste handlers. In general, all generators, transporters, treaters, storers, and disposers of hazardous waste are required to provide information about their activities to state environmental agencies. These agencies, in turn pass on the information to regional and national EPA offices. This regulation is governed by the Resource Conservation and Recovery Act (RCRA), as amended by the Hazardous and Solid Waste Amendments of 1984.
Facilities that generate or transport hazardous waste or meet other RCRA requirements.
LGN - Large Quantity Generators
SGN - Small Quantity Generators
VGN – Conditionally Exempt Generator.
Included are RAATS (RCRA Administrative Action Tracking System) and CMEL (Compliance Monitoring & Enforcement List) facilities.
CONNECTICUT HAZARDOUS WASTE MANIFEST – Database of all shipments of hazardous waste within, into or from Connecticut. The data includes date of shipment, transporter and TSD info, and material shipped and quantity. This data is appended to the details of existing generator records.
MASSACHUSETTES HAZARDOUS WASTE GENERATOR – database of generators that are regulated under the MA DEP.
VQN-MA = generates less than 220 pounds or 27 gallons per month of hazardous waste or waste oil.
SQN-MA = generates 220 to 2,200 pounds or 27 to 270 gallons per month of waste oil.
LQG-MA = generates greater than 2,200 lbs of hazardous waste or waste oil per month.

RCRA NLR: ***EPA*** RESOURCE CONSERVATION AND RECOVERY INFORMATION SYSTEM SITES - Database of hazardous waste information contained in the Resource Conservation and Recovery Act Information (RCRAInfo), a national program management and inventory system about hazardous waste handlers. In general, all generators, transporters, treaters, storers, and disposers of hazardous waste are required to provide information about their activities to state environmental agencies. These agencies, in turn pass on the information to regional and national EPA offices. This regulation is governed by the Resource Conservation and Recovery Act (RCRA), as amended by the Hazardous and Solid Waste Amendments of 1984.
Facilities not currently classified by the EPA but are still included in the RCRAInfo database. Reasons for non classification:
Failure to report in a timely matter.
No longer in business.
No longer in business at the listed address.
No longer generating hazardous waste materials in quantities which require reporting.

ERNS: ***EPA/NRC*** EMERGENCY RESPONSE NOTIFICATION SYSTEM (ERNS) - Database of incidents reported to the National Response Center. These incidents include chemical spills, accidents involving chemicals (such as fires or explosions), oil spills, transportation accidents that involve oil or chemicals, releases of radioactive materials, sightings of oil sheens on bodies of water, terrorist incidents involving chemicals, incidents where illegally dumped chemicals have been found, and drills intended to prepare responders to handle these kinds of incidents. Data since January 2001 has been received from the National Response System database as the EPA no longer maintains this data.

Tribal Lands: ***DOI/BIA*** INDIAN LANDS OF THE UNITED STATES - Database of areas with boundaries established by treaty, statute, and (or) executive or court order, recognized by the Federal Government as territory in which American Indian tribes have primary governmental authority. The Indian Lands of the United States map layer shows areas of 640 acres or more, administered by the Bureau of Indian Affairs. Included are

Federally-administered lands within a reservation which may or may not be considered part of the reservation.
BUREAU OF INDIAN AFFIARS CONTACT - Regional contact information for the Bureau of Indian Affairs offices.

State/Tribal Sites: ***CA EPA*** SMBRPD / CAL SITES- The California Department of Toxic Substances Control (DTSC) has developed an electronic database system called Envirostor with information about sites that are known to be contaminated with hazardous substances as well as information on uncharacterized properties where further studies may reveal problems. The Site Mitigation and Brownfields Reuse Program Database (SMBRPD), formerly known as CalSites, is used primarily by DTSC's staff as an informational tool to evaluate and track activities at properties that may have been affected by the release of hazardous substances.
The SMBRPD displays information in six categories, two of which are found in ST. The categories listed under ST are:
1. State Response Sites.
2. School Property Evaluation Program Properties (SCH)
Please Note: Our reports list the above sites as DB Type (STATE). Other categories found in the SMBRPD are listed in our reports in the DB Types OT and VC.
Each Category contains information on properties based upon the type of work taking place at the site. State Response Sites contains only known and potential hazardous substance release sites considered as posing the greatest threat to the public. School sites included in ST will be found within the SMBRPD's School Property Evaluation Program.
CORTESE LIST-Pursuant to Government Code Section 65962.5, the Hazardous Waste and Substances Sites List has been compiled by Cal/EPA, Hazardous Materials Data Management Program to provide information about the location of hazardous materials release sites. Cortese List sites that fall under DTSC's guidelines for State Response sites are included in our reports in the ST category as are qualifying sites from the Annual Work Plan (formerly Bond Expenditure Plan) and the historic ASPIS databases.

State Spills 90: ***CA EPA*** SLIC REGIONS 1 - 9- The California Regional Water Quality Control Boards maintain report of sites that have records of spills, leaks, investigation, and cleanups.

State/Tribal SWL: ***CA IWMB/SWRCB/COUNTY*** SWIS SOLID WASTE INFORMATION SYSTEM-The California Integrated Waste Management Board maintains a database on solid waste facilities, operations, and disposal sites throughout the state of California. The types of facilities found in this database include landfills, transfer stations, material recovery facilities, composting sites, transformation facilities, waste tire sites, and closed disposal sites. For more information on individual sites call the number listed in the source field..
Please Note: This database contains poor site location information for many sites in our reports; therefore, it may not be possible to locate or plot some sites in our reports.
WMUDS-The State Water Resources Control Board maintained the Waste Management Unit Database System (WMUDS). It is no longer updated. It tracked management units for several regulatory programs related to waste management and its potential impact on groundwater. Two of these programs (SWAT & TPCA) are no longer on-going regulatory programs as described below. Chapter 15 (SC15) is still an on-going regulatory program and information is updated periodically but not to the WMUDS database. The WMUDS System contains information from the following agency databases: Facility, Waste Management Unit (WMU), Waste Discharger System (WDS), SWAT, Chapter 15, TPCA, RCRA, Inspections, Violations, and Enforcement's.
Note: This database contains poor site location information for many sites in our reports; therefore, it may not be possible to locate or plot some sites in reports.
ORANGE COUNTY LANDFILLS LIST- A list maintained by the Orange County Health Department.

State/Tribal LUST: ***CA SWRCB/COUNTY*** LUSTIS- The State Water Resources Control Board maintains a database of sites with confirmed or unconfirmed leaking underground storage tanks. Information for this database is collected from the states regional boards quarterly and integrated with this database.
SAN DIEGO COUNTY LEAKING TANKS- The San Diego County Department of Environmental Health maintains a database of sites with confirmed or unconfirmed leaking underground storage tanks within its HE17/58 database. For more information on a specific file call the HazMat Duty Specialist at phone number listed in the source information field.

State/Tribal UST/AST: ***CA EPA/COUNTY/CITY*** ABOVEGROUND STORAGE TANKS LISTING-The Above Ground Petroleum Storage Act became State Law effective January 1, 1990. In general, the law requires owners or operators of AST's with petroleum products to file a storage statement and pay a fee by July 1, 1990 and every two years thereafter, take specific action to prevent spills, and in certain instances implement a groundwater monitoring program. This law does not apply to that portion of a tank facility associated with the

production oil and regulated by the State Division of Oil and Gas of the Dept. of Conservation.
SWEEPS / FIDS STATE REGISTERED UNDEGROUND STORAGE TANKS- Until 1994 the State Water Resources Control Board maintained a database of registered underground storage tanks statewide referred to as the SWEEPS System. The SWEEPS UST information was integrated with the CAL EPA's Facility Index System database (FIDS) which is a master index of information from numerous California agency environmental databases. That was last updated in 1994. We have included the UST information from the FIDS database in our reports for historical purposes to help our clients identify where tanks may possibly have existed. For more information on specific sites from individual paper files archived at the State Water Resources Control Board call the number listed with the source information.
INDIAN LANDS UNDERGROUND STORAGE TANKS LIST- A listing of underground storage tanks currently on Indian Lands under federal jurisdiction. California Indian Land USTS are administered by US EPA Region 9.
CUPA DATABASES & SOURCES- Definition of a CUPA: A Certified Unified Program Agency (CUPA) is a local agency that has been certified by the CAL EPA to implement six state environmental programs within the local agency's jurisdiction. These can be a county, city, or JPA (Joint Powers Authority). This program was established under the amendments to the California Health and Safety Code made by SB 1082 in 1994.
A Participating Agency (PA) is a local agency that has been designated by the local CUPA to administer one or more Unified Programs within their jurisdiction on behalf of the CUPA. A Designated Agency (DA) is an agency that has not been certified by the CUPA but is the responsible local agency that would implement the six unified programs until they are certified.
Please Note: We collect and maintains information regarding Underground Storage Tanks from the majority of the CUPAS and Participating Agencies in the State of California. These agencies typically do not maintain nor release such information on a uniform or consistent schedule; therefore, currency of the data may vary. Please look at the details on a specific site with a UST record in the First Search Report to determine the actual currency date of the record as provided by the relevant agency. Numerous efforts are made on a regular basis to obtain updated records.

State/Tribal IC: ***CA EPA*** DEED-RESTRICTED SITES LISTING- The California EPA's Department of Toxic Substances Control Board maintains a list of deed-restricted sites, properties where the DTSC has placed limits or requirements on the future use of the property due to varying levels of cleanup possible, practical or necessary at the site.

State/Tribal VCP: ***CA EPA*** SMBRPD / CAL SITES- The California Department of Toxic Substances Control (DTSC) has developed an electronic database system called Envirostor with information about sites that are known to be contaminated with hazardous substances as well as information on uncharacterized properties where further studies may reveal problems. The Site Mitigation and Brownfields Reuse Program Database (SMBRPD), formerly known as CalSites, is used primarily by DTSC's staff as an informational tool to evaluate and track activities at properties that may have been affected by the release of hazardous substances. The Voluntary Cleanup Program (VCP) category contains only those properties undergoing voluntary investigation and/or cleanup and which are listed in the Voluntary Cleanup Program.
Please Note: Our reports list the above sites as DB Type VC.

RADON: ***NTIS*** NATIONAL RADON DATABASE - EPA radon data from 1990-1991 national radon project collected for a variety of zip codes across the United States.

State Permits: ***CA EPA/COUNTY*** SAN DIEGO COUNTY HE17 PERMITS- The HE17/58 database tracks establishments issued permits and the status of their permits in relation to compliance with federal, state, and local regulations that the County oversees. It tracks if a site is a hazardous waste generator, TSD, gas station, has underground tanks, violations, or unauthorized releases. For more information on a specific file call the HazMat Duty Specialist at the phone number listed in the source information field.
SAN BERNARDINO COUNTY HAZARDOUS MATERIALS PERMITS- Handlers and Generators Permit Information Maintained by the Hazardous Materials Division.

State Other: ***CA EPA/COUNTY*** SMBRPD / CAL SITES- The California Department of Toxic Substances Control (DTSC) has developed an electronic database system called Envirostor with information about sites that are known to be contaminated with hazardous substances as well as information on uncharacterized properties where further studies may reveal problems. The Site Mitigation and Brownfields Reuse Program Database (SMBRPD), formerly known as CalSites, is used primarily by DTSC's staff as an informational tool to evaluate and track activities at properties that may have been affected by the release of hazardous substances.
The SMBRPD displays information in six categories, two of which are found in ST. The categories listed under

OT are:
1. Unconfirmed Properties Referred to Another Local or State Agency (REF)
2. Properties where a No Further Action Determination has been made (NFA)
Please Note: Our reports list the above sites as DB Type (OTHER). Other categories found in the SMBRPD are listed in our reports in the DB Types ST and VC.
LA COUNTY SITE MITIGATION COMPLAINT CONTROL LOG- The County of Los Angeles Public Health Investigation Compliant Control Log.
ORANGE COUNTY INDUSTRIAL SITE CLEANUPS- List maintained by the Orange County Environmental Health Agency.
RIVERSIDE COUNTY WASTE GENERATORS-A list of facilities in Riverside County which generate hazardous waste.
SACRAMENTO COUNTY MASTER HAZMAT LIST-Master list of facilities within Sacramento County with potentially hazardous materials.
SACRAMENTO COUNTY TOXIC SITE CLEANUPS-A list of sites where unauthorized releases of potentially hazardous materials have occurred.

FI Map Coverage: ***PROPRIETARY*** FIRE INSURANCE MAP AVAILABILITY - Database of historical fire insurance map availability.

HW Manifest: ***CA EPA*** DEPARTMENT OF TOXIC SUBSTANCES CONTROL HAZARDOUS WASTE MANIFEST INVENTORY-Records maintained by the CA DTSC of Hazardous Waste Manifests used to track and document the transport of hazardous waste from a generator's site to the site of its final disposition.

Environmental FirstSearch Database Sources

NPL: ***EPA*** Environmental Protection Agency

Updated quarterly

NPL DELISTED: ***EPA*** Environmental Protection Agency

Updated quarterly

CERCLIS: ***EPA*** Environmental Protection Agency

Updated quarterly

NFRAP: ***EPA*** Environmental Protection Agency.

Updated quarterly

RCRA COR ACT: ***EPA*** Environmental Protection Agency.

Updated quarterly

RCRA TSD: ***EPA*** Environmental Protection Agency.

Updated quarterly

RCRA GEN: ***EPA/MA DEP/CT DEP*** Environmental Protection Agency, Massachusetts Department of Environmental Protection, Connecticut Department of Environmental Protection

Updated quarterly

RCRA NLR: ***EPA*** Environmental Protection Agency

Updated quarterly

ERNS: ***EPA/NRC*** Environmental Protection Agency

Updated annually

Tribal Lands: ***DOI/BIA*** United States Department of the Interior

Updated annually

State/Tribal Sites: ***CA EPA*** The CAL EPA, Depart. Of Toxic Substances Control
Phone: (916) 323-3400

Updated quarterly/when available

State Spills 90: ***CA EPA*** The California State Water Resources Control Board

Updated when available

State/Tribal SWL: ***CA IWMB/SWRCB/COUNTY*** The California Integrated Waste Management Board
Phone:(916) 255-2331
The State Water Resources Control Board
Phone:(916) 227-4365
Orange County Health Department

Updated quarterly/when available

State/Tribal LUST: ***CA SWRCB/COUNTY*** The California State Water Resources Control Board
Phone:(916) 227-4416
San Diego County Department of Environmental Health

Updated quarterly/when available

State/Tribal UST/AST: ***CA EPA/COUNTY/CITY*** The State Water Resources Control Board
Phone:(916) 227-4364
CAL EPA Department of Toxic Substances Control
Phone:(916)227-4404
US EPA Region 9 Underground Storage Tank Program
Phone: (415) 972-3372
ALAMEDA COUNTY CUPAS:
* County of Alameda Department of Environmental Health
* Cities of Berkeley, Fremont, Hayward, Livermore / Pleasanton, Newark, Oakland, San Leandro, Union
ALPINE COUNTY CUPA:
* Health Department (Only updated by agency sporadically)
AMADOR COUNTY CUPA:
* County of Amador Environmental Health Department
BUTTE COUNTY CUPA
* County of Butte Environmental Health Division (Only updated by agency biannually)
CALAVERAS COUNTY CUPA:
* County of Calaveras Environmental Health Department
COLUSA COUNTY CUPA:
* Environmental Health Dept.
CONTRA COSTA COUNTY CUPA:
* Hazardous Materials Program
DEL NORTE COUNTY CUPA:
* Department of Health and Social Services
EL DORADO COUNTY CUPAS:
* County of El Dorado Environmental Health - Solid Waste Div (Only updated by agency annually)
* County of El Dorado EMD Tahoe Division (Only updated by agency annually)
FRESNO COUNTY CUPA:
* Haz. Mat and Solid Waste Programs
GLENN COUNTY CUPA:
* Air Pollution Control District
HUMBOLDT COUNTY CUPA:
* Environmental Health Division
IMPERIAL COUNTY CUPA:
* Department of Planning and Building
INYO COUNTY CUPA:
* Environmental Health Department

KERN COUNTY CUPA:
* County of Kern Environmental Health Department
* City of Bakersfield Fire Department
KINGS COUNTY CUPA:
* Environmental Health Services
LAKE COUNTY CUPA:
* Division of Environmental Health
LASSEN COUNTY CUPA:
* Department of Agriculture
LOS ANGELES COUNTY CUPAS:
* County of Los Angeles Fire Department CUPA Data as maintained by the Los Angeles County Department of Public Works
* County of Los Angeles Environmental Programs Division
* Cities of Burbank, El Segundo, Glendale, Long Beach/Signal Hill, Los Angeles,Pasadena, Santa Fe Springs, Santa Monica, Torrance, Vernon
MADERA COUNTY CUPA:
* Environmental Health Department
MARIN COUNTY CUPA:
* County of Marin Office of Waste Management
* City of San Rafael Fire Department
MARIPOSA COUNTY CUPA:
* Health Department
MENDOCINO COUNTY CUPA:
* Environmental Health Department
MERCED COUNTY CUPA:
* Division of Environmental Health
MODOC COUNTY CUPA:
* Department of Agriculture
MONO COUNTY CUPA:
* Health Department
MONTEREY COUNTY CUPA:
* Environmental Health Division
NAPA COUNTY CUPA:
* Hazardous Materials Section
NEVADA COUNTY CUPA:
* Environmental Health Department
ORANGE COUNTY CUPAS:
* County of Orange Environmental Health Department
* Cities of Anaheim, Fullerton, Orange, Santa Ana
* County of Orange Environmental Health Department
PLACER COUNTY CUPAS:
* County of Placer Division of Environmental Health Field Office
* Tahoe City
* City of Roseville Roseville Fire Department
PLUMAS COUNTY CUPA:
* Environmental Health Department
RIVERSIDE COUNTY CUPA:
* Environmental Health Department
SACRAMENTO COUNTY CUPA:
* County Environmental Mgmt Dept, Haz. Mat. Div.
SAN BENITO COUNTY CUPA:
* City of Hollister Environmental Service Department
SAN BERNARDINO COUNTY CUPAS:
* County of San Bernardino Fire Department, Haz. Mat. Div.
* City of Hesperia Hesperia Fire Prevention Department
*City of Victorville Victorville Fire Department
SAN DIEGO COUNTY CUPA:
* The San Diego County Dept. of Environmental Health HE 17/58
SAN FRANCISCO COUNTY CUPA:
* Department of Public Health

SAN JOAQUIN COUNTY CUPA:
* Environmental Health Division
SAN LUIS OBISPO COUNTY CUPAS:
* County of San Luis Obispo Environmental Health Division
* City of San Luis Obispo City Fire Department
SAN MATEO COUNTY CUPA:
* Environmental Health Department
SANTA BARBARA COUNTY CUPA:
* County Fire Dept Protective Services Division
SANTA CLARA COUNTY CUPAS:
* County of Santa Clara Hazardous Materials Compliance Division
* Santa Clara County Central Fire Protection District (Covers Campbell, Cupertino, Los Gatos, & Morgan Hill)
* Cities of Gilroy, Milpitas, Mountain View, Palo Alto, San Jose Fire, Santa Clara, Sunnyvale
SANTA CRUZ COUNTY CUPA:
* Environmental Health Department
SHASTA COUNTY CUPA:
* Environmental Health Department
SIERRA COUNTY CUPA:
* Health Department
SISKIYOU COUNTY CUPA:
* Environmental Health Department
SONOMA COUNTY CUPAS:
* County of Sonoma Department Of Environmental Health
* Cities of Healdsburg / Sebastopol, Petaluma, Santa Rosa
STANISLAUS COUNTY CUPA:
* Department of Environmental Resources Haz. Mat. Division
SUTTER COUNTY CUPA:
* Department of Agriculture
TEHAMA COUNTY CUPA:
* Department of Environmental Health
TRINITY COUNTY CUPA:
* Department of Health
TULARE COUNTY CUPA:
* Environmental Health Department
TUOLUMNE COUNTY CUPA:
* Environmental Health
VENTURA COUNTY CUPAS:
* County of Ventura Environmental Health Division
* Cities of Oxnard, Ventura
YOLO COUNTY CUPA:
* Environmental Health Department
YUBA COUNTY CUPA:

Updated quarterly/annually/when available

State/Tribal IC: ***CA EPA*** The California EPA Department of Toxic Substances Control.

Updated Updated quarterly/annually/when available

State/Tribal VCP: ***CA EPA*** The California EPA Department of Toxic Substances Control.

Updated Updated quarterly/annually/when available

RADON: ***NTIS*** Environmental Protection Agency, National Technical Information Services

Updated periodically

State Permits: ***CA EPA/COUNTY*** The San Diego County Depart. Of Environmental Health
Phone:(619) 338-2211
San Bernardino County Fire Department

Updated quarterly/when available

State Other: ***CA EPA/COUNTY*** The CAL EPA, Depart. Of Toxic Substances Control
Phone: (916) 323-3400
The Los Angeles County Hazardous Materials Division
Phone: (323) 890-7806
Orange County Environmental Health Agency
Phone: (714) 834-3536
Riverside County Department of Environmental Health, Hazardous Materials Management Division
Phone:(951) 358-5055
Sacramento County Environmental Management Department

Updated quarterly/when available

FI Map Coverage: ***PROPRIETARY*** Library of Congress
Catalogue of Maps Published by Sanborn Mapping and Geographic Information Service in February 1988®
ProQuest
Other internally produced datasets

Updated quarterly

HW Manifest: ***CA EPA***
CAL EPA, Department of Toxic Substances Control

Updated annually/when available

APPENDIX K

PHASE I ENVIRONMENTAL SITE ASSESSMENT QUESTIONNAIRE/ SOURCE AND INTERVIEW DOCUMENTATION

carmen.lo@lsa-assoc.com
(949) 553-0666
Fax: (949) 553-8076

From: Shirleen Garcia [mailto:sgarcia@hacsb.com]
Sent: Tuesday, November 30, 2010 11:22 AM
To: Nancy Finch; Carmen Lo
Cc: Kent Norton
Subject: RE: SB City Phase 1

Carmen & Nancy,
I hope that everyone had a great Thanksgiving holiday!
Concerning the questionnaire, it was given to Nancy & Estella initially to fill out, however, in seeing the nature of the questions it's best if our Development Department take the lead on it. Further questions on this topic and status, please contact me directly. My contact information is in the namestamp below. I'll return it to you ASAP. Thank you.

Shirleen Garcia
Project Manager
Office of Real Estate Development
Housing Authority of the County of San Bernardino
715 East Brier Drive
San Bernardino, CA 92408-2841
Phone: 909.890.0644 , Ext. x2378| Fax: 909.890.4618
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Please consider the environment before printing this email

From: Nancy Finch
Sent: Tuesday, November 30, 2010 9:40 AM
To: Carmen Lo; Shirleen Garcia
Cc: Kent Norton
Subject: RE: SB City Phase 1

Carmen

Ok these are some questions I can try and help with. Sorry I could not help on the questionnaire:

Thank you!

Nancy

From: Carmen Lo [mailto:Carmen.Lo@lsa-assoc.com]
Sent: Tuesday, November 30, 2010 9:21 AM
To: Nancy Finch; Shirleen Garcia
Cc: Kent Norton
Subject: RE: SB City Phase 1

Nancy/Shirleen,

Shirleen - please fill out the questionnaire. Let me know if you have any question.

Nancy - Here is some questions for you:

1) Based on your knowledge, when are the buildings constructed on the site? I believe the construction for the majority of the buildings is 4/4/1942

2) Who is the service for the solid waste disposal, water and sewer service? City of San Bernardino Integrated Waste Management Division, City of San Bernardino Water Dept.

3) Any HVAC on the roof for the units? None of the residential units have HVAC on the roofs. Only the 1 office building, 1 community building, 2 day care buildings have HVAC on roofs.

4) Any drains, sumps or clarifers at the site? There are drains throughout the complex. I know for sure we have one on Elm and one on Sycamore Circle.

5) Any elevators on site? If yes, any hazardous substance use or stored on site? There is a service elevator in the maintenance shop at 660 Orange. There is paint and paint thinner stored there.

6) Any swimming pool on site? If yes, any hazardous substance use or stored on site related to the swimming pool? No swimming pools on site.

Thanks

Carmen Lo, REA I
Assistant Environmental Planner
LSA Associates, Inc.
20 Executive Park, Suite 200
Irvine, CA 92614

carmen.lo@lsa-assoc.com
(949) 553-0666
Fax: (949) 553-8076

From: Nancy Finch [mailto:nfinch@hacsb.com]
Sent: Tuesday, November 30, 2010 9:08 AM
To: Carmen Lo
Subject: RE: SB City Phase 1

Hi

I am sorry I do not have the information on the site as requested on the Phase 1 questionnaire. I am not advised of liens on the property nor am I advised about use of the land.
I am sure Shirleen can assist you with this.

Sorry I do not have the information you request but I am sure Shirleen can assist in this matter.

Thank you.

Nancy

From: Carmen Lo [mailto:Carmen.Lo@lsa-assoc.com]
Sent: Tuesday, November 30, 2010 9:06 AM
To: Nancy Finch
Cc: Shirleen Garcia; Kent Norton; mchao@pyatok.com
Subject: RE: SB City Phase 1

Nancy,

Marcial told me you are the on-site property manager on the site. And I am sure that you know the background and history of the subject site more than others listed on the email. Part of the Phase I process, we will need to conduct an interview with the property manager and/or someone who knows about the property. That will be very helpful if both Shirlenn and you fill out the form. You just need to answer the questions based on your best knowledge of the site.

Please let me know if you have any question. And please understand that we are having a tight schedule, please take a few minutes to look at the questionnaire. I will contact you once I receive the questionnaire from you.

Thanks

Carmen Lo, REA I
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LSA Associates, Inc.
20 Executive Park, Suite 200
Irvine, CA 92614

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Fax: (949) 553-8076

From: Nancy Finch [mailto:nfinch@hacsb.com]
Sent: Tuesday, November 30, 2010 8:53 AM
To: Carmen Lo
Cc: Shirleen Garcia
Subject: RE: SB City Phase 1

Hi Carmen,

I cannot answer the questions on the Phase 1 questionnaire, but I think Shirleen is handing that. My cell number is 760 265 1251.

Thank you.

From: Carmen Lo [mailto:Carmen.Lo@lsa-assoc.com]
Sent: Tuesday, November 30, 2010 8:51 AM
To: Nancy Finch
Subject: RE: SB City Phase 1

Nancy,

Thank you for your quick response. Attached is the Phase I questionnaire. Please fill out the document and pdf it and send it back to me by email. I am going to take a look at it once I get the document back from you. Then I will make a phone call with you.

Would you mind giving me your contact number?

Thanks

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carmen.lo@lsa-assoc.com

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Fax: (949) 553-8076

From: Nancy Finch [mailto:nfinch@hacsb.com]
Sent: Tuesday, November 30, 2010 8:46 AM
To: Carmen Lo; Shirleen Garcia
Cc: Kent Norton; merikson@hacsb.com; Estella Nunez
Subject: RE: SB City Phase 1

Carmen

Hi, I was on annual leave for the last 3 weeks and just back. If you want to schedule a phone call I will try and make time for you. Being gone so long I have a lot of workload back up but will try my best to accommodate you.

Thank you.

From: Carmen Lo [mailto:Carmen.Lo@lsa-assoc.com]
Sent: Tuesday, November 30, 2010 8:40 AM
To: Shirleen Garcia
Cc: Kent Norton; Nancy Finch; merikson@hacsb.com
Subject: FW: SB City Phase 1

Shirleen,

Since the last email I sent out to Nancy and Melissa, I have not heard of anything response back from them. I would like to give them a call to go over some questions I have about the property or maybe even meet on site if possible. Could you please give me their contact numbers? So I can contact them directly.

Also, I am not sure how well you know about the history of the subject site. I attached a questionnaire for you to fill out. Please send me back a pdf by email after you are done with answering the questions on the questionnaire.

Thank you so much.

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LSA Associates, Inc.
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Irvine, CA 92614

carmen.lo@lsa-assoc.com
(949) 553-0666
Fax: (949) 553-8076

From: Shirleen Garcia [mailto:sgarcia@hacsb.com]
Sent: Monday, November 22, 2010 4:55 PM
To: Marcial Chao; Kent Norton
Cc: Carmen Lo; Melissa Erikson; Nancy Finch
Subject: RE: SB City Phase 1

Marcial,
Contacting Nancy and Estella on-site directly should be fine. However, please include me on email correspondences so that I can be left in the loop and assist in expediting requests that involve out Administrative office. Thank you.

Shirleen Garcia

Project Manager
Office of Real Estate Development
Housing Authority of the County of San Bernardino
715 East Brier Drive
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Please consider the environment before printing this email

From: Marcial Chao [mailto:mchao@pyatok.com]
Sent: Monday, November 22, 2010 12:49 PM
To: Kent Norton
Cc: Carmen Lo; Melissa Erikson; Shirleen Garcia; Nancy Finch
Subject: RE: SB City Phase 1

Hi Ken,

The address for the main administration building at the site is:
425 Crestview Avenue
San Bernardino, CA 92410
909-885-1593

The on-site property manager is Nancy Finch. I have cc'd her on this email. Nancy would be first person to speak with in regards to specific knowledge about the site.

Also, Shirleen Garcia is the Housing Authority project manager for Waterman Gardens. She may be able to put you in touch with others who may know more about the history.

Nancy, Shirleen; Ken will be conducting a Phase 1 environmental site assessment will is a requirement for entitlements. Would it be ok for Ken to contact Nancy directly?

thank you.

--

Marcial Chao
Senior Associate
Pyatok Architects
1611 Telegraph Ave., Suite 200
Oakland, CA 94612
510-465-7010 x120
mchao@paytok.com
www.pyatok.com

From: Kent Norton [mailto:kent.norton@lsa-assoc.com]
Sent: Friday, November 19, 2010 8:32 AM
To: Marcial Chao
Cc: Carmen Lo
Subject: SB City Phase 1

Hi Marcial, we will need some additional info on the SB City affordable housing site if you have it, first, the addresses or address ranges of the property or units on the property, and second, the contact info for any person or persons knowledgeable about the site for as far back in time as is practical. Thank you...

Kent Norton, AICP, REA
LSA Associates, Inc.

Please consider the environment before printing this email

Phase I Questionnaire

Date: December 13, 2010

Property Address: Waterman Gardens Public Housing Community, 425 Crestview, San Bernardino, CA 92410

Property Assessor Number: 147-211-1,2,3,4

The following questionnaire is required by the new ASTM Standard E-1527-05, which adheres to the new All Appropriate Inquiries Rule, written into law on November 1, 2005 by the United States Environmental Protection Agency.

If you answer yes to any of the questions, and need additional space to explain, please use additional paper and reference the question number.

(1.) Environmental cleanup liens that are filed or recorded against the site (40 CFR 312.25)

Are you aware of any environmental cleanup liens against the Property that are filed or recorded under federal, tribal. State or local law?

No.

(2.) Activity and land use limitations that are in place on the site or that have been filed or recorded in a registry (40 CFR 312.26)

Are you aware of any activity and land use limitations (AULs), such as engineering controls, land use restrictions or institutional controls that are in place at the Property and/or have been filed or recorded in a registry under federal, tribal, state or local law?

No.

(3.) Specialized Knowledge or experience of the person seeking to qualify for the LLP (40 CFR 312.28)

As the user of this Phase I Environmental Site Assessment ESA do you have any specialized knowledge or experience related to the Property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the Property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business?

Yes, because current owner draws all Ordinances on all Chemicals used and removed on-site.

(4.) Relationship of the purchase price to the fair market value of the Property if it were not contaminated (40 CFR 312.29)

Does the purchase price being paid for this property reasonably reflect the fair market value of the property? If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the Property?

No due to the age of the buildings.

Property Address: Waterman Gardens Public Housing Community, 425 Crestview, San Bernardino, CA 92410

Property Assessor Number: 147-211-1,2,3,4

(5.) Commonly known or reasonably ascertainable information about the Property (40 CFR 312.20)

Are you aware of commonly known or reasonably ascertainable information about the Property that would help the environmental professional to identify conditions indicative of releases or threatened releases? For example, as user,

(a) Do you know the past uses of the Property?
Military Base Housing.

(b) Do you know of specific chemicals that are present or once were present at the Property?
Lead Based Paint on exterior only but encapsulated. Asbestos in Attics & Flooring - currently removed. No live hazardous chemicals.

(c) Do you know of spills or other chemical releases that have taken place at the Property?
In the late 90's – Gas mainline broken was repaired and contained by Gas Company

(d) Do you have any prior knowledge that the property was developed with a gas station, dry cleaner, machine shop or industrial facility in the past?
Gas station was removed and covered in late 90's. Cabinet Shop relocated – was around for minimum 5 years.

(e) Have you been informed of the past existence or hazardous substances of petroleum products with respect to the property or any facility located on the Property?
Not that we know of.

(f) Do you know if one or more underground storage tanks (USTs) or septic tanks were previously located at the property?
No.

(g) Do you know of any past, threatened, or pending lawsuits or administrative proceedings concerning a release or threatened release of any hazardous substance or petroleum products involving the property by any owner or occupant of the property?
Carbon Monoxide Poisoning due to Wall Heaters – closed issue, but unknown if was a formal claim.
Lead Abatement – kid chewed on lead paint and was formal claim. Resident was compensated.

(h) Do you have any prior knowledge that any hazardous substances or petroleum products, unidentified waste materials, tires, automotive or industrial batteries, or any other waste materials have been dumped above grade, buried and/or burned on the Property?
No. They get disposed of in a proper.

(i) What year was the Property building constructed (if developed)?

1942

(j) Do you know of any environmental cleanups that have taken place at the Property?
Modernization removing 504 ADA units – remove lead. Certified HACSB employees.

(6.) The degree of obviousness of the presence or likely presence of contamination at the property, and the ability to detect the contamination by appropriate investigation (40 CFR 312.31).

As the user of the ESA, based on your knowledge and experience related to the property are there any indicators that point to the presence or likely presence of contamination at the property?

No indicators of contamination.

(7.) For what purpose is this Phase I Environmental Site Assessment being conducted, i.e. real estate transaction, lender requirement, etc.?
Real Estate Redevelopment Studies

(8.) Who is the current owner of the Property and how long has he/she owned the Property?
Housing Authority of the County of San Bernardino

(9.) Do you have a Title Search for the Property? If not, would you like us to order one? This is not within the ASTM standard scope. However, we are required to ask the Client this question, even though it is an additional scope, not included in the ASTM standard. The approximate cost for a Title Search with analysis and incorporation into the report is $500.
Yes we have a Title Search. If we cannot locate it we will order it.

I certify that the above responses were made to the best of my knowledge.

Print Name: Susan L Benner.

Address: 715 E. Brier Drive

Relationship to Subject Property: Executive Director of the Housing Authority of the County of San Bernardino

Signature: Susan Benner

Date: 12-13-10

Property Address: Waterman Gardens Public Housing Community, 425 Crestview, San Bernardino, CA 92410

Property Assessor Number: 147-211-1,2,3,4

Housing Authority Contact Staff

Shirleen Garcia
Project Manager
Office of Real Estate Development
Housing Authority of the County of San Bernardino
715 East Brier Drive
San Bernardino. CA 92408-2841
Phone: 909.890.0644 , **Ext.** x2378| **Fax:** 909.890.4618
sgarcia@hacsb.com | **www.hacsb.com**

Jose Gonzalez - HACSB Senior Maintenance Staff
jgonzalez@hacsb.com
Phone: 909.885.1593

Nancy Finch
Property Manager
Waterman Gardens
425 Crestview
San Bernardino, CA 92410
Phone: 909.885.1593 | **Fax:** 909.388-2218
nfinch@hacsb.com | **www.hacsb.com**

From Nancy Finch – Nov. 30, 2010.

1) Based on your knowledge, when are the buildings constructed on the site? I believe the construction for the majority of the buildings is 4/4/1942

2) Who is the service for the solid waste disposal, water and sewer service? City of San Bernardino Integrated Waste Management Division, City of San Bernardino Water Dept.

3) Any HVAC on the roof for the units? None of the residential units have HVAC on the roofs. Only the 1 office building, 1 community building, 2 day care buildings have HVAC on roofs.

4) Any drains, sumps or clarifers at the site? There are drains throughout the complex. I know for sure we have one on Elm and one on Sycamore Circle.

5) Any elevators on site? If yes, any hazardous substance use or stored on site? There is a service elevator in the maintenance shop at 660 Orange. There is paint and paint thinner stored there.

6) Any swimming pool on site? If yes, any hazardous substance use or stored on site related to the swimming pool? No swimming pools on site.

APPENDIX L

RESUMES

KENT NORTON, AICP, REA

SENIOR ENVIRONMENTAL PLANNER

EXPERTISE

Mr. Norton has prepared and managed the preparation of hundreds of CEQA and NEPA compliance documents that include Initial Studies, Environmental Assessments, Categorical Exclusions and Exemptions, Negative Declarations, and Environmental Impact Reports. His projects have ranged from small urban infill subdivisions to the development of over 13,000 acres of land in the high desert near Barstow, and EIRs for approximately a dozen large specific plan projects in Riverside and San Bernardino Counties. He has prepared EIRs for complex development projects on the former Kaiser Steel Mill, the Ontario Mills Mall property, and the Sierra Lakes Specific Plan project in Fontana. He has managed several award-winning projects including the Los Alamos Hills Master Plan and EIR for park and school facilities in Murrieta, the Coldwater Reservoir EIR in Beverly Hills, the Padua Park EIR in the City of Claremont, and the MacArthur Park Master Plan EIR in the City of Los Angeles. He also managed preparation of a comprehensive Environmental Impact Statement (EIS) for the closure and reuse of Griffiss Air Force Base in Rome, New York. As a Registered Environmental Assessor, Mr. Norton has prepared dozens of Phase 1 ESAs dealing with hazardous materials on vacant and developed sites.

Mr. Norton is the immediate past state president of the Association of Environmental Professionals (AEP), and has conducted numerous workshops and training sessions for students and professionals on the basics of CEQA compliance. He is still a Director-At-Large on the AEP State Board and is the chair of the AEP Emerging Issues Committee. He is also a member of the American Institute of Certified Planners (AICP) and the American Planning Association (APA).

EDUCATION

California State University, Fullerton, California. M.S., Environmental Studies with an emphasis in Urban and Regional Planning. 1983. His thesis on "Land Use Planning for Sources of Non-Ionizing Electromagnetic Radiation" was published in 1984 by the National Technical Information Service as a handbook for planners when dealing with cellular telephone towers, high voltage power lines, microwave communication towers, radio and television broadcast towers, etc.

California State University, Fullerton, California. B.A., Biology. 1978.

PROFESSIONAL EXPERIENCE

Senior Environmental Planner, LSA Associates, Inc., environmental, planning, and traffic engineering consultants, Riverside, California, September 2010 to present.

Director of Environmental Services, The Planning Center. November 2009 to June 2010.

Director of Environmental Services, Michael Brandman Associates. October 2002 to November 2009.

Director of Environmental Services, The Keith Companies. May 1995 to October 2002.

Independent Consultant. August 1994 to May 1995.

Environmental Planner, South Coast Air Quality Management District. June 1993 to August 1994.

Senior Scientist, Tetra Tech. September 1992 to June 1993.

Senior Project Manager, Cotton-Beland Associates. March 1992 to September 1992.

Project Manager, Planning Network. January 1980 to February 1992.

Facilities Planner, Placentia Unified School District. January 1980 to January 1988.

Environmental Planner, PRC Toups Corporation. November 1977 to January 1980.

REPRESENTATIVE PROJECT-SPECIFIC EXPERIENCE

General Plans and GP Environmental Impact Reports

City of Indian Wells General Plan. Mr. Norton assisted EPC Land Consultants with GIS mapping and environmental services for an update to the General Plan Land Use Element and Hillside Management Plan. Mr. Norton was the project director assigned to update portions of the City of Indian Wells' General Plan. The effort included an evaluation of the current General Plan Land Use Element in light of current conditions in the City and consistency within the element and with other elements of the General Plan. He prepared an Addendum to the previous General Plan EIR to comply with CEQA.

City of Diamond Bar General Plan and EIR. Mr. Norton assisted in the preparation of a comprehensive General Plan document and prepared a Master Environmental Assessment and General Plan EIR for the City of Diamond Bar. Major tasks included participation in General Plan Advisory Committee meetings. Major issues included biological resources in Tonner Canyon, Sycamore Canyon, and various open space areas within the City where little or no documentation of preservation status existed.

Residential Development Environmental Impact Reports

University Hills Specific Plan EIR in the City of San Bernardino. Mr. Norton provided environmental planning services to Inland Communities Corporation for the development of its University Hills project located in the City of San Bernardino near the Cal State San Bernardino (CSUSB) campus. The project included a land laboratory for the University and required significant interface with faculty and other representatives of CSUSB.

Roripaugh Ranch Specific Plan and EIR in the City of Temecula. Mr. Norton was project manager for the Specific Plan (SP) and EIR for development of 2,058 units on 805 acres of hills and valleys in the northeast corner of the City of Temecula. This site contains over 200 acres of sage scrub and other native habitat, and supports several listed species, including the California gnatcatcher and possibly the Quino checkerspot butterfly. Mr. Norton was responsible for evaluating and resolving many complex issues on this project such as neighborhood compatibility, availability of services, school impacts, and recreation. A Federal Endangered Species Act (FESA) Section 10(a) permit, Federal Clean Water Act (CWA) Section 404 permit, and Section 1603 Streambed Alteration Agreement were also prepared.

Sierra Bella Specific Plan EIR in the City of Corona. Mr. Norton was the project director for the subject residential EIR located on 320 acres within the City of Corona's sphere of influence. Implementation of the proposed project will result in the development of up to 244 detached single-family homes on 320 acres with an additional 174 acres being graded and approximately 146 acres being preserved as natural open space. Major issues included geotechnical constraints, risk of wildland fires, steep topography with related grading and drainage constraints, traffic through adjacent residential neighborhoods, air pollutants and health risks to local residents from dust during grading, and biological resources of the adjacent Santa Ana Mountains and National Forest land.

Rancho El Rivino Residential Specific Plan in the City of Rialto. Project director responsible for the preparation of a Specific Plan EIR for a 205-acre planned residential development located in the City of Rialto. The developer, Young Homes, proposed the development of a Specific Plan to guide the development of 773 single-family homes and a central park. Major issues included conversion of a long-time golf course to residential uses; traffic, noise, and air quality impacts on local residents; and drainage, biological resources, and potential cultural resources.

P&V High Desert Development EIR in San Bernardino County. Mr. Norton was the project director responsible for the preparation of an EIR for this residential subdivision of 13,000 acres near the City of Barstow. The project was prepared for the County of San Bernardino and examined all environmental issues potentially affecting the natural habitat in the proposed project area, including geotechnical constraints, biological resources including desert tortoise, water availability, air quality from vehicles traveling on over 200 miles of dirt roads, grading constraints, and desert hydrology and runoff.

Environmental Impact Reports for Mixed-Use Development

Marketplace at Main Street Project EIR in the City of Corona. Mr. Norton was the project manager responsible for the preparation of an EIR for a mixed-use residential and commercial project near south Corona. This project has been very controversial with local residents. The EIR examined regional and local traffic issues, air quality, noise, aesthetics (views and night lighting), alternatives, cumulative impacts, and potential impacts on nearby historical palm trees and homes.

Renaissance Specific Plan EIR in the City of Rialto. Mr. Norton was the project director responsible for the preparation of an EIR and Mitigation Monitoring and Compliance Program for the subject residential/mixed-use project for the City of Rialto and Lewis Development. Major issues

included traffic both on local streets and the adjacent State Route 210 Freeway, water service (4 different districts), schools (2 districts), drainage (into 3 jurisdictions), compatibility with surrounding land uses, and hazardous materials including historical groundwater contamination from PCE and soil contamination from long-term use of a portion of the property for the Rialto Airport. The EIR also examined the impacts related to the timing of closing the Rialto Airport and converting it to suburban development.

Sunny Cal Specific Plan EIR in the City of Beaumont. Mr. Norton was the project director responsible for the preparation of an EIR to develop the 323-acre Sunny Cal Egg Ranch property. The proposed project site was located near Interstate 10 in the City of Beaumont. Owner, the Sunny Cal Egg and Poultry Company, proposed to develop residential uses (almost 1,000 units at one time) on the site.

NEPA and Transportation Projects

EIS for Closure and Reuse of Griffiss Air Force Base in Rome, New York. Mr. Norton prepared a comprehensive EIS and Economic Impact Statement for closure and reuse of an air force base in upstate New York. Evaluation included different land use alternatives, and conversion of waste and electrical systems to public services. Major issues included groundwater contamination by aircraft maintenance activities, enhancement of local drainages and woodland areas surrounding the base.

CEQA and NEPA Compliance for Riverside Freeway (SR-91) Auxiliary Lane in the City of Riverside. Mr. Norton supervised preparation of a Natural Environment Study (NES), Preliminary Environmental Study (PES), and Aerially-Deposited Lead (ADL) survey for a new auxiliary lane for the State Route 91. Work involved coordination with Caltrans District 7 (Riverside) Environmental staff, the City of Riverside Engineering and Public Works staffs, and the City's contract engineer (TY Lin). He also prepared an Initial Study for CEQA compliance on the project, including detailed noise and air quality studies to ascertain impacts on nearby adjacent residential and commercial uses.

NEPA Compliance for Various Road Projects in Moreno Valley. Mr. Norton supervised preparation of an NES and a PES for six different road segments in the City of Moreno Valley. He coordinated with Caltrans District 7 Environmental staff and the City's Public Works staff. He also prepared a detailed Initial Study for CEQA compliance on the project, including detailed noise and air quality studies to ascertain impacts on adjacent residences.

CEQA and NEPA Compliance for Improvements to Foothill Boulevard (Route 66) through the City of Fontana. Mr. Norton supervised preparation of an Initial Study/Environmental Assessment to determine potential impacts of widening and improving Route 66 though the City of Fontana. He conducted detailed historical and economic impact analyses for several hundred adjacent commercial businesses and residences. Work involved coordination with Caltrans District 8 (San Bernardino) Environmental staff and the City of Fontana Redevelopment and Public Works staffs.

EIS/EIR for Metro Gold Line Extension to Pasadena for LAMTA. Mr. Norton assisted in the preparation and processing of the Final EIS/EIR for the Gold Line extension, including analyzing

potential vibration and safety issues at several locations, traffic delay, and possible impacts to nearby historical structures from underground excavation and vibration from heavy equipment.

Greenspot Road Improvements in the City of Highland. Mr. Norton prepared an Addendum to the General Plan EIR to address specific improvements along Greenspot Road just east of SR-210. Issues included coordination with U.S. Fish and Wildlife Service and U.S. Army Corps of Engineers regarding potential impacts to San Bernardino kangaroo rat and the nearby City Creek.

CEQA Services for School Projects

High School #3 EIR & Elementary School for the Palm Springs Unified School District. Mr. Norton supervised preparation of a comprehensive EIR that addressed impacts of constructing a new high school and elementary school with existing residences at the southwest boundary of the site. Major issues included the location and impacts of the lighted sports stadium with amplified sound, traffic, potential vandalism and crime, and noise from school activities. The document successfully withstood legal challenge by the local residents and City of La Quinta after ongoing discussions about alternative locations of the stadium failed.

South Ontario High School for Chaffee Joint Union High School District. Mr. Norton prepared a comprehensive EIR for a 2,800-student high school in the south portion of Ontario, within existing dairy lands planned for suburban development. Major issues included location of buildings relative to several pipelines, school access routes and driveways, and remediation of former dairy underground storage tanks (USTs) and facilities.

Desert Hot Springs Elementary School Mitigated Negative Declaration (MND) for the Palm Springs Unified School District. Mr. Norton supervised preparation of a complete MND on an accelerated schedule, including an "informal" traffic analysis based on existing and planned land uses due to the size and location of the facility.

CEQA Services for Public Works Projects

Police and Public Works Facilities EIR in the City of San Gabriel. Mr. Norton supervised preparation of a comprehensive EIR, including public scoping meetings and coordination with City staff. Major issues included construction on two different sites, views of a new 2-story police building, construction of a new city maintenance facility adjacent to an improved flood control wash, neighboring residential uses within another city (Rosemead), and traffic and parking concerns during construction and operation of new city yard.

Cedar Glen Disaster Recovery EIR in Lake Arrowhead. Mr. Norton served as project director responsible for the preparation of an EIR for the redevelopment of the Cedar Glen area of Lake Arrowhead. Cedar Glen was the site of the devastating "Old Fire" in the fall of 2004, so to guide development, the County of San Bernardino proposed a "Disaster Recovery Redevelopment Project Area." Mr. Norton prepared the EIR document and coordinated review of various technical studies to be prepared as part of the project inclusive of extensive aesthetic and biological evaluations.

Los Alamos Hills Master Plan EIR for Park and School Facilities in the City of Murrieta. Mr. Norton prepared a comprehensive EIR for several park facilities, including a community sports park, and a high school in the north end of the City of Murrieta. The site had been subject to two previous (successful) CEQA lawsuits by a local resident, who eventually recommended this project for a state environmental award. Mr. Norton was also responsible for planning the various park and school facilities while preserving of several hills with native sage scrub habitat and associated natural drainages. Major issues included school and park locations, traffic access and parking impacts on surrounding neighborhoods, sports field lighting, noise from sports on weekends, drainage and water quality.

CEQA Services for Recreational Projects

MacArthur Park Master Plan EIR in the City of Los Angeles. Mr. Norton was project manager for preparation of a comprehensive EIR to evaluate a variety of landscape and hardscape improvements to the historic MacArthur Park, including construction of a new artificial turf soccer field with sports lighting, upgrades to trails and lighting, and renovation of historic boathouse and police substation buildings. The EIR examined potential environmental issues including air quality, historic resources, hydrology, noise, traffic, public services, and hazards.

Padua Hills Park EIR in the City of Claremont. Mr. Norton was the project manager responsible for the preparation of an EIR and coordination of various technical studies such as traffic/parking, lighting/glare, noise, biological resources, and air quality. Padua Hills Park is located in the northeastern portion of the city in a low-density residential neighborhood in the City of Claremont, which is presently not serviced by a park. The conceptual park design for the 24-acre site proposed both neighborhood and community park facilities including an open play area, group picnic shelters, restrooms, playground areas, active sports facilities, and parking. He also provided extensive coordination with city staff due to extremely controversial nature of the project.

Ferraro Soccer Fields MND in the City of Los Angeles. Mr. Norton served as project manager responsible for the preparation of a Mitigated Negative Declaration for the Griffith Park Athletic Field Upgrade in the City of Los Angeles. He was tasked with identifying all potentially significant impacts and issues, such as aesthetics, traffic, noise, air quality, and other issues associated with approval and construction of planned upgrades.

CEQA Services for Commercial and Industrial Projects

Jurupa Business Park EIR in the City of Fontana. Mr. Norton was the project manager responsible for the preparation of the Jurupa Business Park EIR for the City of Fontana. The proposed project was situated on 62.5 net acres and was designed to be completed in three phases. When completed, the business park would contain three warehouse buildings for a total of 1,268,360 square feet. The EIR focused on the project's potential impacts related to air quality and traffic in the development area.

Calvary Chapel Initial Study/MND in the City of Highland. Mr. Norton was the project manager responsible for the preparation of the subject Initial Study, which was prepared for the City of Highland and developer, Calvary Chapel. The project proposed to develop approximately 60 acres for

the purpose of building a new church facility. When completed, this phased project will contain approximately 100,000 square feet of church development, including a 1,600-seat sanctuary and additional ancillary uses, including an outdoor amphitheater with seating for 1,000, a small chapel with seating for 150, a fellowship hall, administrative buildings, classrooms (to be used as Sunday school classes and church purposes only), a coffee shop, and a bookstore.

Yucca Valley Home Depot EIR in the Town of Yucca Valley. Mr. Norton served as project manager responsible for the preparation of an EIR and coordination of various technical studies for the Home Depot Center in the Town of Yucca Valley. The project site encompassed 18.36 acres near State Route 62. The project included a Home Depot, plus pads for future uses. Approvals include a Conditional Use Permit, a Specific Plan, and a Parcel Map encompassing approximately 175,000 square feet of commercial space.

CEQA Services for Water Projects

Vista Del Sol Storm Drain MND in Three Arch Bay. Mr. Norton was the project manager responsible for the preparation of environmental documentation required under CEQA for the development of the Vista del Sol Storm Drain located at Three Arch Bay. Work efforts included substantial coordination with and permitting approval through the California Coastal Commission.

Coldwater Canyon Reservoir EIR for the City of Beverly Hills. Mr. Norton prepared and successfully processed an EIR for a new 25-foot tall 1 million-gallon reservoir within an established exclusive residential neighborhood in Coldwater Canyon. Work included documenting repairs to an existing underground reservoir damaged in the 1994 Northridge Earthquake. Major issues included land use compatibility, adequate visual buffering, air quality and dust, impacts on historic landscaping (nearby 150-year old sycamore and oak trees), and public safety hazards if the reservoir were to be damaged during an earthquake.

PROFESSIONAL AFFILIATIONS

- Association of Environmental Professionals (AEP), State of California President 2006–2009
- AEP, Inland Empire Chapter Director, 2005–2006.
- AEP, Inland Empire Chapter, Board Officer, 2000–2005.
- National Association of Environmental Professionals (NAEP), 2007–2009.
- American Planning Association (APA), Inland Empire Section, member, 2000–present.
- American Institute of Certified Planners (AICP), #9601, 1993.
- Registered Environmental Assessor (REA), Class I #06827, State of California. 1996.

CARMEN LO

ASSISTANT ENVIRONMENTAL PLANNER

EXPERTISE

Environmental Planning
Data Collection, Research, and Analysis
Documentation Distribution
Hazardous Waste

EDUCATION

University of California, Irvine, B.A., Environmental Analysis and Design, Minor in Urban and Regional Planning, 2004.

Pasadena City College, Associate of Arts, 2002.
1921—2001 1921 - 101 444 1921—2001

PROFESSIONAL EXPERIENCE

Assistant Environmental Planner, LSA Associates, Inc., Irvine, California, October 2007–present.

Environmental Analyst, Tait and Associates, Inc., Santa Ana, California, 2005–2007.

Environmental Specialist, PSI, Inc., Long Beach, California, 2005.

Assistant Environmental Planner/Intern, Caltrans District 12, Orange County, California, 2004.

PRINCIPAL PROFESSIONAL RESPONSIBILITIES

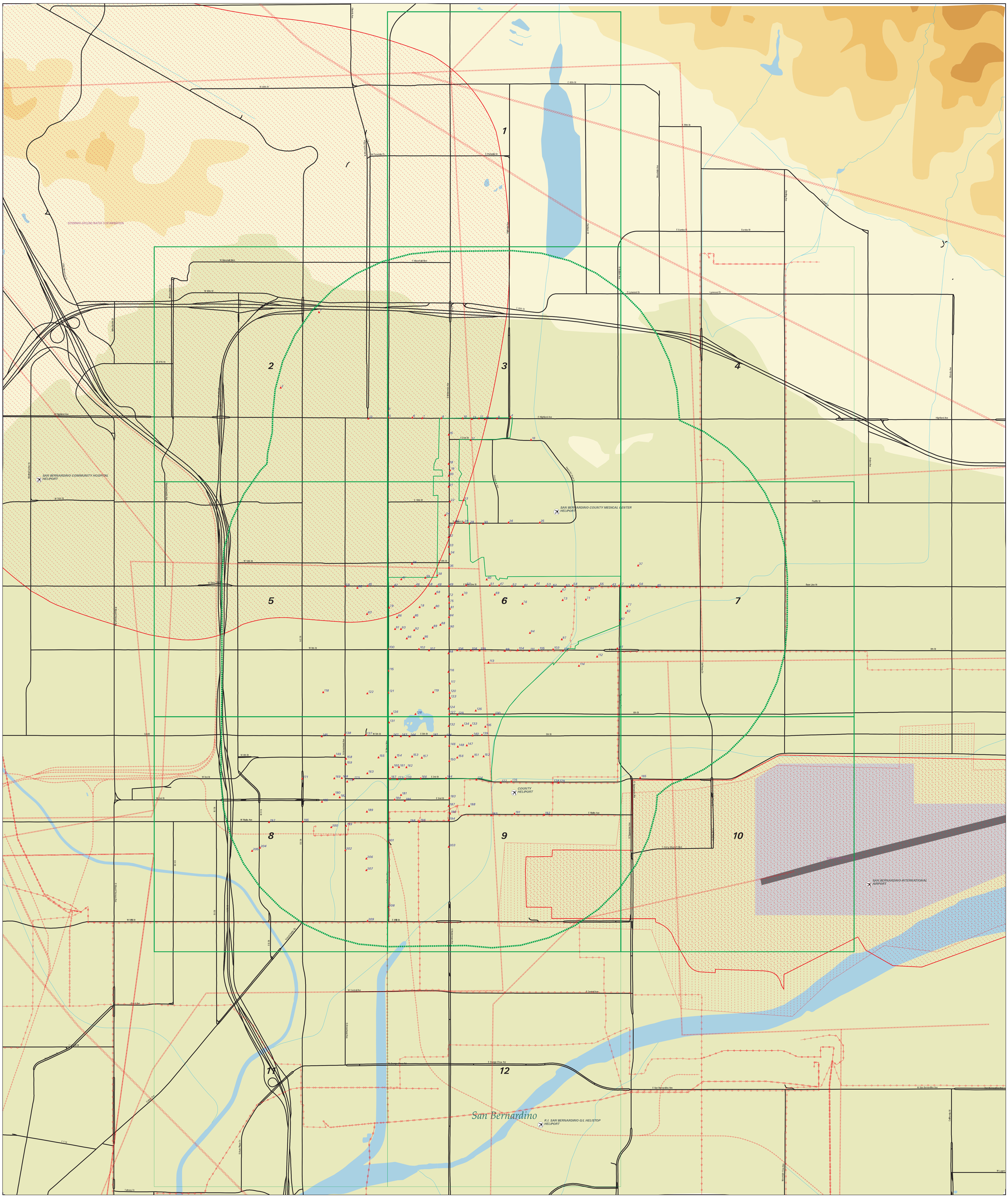
Ms. Lo is responsible for a variety of tasks related to the environmental analysis process, including the research of technical sections in environmental documents such as Environmental Impact Reports, Mitigated Negative Declarations and Initial Studies, and preparation of Hazardous Waste Initial Site Assessments. Her primary responsibilities include research and preparation of environmental documents pursuant to the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). Her technical experience includes the management of projects involving Preliminary Environmental Site Assessment (Phase I) reports and Soil and Water Investigations (Phase II).

CERTIFICATIONS/TRAINING

ACAD Fundamentals Program – August 2006.
Three-hour of Drilling Site and Rig Safety Awareness Program – January 2006.
OSHA 40-hour HAZWOPER Training – June 2005.

REGISTRATIONS

Registered Environmental Assessor I, California #30249



EDR DataMap® - Environmental Atlas

Waterman Gardens Specific Plan

960 1230 1500 1771 2041 2311 2581

Elevation in Feet

Legend

- Roads
- Major Roads
- Contour Lines
- Waterways
- Study Boundary
- Fault Lines
- Pipelines
- Powerlines
- Railroads
- Water
- Superfund Sites
- Federal DOD Sites
- Indian Reservations BIA
- Listed Sites
- Earthquake Epicenters (Richter 5 or greater)

N

0 1/4 1/2

Scale in Miles

EDR® Environmental Data Resources Inc

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KUNZMAN ASSOCIATES, INC.

WATERMAN GARDENS

NOISE STUDY REPORT

May 17, 2016

Traffic Engineering | Transportation Planning | Parking | Noise/Vibration | Expert Witness
Air Quality | Global Climate Change | Health Risk Assessment

KUNZMAN ASSOCIATES, INC.

WATERMAN GARDENS

NOISE STUDY REPORT

May 17, 2016

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I. INTRODUCTION AND PROJECT LOCATION

A. Introduction

This report provides a foundation for creating goals, policies, and programs for the Waterman Gardens project (Waterman + Baseline Neighborhood Transformation Specific Plan) in relation to noise. It includes a discussion of basic noise terminology, a discussion of existing land uses, noise sources, sensitive receptors, representative noise measurements and noise contours, and a discussion of the existing regulatory environment. Potential noise impacts associated with the proposed Specific Plan land uses and associated vehicle traffic are evaluated in light of the City of San Bernardino General Plan Noise Element and applicable portions of the City's Municipal Code. Recommended measures to reduce impacts are also provided.

B. Project Location

The City of San Bernardino is located approximately 60 miles east of the City of Los Angeles within the Santa Ana River Valley and San Bernardino County. The Waterman + Baseline Neighborhood Transformation Specific Plan area is near the center of the City of San Bernardino centered around the intersection of Waterman Avenue and Baseline Avenue. The Specific Plan area is bounded by Highland Avenue to the north, Tippecanoe Avenue and a flood control channel to the east, 3rd Street to the south, and Sierra Way to the west. Figure 1 provides a project location map, while Figure 2 illustrates the boundaries of the Specific Plan area.

C. Project Description

The Waterman + Baseline Neighborhood Transformation Specific Plan area totals approximately 710 acres. In addition to the major north-south arterials of Waterman Avenue and Tippecanoe Avenue and major east-west arterials of Baseline Road, 5th Street, and 2nd Street, the project site is located approximately 1.1 miles away from the I-215 Freeway and the northern boundary is located approximately 0.6 miles from the I-210 Freeway.

The proposed Specific Plan establishes a land use and development framework, identifies needed transportation and infrastructure improvements, and serves as a marketing tool for attracting developers to key sites and for boosting economic development. The Specific Plan is intended to encourage residential and neighborhood-serving commercial establishments on major corridors such as Baseline Avenue and Waterman Avenue, direct the creation of employment generating uses to the southern portion of the Plan area closer to the Civic Center and Downtown, and protect and enhance the existing residential neighborhoods.

Six planning "districts" that implement a mix of both residential and commercial land uses are proposed including an increase in residential uses from an existing 2,049 residential dwelling units to 4,341 residential dwelling units and an increase in commercial uses from

an existing 2,366,385 square feet to 3,570,448 square feet. The proposed planning districts, shown on Figure 2, have been summarized below:

District 1- Uptown Professional District. The Uptown Professional District is comprised of approximately 82 acres located in the northern portion of the Specific Plan area. It includes all the parcels fronting Waterman Avenue between Highland Avenue and 13th Street. The Plan would consolidate the medical uses scattered along Waterman Avenue into a focused district that leverages the demand generated by St. Bernardine Medical Center. District 1 will be zoned entirely as a mixed use district with office uses, neighborhood serving commercial uses, and limited residential uses up to 20 dwelling units per acre with a focus on senior housing.

District 2- Westside Neighborhood District. The Westside Neighborhood District includes approximately 127 acres at the western end of the Specific Plan area. The boundaries of this district are formed by Sierra Way on the west, Waterman Avenue on the east, and 5th Street on the south. The primary purpose for this district is to improve and preserve the existing single family neighborhoods located of west of Waterman Avenue. The district would accommodate mixed use development primarily neighborhood serving commercial land uses, along Baseline Street and Waterman Avenue.

District 3- Midtown Core District. The Midtown Core District includes 120 acres at the center of Specific Plan area. The boundaries of the district are Waterman Avenue on the west, 9th Street on the south, with no formal roadway boundaries to the north or east. Pivotal to this district is the redevelopment of Waterman Gardens, a 38-acre public housing project. The proposed project replaces 252 units of existing public housing with approximately 400 units of mixed income housing, a central park, community center, and other community and recreational resources. Olive Avenue would be re-designed and accommodate a pedestrian-oriented avenue with a variety of housing options, commercial shops and eating establishments along Waterman & Baseline Avenues– all within walking distance to a repurposed public K-12 school campus. Mixed use development would be accommodated including residential uses up to 30 dwelling units per acre.

District 4- Eastside Neighborhood District. The Eastside Neighborhood District includes approximately 144 acres at the eastern end of the Specific Plan area adjacent to the Midtown Core District. The boundaries of this district are loosely formed by Tippecanoe Avenue and a flood control channel to the east and south, the parcels fronting Baseline to the north, and no formal boundary to the west. This district would accommodate mixed use development primarily neighborhood serving commercial uses along Baseline Avenue consistent with the existing single family neighborhoods to the south. Portions of this district located along or adjacent to the flood control channel would be included in a linear park or trail system along the southern and eastern edges of the district.

District 5- Gateway District. The Gateway Lake district is approximately 97 acres in size and located south of 7th Street, east of Sierra Way, north of 3rd Street and west of Waterman Avenue. This district would introduce streetscape and building design

identifying this area as a gateway to the Specific Plan area and connecting distinguishing the neighborhood from the Civic Center/Downtown area. This district is intended to promote the identity of San Bernardino through enhanced landscaping and signage as well as mixed-use development at Seccombe Lake. The Gateway District would accommodate mixed use development along Waterman Avenue, with a small area of single family enhancement located in the center of the district. The majority of the district, including Seccombe Lake, would allow for higher density residential development of up to 30 dwelling units per acre with compatible neighborhood serving commercial uses in the form of vertical or horizontal mixed use.

District 6- Employment District. The Employment District is approximately 140 acres in size and is located south of 9th Street, east of Waterman Avenue, north of 3rd Street and west of a flood control channel. This district would be an employment generating and flexible business use district. The Employment District would accommodate office, commercial, and business park uses which are intended to create new job opportunities in close proximately to new and existing residential development. The Specific Plan project area fronting Waterman Avenue would accommodate the development of mixed use projects including residential up to 20 dwelling units per acre. The existing single family residential area located between 5th and 4th Streets would remain. Portions of the Employment District located in or adjacent to the flood control channel would be developed as a linear park or trail system along the eastern edge of the district.

In order to achieve the mix of residential and commercial land uses envisioned for the Specific Plan area, the proposed Specific Plan would establish five new land uses zones. The five new land uses zones are further described below:

- **Open Space.** The open space zone is intended to preserve and create recreational and open space opportunities throughout the Specific Plan area. New development is not permitted, unless it is tied to recreational uses and/or the enhancement of existing facilities, such as a linear trail, ball parks, pocket parks, tot lots, and other similar uses.

- **Neighborhood Residential.** The neighborhood residential zone is intended to promote the preservation and enhancement of existing single family neighborhoods while allowing for the development of new residential units up to 14 dwelling units per acre. This zone would buffer existing neighborhoods from higher intensity surrounding uses and provide transitions between residential and non-residential uses.

- **Corridor Mixed Use.** The corridor mixed use zone is intended to encourage the development of a mix of neighborhood serving commercial and residential uses along Baseline Street and Waterman Avenue. The zone would accommodate both vertical and horizontal mixed use development up to 20 dwelling units per acre and a floor area ratio (FAR) of 0.5. Existing businesses and new construction would incorporate streetscape improvements to encourage walkability along these two major corridors.

- **Urban Mixed Use.** The urban mixed use zone is intended to develop a pedestrian-oriented environment with a variety of housing options, commercial shops and eating establishments. Mixed use development will be encouraged including residential uses up to 30 dwelling units an acre and non-residential uses up to an FAR of 0.75. These zones are intended to create a sense of place and identify the Specific Plan Area as a distinct location within the City.

- **Employment.** The employment zone is intended to promote the development of employment generating uses including office, commercial, and business park uses (mix of business and support services) to establish new job opportunities in close proximately to new and existing residential development. This zone allows for non-residential uses up to an FAR of 0.75.

Figure 1
Project Location Map

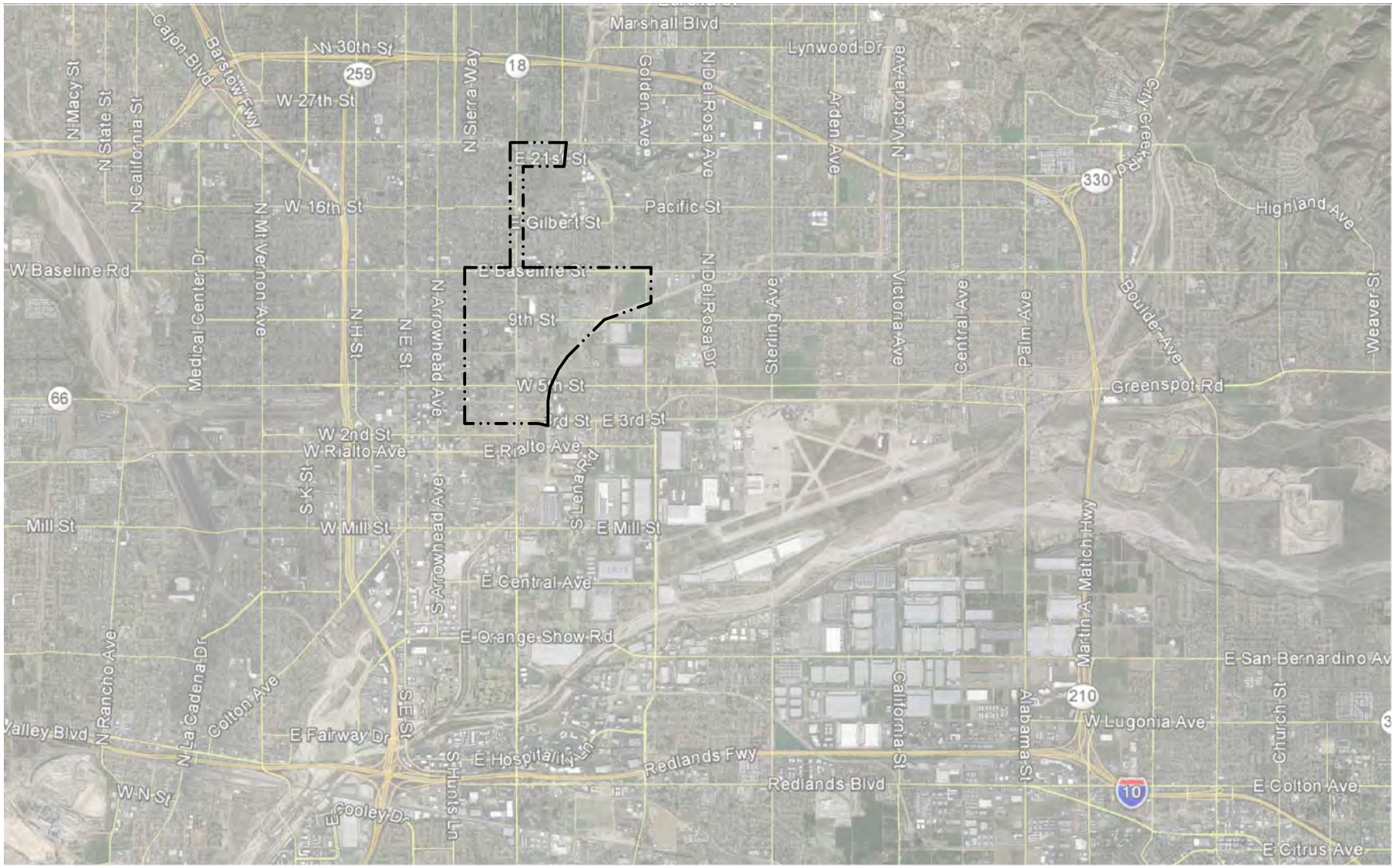

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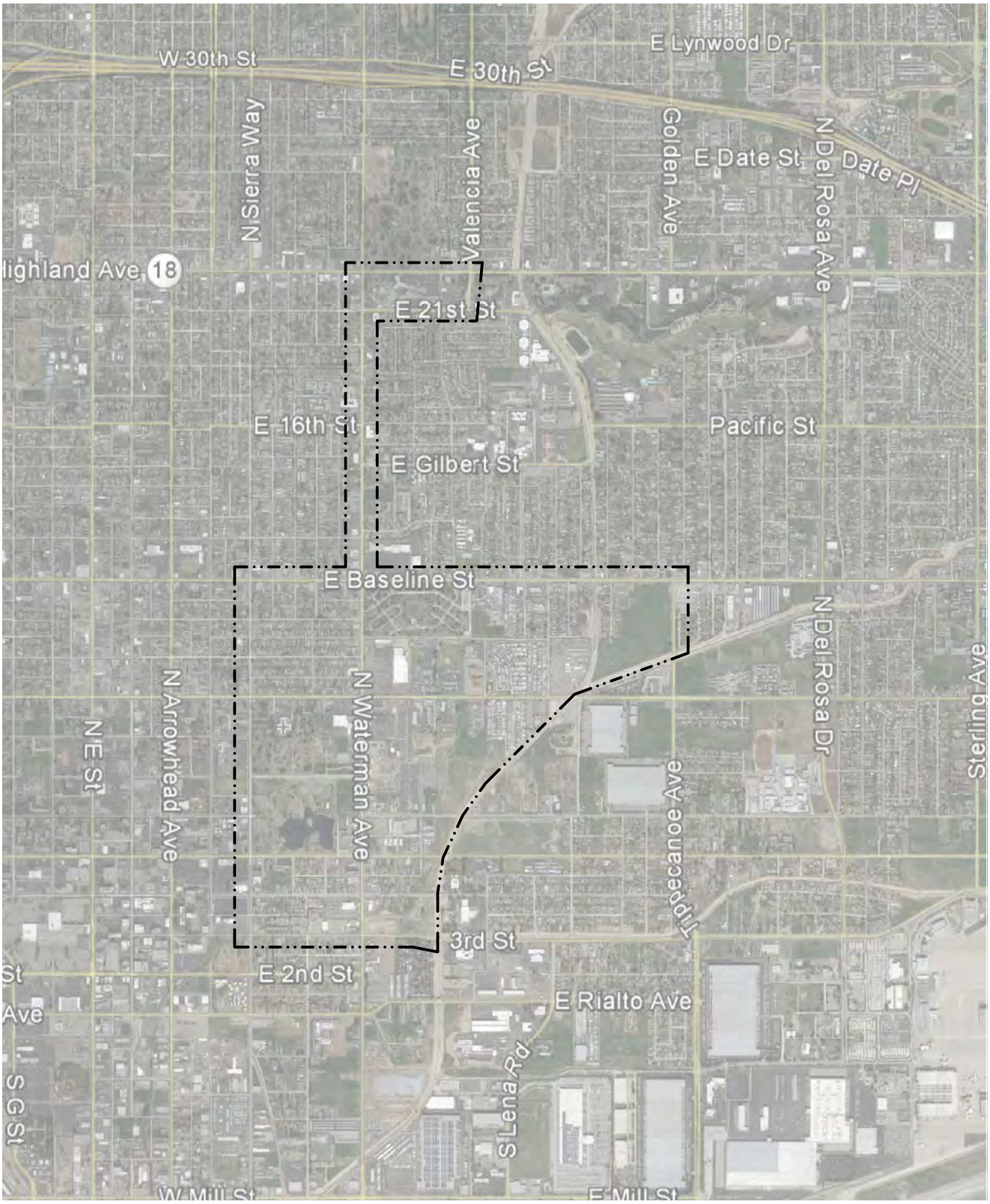
Figure 2
Waterman + Baseline Neighborhood Transformation Specific Plan Area



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II. NOISE AND VIBRATION FUNDAMENTALS AND DEFINITION OF TERMS

A. Noise Fundamentals

There are certain fundamental properties of sound and techniques for describing noise levels that are necessary for a complete understanding of existing conditions. Below is a simplified explanation of some of these properties and techniques. The discussion is structured to promote understanding by those with and without an existing understanding of noise. However, the use of some technical terms is unavoidable.

1. Sound Properties

Sound is technically described in terms of the loudness (amplitude) of the sound and frequency (pitch) of the sound. The standard unit of measurement of the loudness of sound is the decibel (dB). Decibels are based on the logarithmic scale. The logarithmic scale compresses the wide range in sound pressure levels to a more usable range of numbers in a manner similar to the Richter scale used to measure earthquakes. In terms of human response to noise, a sound 10 dB higher than another is judged to be twice as loud; and 20 dB higher four times as loud; and so forth. Everyday sounds normally range from 30 dB (very quiet) to 100 dB (very loud).

Since the human ear is not equally sensitive to sound at all frequencies, a special frequency-dependent rating scale has been devised to relate noise to human sensitivity. The A-weighted decibel scale (dBA) performs this compensation by discriminating against frequencies in a manner approximating the sensitivity of the human ear. Community noise levels are measured in terms of the "A-weighted decibel," abbreviated dBA. Figure 3 provides examples of various noises and their typical A-weighted noise level.

2. Noise Descriptors

There are several “descriptors” used to describe noise. The noise descriptors most often encountered when dealing with traffic, community, and environmental noise are defined below. A more comprehensive list of acoustical terms and their definitions is included as Appendix A of this report.

L_{eq} (Equivalent Noise Level): Average noise levels over a period of minutes or hours are usually expressed as dBA $L_{eq,}$ or the equivalent noise level for that period of time. For example, $L_{eq\ (3)}$ would represent a 3-hour average. When no period is specified, a one-hour average is assumed.

L_{max} (Maximum Noise Level): The maximum instantaneous noise level during a specified period of time.”

L_{min} (Minimum Noise Level): The minimum instantaneous noise level during a specified period of time.

L_n (Statistical Descriptor): The noise level exceeded X% of a specific period of time. For example, L_{50} is the median noise level, or level exceeded 50% of the time.

CNEL/Ldn (Community Noise Equivalent Level/ Day-Night Average Noise Level): CNEL is a 24-hour weighted average measure of community noise. It is obtained by adding five decibels to sound levels in the evening (7:00 PM to 10:00 PM), and by adding ten decibels to sound levels at night (10:00 PM to 7:00 AM). This weighting accounts for the increased human sensitivity to noise during the evening and nighttime hours. L_{dn} is a very similar 24-hour average measure that weights only the nighttime hours.

3. Noise Propagation

Sound levels decrease as a function of distance from the source as a result of wave divergence, atmospheric absorption and ground attenuation. As the sound wave form travels away from the source, the sound energy is dispersed over a greater area, thereby dispersing the sound power of the wave. Atmospheric absorption also influences the levels that are received by the observer. The greater the distance traveled, the greater the influence and the resultant fluctuations. The degree of absorption is a function of the frequency of the sound as well as the humidity and temperature of the air. Turbulence and gradients of wind also play a significant role in determining the degree of attenuation. Intervening topography or structures can also have a substantial effect on the effective perceived noise levels.

4. Noise and Health Effects

Noise has been defined as unwanted sound and it is known to have several adverse effects on people. From these known effects of noise, criteria have been established to help protect the public health and safety and prevent disruption of certain human activities. This criteria is based on such known impacts of noise on people as hearing loss, speech interference, sleep interference, physiological responses and annoyance. Each of these potential noise impacts on people are briefly discussed in the following narratives:

Hearing loss is not a concern in community noise situations of this type. The potential for noise induced hearing loss is more commonly associated with occupational noise exposures in heavy industry or very noisy work environments. Noise levels in neighborhoods, even in very noisy airport environs, are not sufficiently loud to cause hearing loss.

Speech interference is one of the primary concerns in environmental noise problems. Normal conversational speech is in the range of 60 to 65 dBA and any noise in this range or louder may interfere with speech.

Sleep disturbance is a major noise concern for traffic noise. Sleep disturbance studies have identified interior noise levels that have the potential to cause sleep disturbance. Note that sleep disturbance does not necessarily mean awakening from sleep, but can refer to altering the pattern and stages of sleep.

Physiological responses are those measurable effects of noise on people that are realized as changes in pulse rate, blood pressure, etc. While such effects can be induced and observed, the extent is not known to which these physiological responses cause harm or are sign of harm.

Annoyance is the most difficult of all noise responses to describe. Annoyance is a very individual characteristic and can vary widely from person to person. What one person considers tolerable can be quite unbearable to another of equal hearing capability.

B. Vibration Fundamentals

1. Vibration Properties

Groundborne vibrations consist of rapidly fluctuating motions within the ground that have an average motion of zero. The effects of groundborne vibrations typically only cause a nuisance to people, but at extreme vibration levels, damage to buildings may occur. Although groundborne vibration can be felt outdoors, it is typically only an annoyance to people indoors where the associated effects of the shaking of a building can be notable. Groundborne noise is an effect of groundborne vibration and only exists indoors, since it is produced from noise radiated from the motion of the walls and floors of a room and may consist of the rattling of windows or dishes on shelves.

2. Vibration Descriptors

Peak particle velocity (PPV) or the root mean square (RMS) amplitude of the vibration velocity is used to quantify vibration amplitude in this report.

3. Vibration Perception

Typically, groundborne vibration is readily perceptible at 0.08 PPV. Off-site sources that may produce perceptible vibrations are usually caused by construction equipment, steel-wheeled trains, and traffic on rough roads, while smooth roads rarely produce perceptible groundborne noise or vibration.

4. Vibration Propagation

The propagation of groundborne vibration is not as simple to model as airborne noise. This is because noise in the air travels through a relatively uniform median, while groundborne vibrations travel through the earth, which may contain significant geological differences. There are three main types of vibration propagation: surface, compression, and shear waves. Surface waves, or Rayleigh waves, travel along the ground's surface. These waves carry most of their energy along an expanding circular wave front, similar to ripples produced by throwing a rock into a pool of water. P-waves, or compression waves, are body waves that carry their energy along an expanding spherical wave front. The particle motion in these waves is longitudinal (i.e., in a "push-pull" fashion). P-waves are analogous to airborne sound waves. S-

waves, or shear waves, are also body waves that carry energy along an expanding spherical wave front. However, unlike P-waves, the particle motion is transverse, or side-to-side and perpendicular to the direction of propagation. The rate of attenuation can vary greatly depending on the soil type.

5. Construction Vibration

Construction activity can result in varying degrees of ground vibration, depending on the equipment used on the site. Operation of construction equipment causes ground vibrations that spread through the ground and diminish in strength with distance. Buildings in the vicinity of the construction site respond to these vibrations with varying results ranging from no perceptible effects at the low levels to slight damage at the highest levels. Table 1 provides a reasonable estimate of vibration levels for different types of construction equipment over a wide range of soil conditions.

Table 1

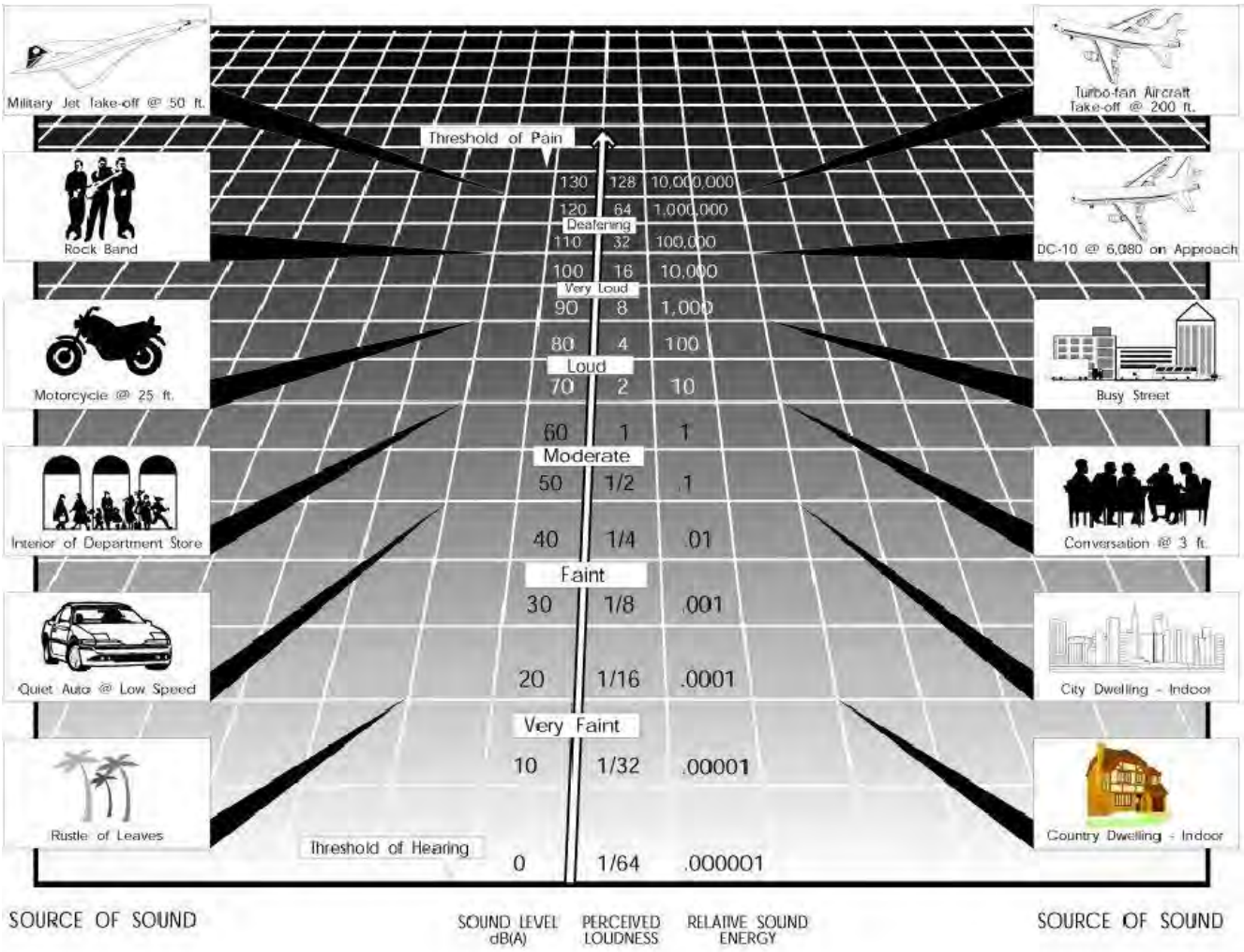
Construction Equipment Vibration Source Levels[1]

Equipment	Community Noise Equivalent Level (CNEL) or Day-Night Level (Ldn), dB		
	at 25 feet	at 50 feet	at 100 feet
Clam Shovel Drop (slurry wall)	**0.202**	0.071	0.025
Vibratory Roller	**0.210**	0.074	0.026
Hoe Ram	**0.089**	0.031	0.011
Large Bulldozer	**0.089**	0.031	0.011
Caisson Drilling	**0.089**	0.031	0.011
Loaded Trucks	0.076	0.027	0.010
Jackhammer	0.035	0.012	0.004
Small Bulldozer	0.003	0.001	0.0004

[1] Source: Federal Transit Administration: Transit Noise and Vibration Impact Assessment, 2006.

[2] Bold values are considered annoying to people.

Figure 3
Common Noise Sources and Noise Levels



III. EXISTING NOISE ENVIRONMENT

A. Ambient Noise Measurements

An American National Standards Institute (ANSI Section SI4 1979, Type 1) Larson Davis model LxT sound level meter was used to document existing ambient noise levels. Twenty-two 10-minute representative noise measurements were taken between 2:24 PM and 6:09 PM on April 27, 2016 and between 8:05 AM and 7:25 PM on April 28, 2016. Noise measurement locations (see Figure 4) were chosen to represent a variety of existing land uses and sensitive receptors near the six proposed Specific Plan Districts. As shown in Table 2, measured ambient noise levels ranged between 50.9 dBA $_{Leq}$ and 73.5 dBA L_{eq}. Noise measurement output data is included in Appendix B.

B. Existing Land Uses and Sensitive Receptors

1. Sensitive Receptors

Noise can become a problem when noise sources and noise sensitive land uses are located in adjacent areas. Residential uses are generally the most sensitive to noise. Other noise-sensitive land uses include schools, libraries, offices, hospitals, churches, hotels, motels, and outdoor recreational areas. Most noise impacts can be avoided when noise sources, sensitive land uses, and information about the future noise environment are considered in planning and development decisions.

2. Existing Land Use

Land uses in the project area includes residential, commercial, and mixed-use development. There are also several places of worship, and medical offices within the project area. Sierra High School is centrally located within the project area.

C. Existing Noise Sources

1. Transportation-Related Noise

Motor Vehicles

Vehicle noise associated with Waterman Avenue and other major arterial roadways in the project area represents the major source of noise in the Specific Plan area. Existing traffic noise levels associated with road segments in the project area were modeled utilizing the Highway Noise Model published by the Federal Highway Administration ("FHWA Highway Traffic Noise Prediction Model," FHWA-RD-77-108, December, 1978). The FHWA Model uses traffic volume, vehicle mix, vehicle speed, and roadway geometry to compute the "equivalent noise level." Existing traffic volumes were obtained from forecast traffic data provided by Fehr & Peers (2016). The volumes, along with speeds that were used to calculate the noise levels associated with existing vehicle traffic are presented in Appendix C. As the City of San Bernardino does not have a published vehicle mix or Day/Evening/Night (D/E/N) split

for use in acoustical studies, road segments were assigned D/E/N splits recommended by the Riverside County Department of Industrial Hygiene for noise modeling.

The 60, 65, 70 CNEL contours are shown in Table 3. Land uses within 1,200 feet of Waterman Avenue, 581 feet of Baseline Street, or 586 feet of 5th Street are currently exposed to noise levels that exceed the applicable noise/land use compatibility criteria standards shown in Table 4.

Aircraft Noise

San Bernardino International Airport, is located approximately 1.68 miles southeast from the southernmost corner of the Specific Plan area. The San Bernardino International Airport is a fully certified FAA Part 139 airport able to accommodate heavy aircraft maintenance, air cargo, passenger flights, and corporate and general aviation flights (San Bernardino International Airport 2015). The San Bernardino International Airport is publicly owned by the San Bernardino International Airport Authority (SBIAA), a joint powers authority comprised of the County of San Bernardino and the Cities of San Bernardino, Colton, Loma Linda, and Highland (SBIAA 2010). San Bernardino International has been converted to a commercial airport from its previous use as Norton Air Force Base and is seeking to establish itself as an alternative destination for both passenger and cargo carriers.

Although aircrafts associated with the San Bernardino International Airport do fly directly over the Plan area (which was confirmed during noise measurements) none of the Specific Plan Area is located in the Airport's 65 CNEL Ultimate Noise Contour (see Figure 5).

The short duration of the flyovers, the large distance of the flying aircraft to the project site (e.g., the altitude of flying aircraft), and the low intensity of the noise energy emitted by most aircraft associated with the San Bernardino International Airport result in noise impacts in the Specific Plan area that are only sufficient to make minor temporary alterations to the average ambient noise level.

2. <u>Stationary Noise Sources</u>

Stationary noise sources can include commercial and industrial activities, loudspeakers, car alarms, loud music, and noise generated from large gathering and typical residential neighborhood sounds such as lawnmowers, children at play, and barking dogs. In the project area, the noise impacts from these sources are mostly outweighed by vehicle traffic-related noise.

Table 2

Measured Existing Noise Levels[1]

Name	Measurement Period	Duration of Measurement	Description	Existing Ambient Noise Levels (dBA)					
				L_{eq}	L_{max}	L_2	L_8	L_{25}	L_{50}
NM 1	2:24 PM to 2:34 PM	10 min	Traffic & Community Noise	63.0	76.1	71.4	67.6	63.1	58.3
NM 2	2:57 PM to 3:07 PM	10 min	Traffic Noise	54.9	69.4	63.9	55.9	53.9	52.5
NM 3	3:33 PM to 3:43 PM	10 min	Traffic Noise	57.5	67.1	62.7	60.8	58.5	51.8
NM 4	4:08 PM to 4:18 PM	10 min	Traffic Noise	56.0	68.2	64.8	61.0	55.0	51.0
NM 5	4:43 PM to 4:53 PM	10 min	Community Noise	63.7	81.8	75.5	64.6	54.6	52.2
NM 6	5:21 PM to 5:31 PM	10 min	Community Noise	53.3	63.5	59.3	55.4	53.1	52.3
NM 7	5:59 PM to 6:09 PM	10 min	Traffic Noise	59.4	72.3	65.8	63.2	59.3	57.0
NM 8	8:05 AM to 8:15 AM	10 min	Traffic Noise	68.7	80.2	76.0	73.1	70.0	65.0
NM 9	8:43 AM to 8:53 AM	10 min	Traffic Noise	59.5	72.7	66.5	63.6	60.1	56.5
NM 10	9:19 AM to 9:29 AM	10 min	Traffic Noise	56.8	69.4	63.8	60.4	57.7	54.6
NM 11	10:21 AM to 10:31 AM	10 min	Traffic Noise	69.8	82.5	76.8	74.4	70.9	67.0
NM 12	10:57 AM to 11:07 AM	10 min	Community Noise	54.0	70.4	60.5	57.4	53.5	50.3
NM 13	11:40 AM to 11:50 AM	10 min	Traffic Noise	65.0	76.4	73.2	70.5	65.5	59.4
NM 14	12:46 PM to 12:56 PM	10 min	Traffic Noise	61.7	77.6	72.4	66.6	57.3	47.5
NM 15	1:26 PM to 1:36 PM	10 min	Community Noise	50.9	60.3	57.4	54.3	51.4	49.0
NM 16	2:10 PM to 2:20 PM	10 min	Community Noise	61.4	76.7	70.4	66.4	60.5	55.7
NM 17	2:52 PM to 3:02 PM	10 min	Traffic & Community Noise	62.2	81.4	71.1	66.1	59.5	54.1
NM 18	4:19 PM to 4:29 PM	10 min	Traffic & Community Noise	64.4	77.5	72.5	69.9	64.9	57.1
NM 19	5:00 PM to 5:10 PM	10 min	Traffic Noise	73.5	81.9	79.6	77.9	75.3	70.7
NM 20	5:34 PM to 5:44 PM	10 min	Traffic Noise	58.3	74.5	64.8	60.5	58.8	56.4
NM 21	6:32 PM to 6:42 PM	10 min	Traffic Noise	56.7	71.4	65.0	61.4	55.2	52.2
NM 22	7:15 PM to 7:25 PM	10 min	Traffic Noise	58.3	72.2	63.1	61.2	58.9	56.5

[1] Source: Site Visit, Kunzman Associates, Inc. (NM 1-7 performed on April 27, 2016 and NM 8-22 performed on April 28,2016.)

Table 3

Modeled Existing Traffic Noise Levels (CNEL)

Roadway	Segment	Existing Average Daily Traffic[1]	Existing CNEL Contour (feet from centerline)		
			70 dBA	65 dBA	60 dBA
Waterman Avenue	North of 30th Street	16,750	115	363	1150
	30th Street to State Route 210 EB Ramps	18,905	130	410	1298
	I-210 Freeway EB Ramps to Highland Avenue	15,335	105	333	1053
	Highland Avenue to Baseline Street	14,510	100	315	996
	Baseline Street to 9th Street	15,995	110	347	1099
	9th Street to 5th Street	17,170	117	373	1178
	5th Street to 2nd Street	18,035	118	373	1179
	South of 2nd Street	5,600	38	121	384
	North of I-10 Freeway WB On-Ramp	33,080	379	1200	3788
	South of I-10 Freeway WB On-Ramp	30,740	379	1200	3788
Baseline Street	I-215 Freeway SB Ramps to I-215 Freeway NB Ramps	20,335	167	530	1674
	I-215 Freeway NB Ramps to E Street	22,280	183	581	1837
	E Street to Sierra Way	18,840	155	491	1552
	Sierra Way to Waterman Avenue	16,055	132	418	1322
	Waterman Avenue to Tippecanoe Avenue	13,930	115	363	1149
5th Street	I-215 Freeway SB Ramps to I-215 Freeway NB Ramps	19,130	157	498	1577
	I-215 Freeway NB Ramps to Sierra Way	17,535	144	457	1446
	Sierra Way to Waterman Avenue	9,385	77	244	774
	Waterman Avenue to Tippecanoe Avenue	6,555	54	170	540
	East of Tippecanoe Avenue	5,820	48	152	480
	West of I-210 Freeway SB Ramps	16,680	137	435	1375
	I-210 Freeway SB Ramps and I-210 Freeway NB Ramps	17,905	147	466	1475
	East of I-210 Freeway NB Ramps	22,490	185	586	1855
3rd Street	West of I-215 Freeway SB Ramps	3,270	8	25	80
	I-215 Freeway SB Ramps to I-215 Freeway NB Ramps	4,960	12	38	121
	East of I-215 Freeway NB Ramps	7,220	18	56	176
2nd Street	West of I-215 Freeway SB Ramps	10,960	75	238	752
	I-215 Freeway SB Ramps to I-215 Freeway NB Ramps	17,560	120	381	1204
	I-215 Freeway NB Ramps to Waterman Avenue	14,055	96	305	965

[1] Roadway segment average daily traffic volume forecasts provided by Fehr & Peers (2016).

Figure 4
Noise Measurement Location Map

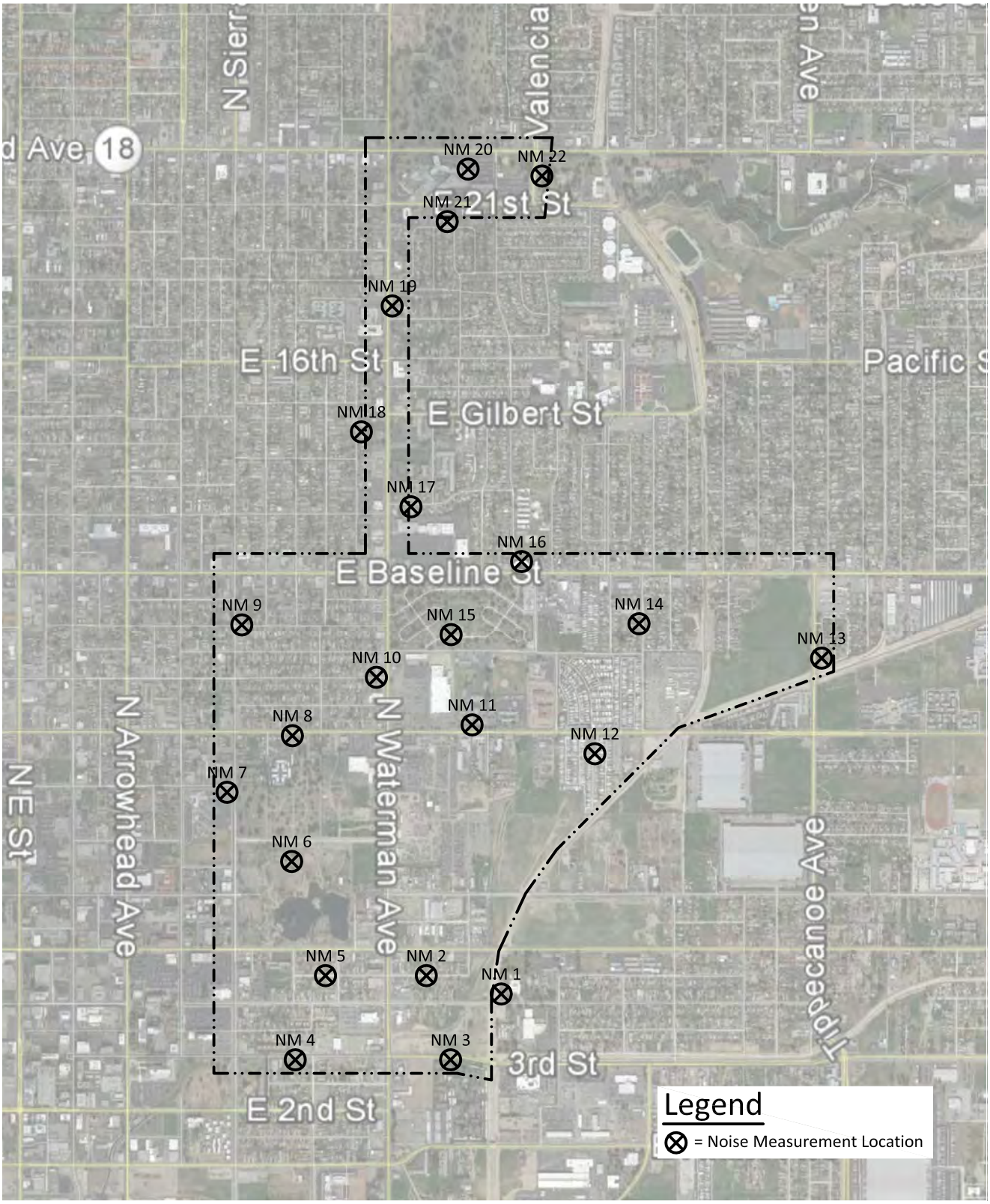


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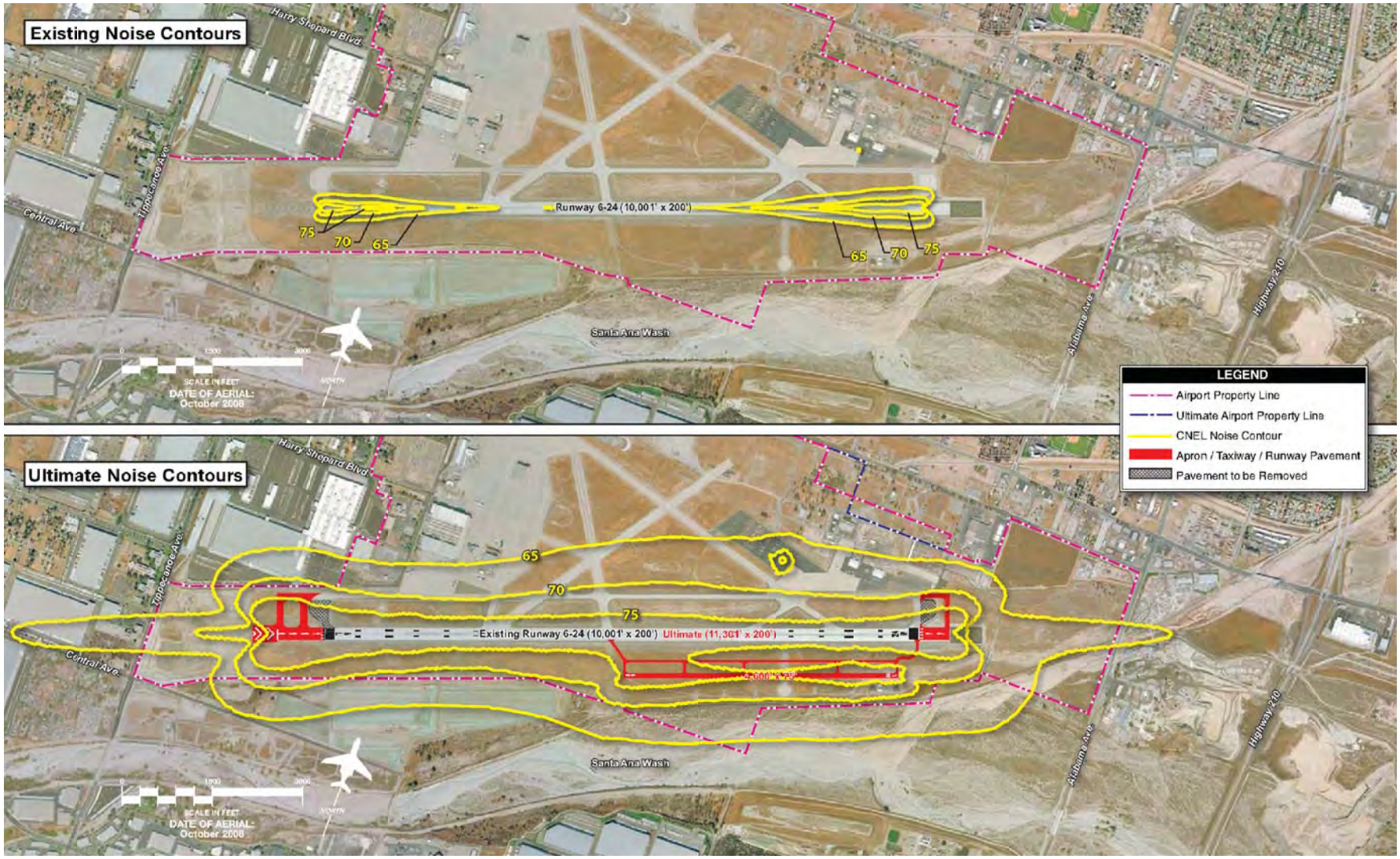
Figure 5
San Bernardino International Airport Noise Contour Map



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IV. APPLICABLE STANDARDS

The following goals, policies, standards and regulations should be considered during the planning, implementation and operational phases of the proposed project in order to minimize potential noise impacts.

A. Federal Regulations

1. Federal Noise Control Act of 1972

The U.S. Environmental Protection Agency (EPA) Office of Noise Abatement and Control was originally established to coordinate federal noise control activities. After its inception, EPA's Office of Noise Abatement and Control issued the Federal Noise Control Act of 1972, establishing programs and guidelines to identify and address the effects of noise on public health, welfare, and the environment. In response, the EPA published Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety (Levels of Environmental Noise). The Levels of Environmental Noise recommended that the Ldn should not exceed 55 dBA outdoors or 45 dBA indoors to prevent significant activity interference and annoyance in noise-sensitive areas.

In addition, the Levels of Environmental Noise identified five dBA as an "adequate margin of safety" for a noise level increase relative to a baseline noise exposure level of 55 dBA Ldn (i.e., there would not be a noticeable increase in adverse community reaction with an increase of five dBA or less from this baseline level). The EPA did not promote these findings as universal standards or regulatory goals with mandatory applicability to all communities, but rather as advisory exposure levels below which there would be no risk to a community from any health or welfare effect of noise.

In 1981, EPA administrators determined that subjective issues such as noise would be better addressed at lower levels of government. Consequently, in 1982 responsibilities for regulating noise control policies were transferred to State and local governments. However, noise control guidelines and regulations contained in EPA rulings in prior years remain in place by designated Federal agencies, allowing more individualized control for specific issues by designated Federal, State, and local government agencies.

B. State Regulations

1. State of California Building Standards Code

The State of California has adopted noise standards in areas of regulation not preempted by the Federal government. State standards regulate noise levels of motor vehicles, sound transmission through buildings, occupational noise control, and noise insulation. Title 24 of the California Code of Regulations, also known as the California Building Code, establishes building standards applicable to all occupancies throughout the state. The code provides acoustical regulations for both exterior-to-

interior sound insulation, as well as sound and impact isolation between adjacent spaces of various occupied units. Title 24 regulations state that interior noise levels generated by exterior noise sources shall not exceed 45 dBA Ldn/CNEL, with windows closed, in any habitable room for multi-family residential uses.

California Building Code Section 1208A, Sound Transmission, of the Building Code requires acoustical evaluation and insulated building design and construction when exterior noise levels exceed 60 Ldn/CNEL. New residential construction must be acoustically designed and constructed to reduce the intrusion of transportation noise and local fixed noise sources. The California Building Code requires a minimum Sound Transmission Class of 50 (STC50) and Impact Isolation Class 50 (IIC50) for multiple family residential units located where exterior noise levels exceed 60 Ldn/CNEL.

The non-residential mandatory measures found in Title 24, Part 11, Section 5.507.4.1 of the California Code of Regulations requires the use of wall and roof-ceiling assemblies that make up the building envelope to have an STC of at least 50 and exterior windows must have minimum STC of 30 for any of the following building locations:

1. Within 1,000 feet (300 m) of right of ways of freeways.
2. Within 5 miles (8 km) of airports serving more than 10,000 commercial jets per year.
3. Where sound levels at the property line regularly exceed 65 decibels, other than occasional sound due to church bells, train horns, emergency vehicles and public warning systems.

Buildings with few or no occupants and where occupants are not likely to be affected by exterior noise, as determined by the enforcement authority, such as factories, stadiums, storage, enclosed parking structures and utility buildings are exempt from this section of code.

2. <u>State of California General Plan Guidelines 2003</u>

Though not adopted by law, the State of California General Plan Guidelines 2003, published by the California Governor's Office of Planning and Research (OPR) (OPR Guidelines), provide guidance for the compatibility of projects within areas of specific noise exposure. The OPR Guidelines identify the suitability of various types of construction relative to a range of outdoor noise levels and provide each local community some flexibility in setting local noise standards that allow for the variability in community preferences. Findings presented in the Levels of Environmental Noise Document (EPA 1974) influenced the recommendations of the OPR Guidelines, most importantly in the choice of noise exposure metrics (i.e., Ldn or CNEL) and in the upper limits for the Normally Acceptable outdoor exposure of noise-sensitive uses. The OPR Guidelines include a Noise and Land Use Compatibility Matrix which identifies acceptable and unacceptable community noise exposure limits for various land use categories. As discussed below, the City of Hawthorne has included their own version of this table in the Noise Element of their General Plan.

3. California Environmental Quality Act

The California Environmental Quality Act Guidelines (Appendix G) establishes thresholds for noise impact analysis. Two of these standards apply to what is referred to as a "substantial increase" in ambient noise levels. The City does not have a definition of a substantial increase, nor does CEQA establish a numerical value for this threshold. Noise generated by transportation sources propagates differently than noise generated by point sources. Therefore, for purposes of this analysis, the following two thresholds were utilized to evaluate the project's potential to result in substantial increases in ambient noise levels.

Traffic Noise

Roadway noise impacts would be considered significant if the project increases noise levels at a noise sensitive land use by 3 dBA CNEL and if: (1) the existing noise levels already exceed the residential land use compatibility standard for "normally acceptable" (60 dBA CNEL), or (2) the project increases noise levels from below the 60 dBA CNEL standard to above 60 dBA CNEL.

Stationary Noise

Project operations, may produce an increase in noise levels which disturbs the peace and quiet of adjacent residential areas or cause discomfort/annoyance to area residents. Caltrans considers a 5 dBA increase to be "readily audible", which seems to correlate most closely to "substantial increase." For the purposes of this report, a substantial permanent increase in ambient noise levels due to stationary noise sources shall be considered 5 dBA L_{eq}.

C. City of San Bernardino

1. General Plan Noise Element

Land Use Compatibility

The General Plan noise Element includes land use planning tools to reduce future noise related land use incompatibilities. These include criteria that specify acceptable limits of noise for various land uses throughout the City. These criteria are designed to integrate noise considerations into land use planning to prevent noise/land use conflicts. Table 4 presents criteria used to assess the compatibility of proposed land uses with the noise environment. These criteria are the basis for the development of specific Noise Standards (see Table 5). These tables are the primary tools which allow the City to ensure integrated planning for compatibility between land uses and outdoor noise.

The City has also established goals, policies and objectives regarding noise within the community. It is recommended that the City review these goals and policies and either confirm that they are appropriate for the Specific Plan or if new policies should be developed specifically for the Specific Plan.

Goal 14.1. Ensure that residents are protected from excessive noise through careful land planning.

Policies:

14.1.1 Minimize, reduce, or prohibit, as may be required, the new development of housing, health care facilities, schools, libraries, religious facilities, and other noise sensitive uses in areas where existing or future noise levels exceed an Ldn of 65 dB(A) exterior and an Ldn of 45 dB(A) interior if the noise cannot be reduced to these levels.

14.1.2 Require that automobile and truck access to commercial properties abutting residential parcels be located at the maximum practical distance from the residential parcel.

14.1.3 Require that all parking for commercial uses abutting residential areas be enclosed within a structure, buffered by walls, and/or limited hours of operation.

14.1.4 Prohibit the development of new or expansion of existing industrial, commercial, or other uses that generate noise impacts on housing, schools, health care facilities, or other sensitive uses above a Ldn of 65 dB(A).

Goal 14.2. Encourage the reduction of noise from transportation-related noise sources such as motor vehicles, aircraft operations, and railroad movements.

Policies:

14.2.2 Employ noise sensitive mitigation practices when designing future streets and highways, and when improvements occur along existing road segments. Mitigation Measures should emphasize the establishment of natural buffers or setbacks between the arterial roadways and adjoining noise-sensitive areas.

14.2.3 Require that development that increases the ambient noise level adjacent to noise-sensitive land uses provide appropriate mitigation measures.

14.2.6 Buffer residential neighborhoods from noise caused by train operations and increasing traffic volumes along major arterials and freeways.

14.2.8 Minimize noise attributable to vehicular travel in residential neighborhoods by inhibiting through trips by the use of cul-de-sacs, one-way streets, and other traffic controls.

14.2.10 Provide for the development of alternative transportation modes such as bicycle paths and pedestrian walkways to minimize the number of automobile trips.

14.2.12 Require that commercial and industrial uses implement transportation demand management programs consistent with the air Quality Management Plan that provide incentives for carpooling, van pools, and the use of public transit to reduce traffic and associated noise levels in the City.

14.2.17 Ensure that new development is compatible with the noise compatibility criteria and noise contours as defined in the Comprehensive Land Use Plan for the San Bernardino International Airport and depicted on Figure 5.

14.2.18 Limit the development of sensitive land uses located within the 65 decibel (dB) Community Noise Equivalent Level (CNEL) contour, as defined in the Comprehensive Land Use Plan for the San Bernardino International Airport.

14.2.19 As may be necessary, require acoustical analysis and ensure the provision of effective noise mitigation measures for sensitive land uses, especially residential uses, in areas significantly impacted by noise.

Goal 14.3. Protect residents from the negative effects of "spill over" or nuisance noise.

Policies:

14.3.1 Require that construction activities adjacent to residential units be limited as necessary to prevent adverse noise impacts.

14.3.2 Require that construction activities employ feasible and practical techniques that minimize the noise impacts on adjacent uses.

14.3.3 Adopt and enforce a standard for exterior noise levels for all commercial uses that prevents adverse levels of discernible noise on adjoining residential properties.

14.3.4 Adopt and enforce a standard for exterior noise levels from the use of leaf blowers, motorized lawn mowers, parking lot sweepers, or other high-noise equipment on commercial properties if their activity will result in noise that adversely affects abutting residential parcels.

14.3.5 Require that the hours of truck deliveries to commercial properties abutting residential uses be limited unless there is no

feasible alternative or there are overriding transportation benefits by scheduling deliveries at another hour.

14.3.6 Ensure that buildings are constructed soundly to prevent adverse noise transmission between differing uses located in the same structure and individual residences in multi-family buildings.

14.3.7 Require that commercial uses in structures containing residences on upper floors not be noise intensive.

14.3.8 Require common walls and floors between commercial and residential uses be constructed to minimize the transmission of noise and vibration.

2. Municipal Ordinance

The City has adopted several ordinances intended to control and enforce community noise. The following is a summary of ordinances that the City may want to consider while developing appropriate noise/land use policies for the Specific Plan. If any seem inappropriate or inadequate for the Specific Plan, policies can be incorporated in the Specific Plan to supersede existing City ordinances.

8.54.020 Prohibited Acts.
It shall be unlawful for any person to engage in the following activities:

I. The creation of loud and excessive noise in connection with the loading or unloading of motor trucks and other vehicles.
L. The operation or use between the hours of 10:00 PM and 8:00 AM of any pile driver, steam shovel, pneumatic hammers, derrick, steam or electric hoist, power drive saw, or any other tool or apparatus, the use of which is attended by loud and excessive noise, except with the approval of the City.
M. Creating excessive noise adjacent to any school, church, court, or library while the same is in use, or adjacent to any hospital or care facility, which unreasonably interferes with the workings of such institution, or which disturbs or unduly annoys patients in the hospital, provided conspicuous signs are displayed in such streets indicating the presence of a school, institution of learning, church, court, or hospital.
N. Making or knowingly and unreasonably permitting to be made any unreasonably loud, unnecessary, or unusual noise that disturbs the comfort, repose, health, peace, and quiet, or which causes discomfort or annoyance to any reasonable person of normal sensitivity. The characteristics and conditions that may be considered in determining whether this section has been violated include, but are not limited to, the following:

1. The level of noise;
2. The level of background noise;
3. The proximity of the noise to sleeping facilities;

4. The nature and zoning of the areas within which the noise emanates;
5. The density of the inhabitation of the area within which the noise emanates;
6. The time of day or night the noise occurs;
7. The duration of the noise;
8. Whether the noise is recurrent, intermittent, or constant; and
9. Whether the noise is produced by a commercial or noncommercial activity.

8.54.050 Controlled Hours of Operation.

It shall be unlawful for any person to engage in the following activities other than between the hours of 8:00 AM and 8:00 PM in residential zones and between the hours of 7:00 AM and 8:00 PM in all other zones:

A. Operate or permit the use of powered model vehicles and planes.
B. Load or unload any vehicle, or operate or permit the use of dollies, carts, forklifts, or other wheeled equipment that causes any impulsive sound, raucous, or unnecessary noise within a thousand (1,000) feet of a residence.
C. Operate or permit the use of domestic power tools, or machinery or any other equipment or tool in any garage, workshop, house, or any other structure.
D. Operate or permit the use of gasoline or electric powered leaf blowers, such as commonly used by gardeners and other persons for cleaning lawns, yards, driveways, gutters, and other property.
E. Operate or permit the use of privately operated street/parking lot sweepers or vacuums, except that emergency work and/or work necessitated by unusual conditions may be performed with the written consent of the City Manager.
F. Operate or permit the use of electrically operated compressor, fan, and other similar devices.
G. Operate or permit the use of any motor vehicle with a gross vehicle weight rating in excess of ten thousand (10,000) pounds, or of any auxiliary equipment attached to such a vehicle, including, but not limited to, refrigerated truck compressors for a period longer than fifteen (15) minutes in any hour while the vehicle is stationary and on a public right-of-way or public space except when movement of said vehicle is restricted by other traffic.
H. Repair, rebuild, reconstruct, or dismantle any motor vehicle or other mechanical equipment or devices in a manner so as to be plainly audible across property lines.

8.54.060 Exemptions.

The following activities and noise sources shall be exempt from the provisions of this chapter:

A. The use of horns, sirens, or other signaling or warning devices by persons vested with legal authority to use the same, and in pursuit of their lawful duties, such as on ambulances, fire, police, or other governmental or official equipment.
B. Such noises as are an accompaniment and effect of a lawful business, commercial or industrial enterprise carried on in an area zoned for that purpose, except where there is evidence that such noise is a nuisance and that such a nuisance is a result of the employment of unnecessary and injurious methods of operation.

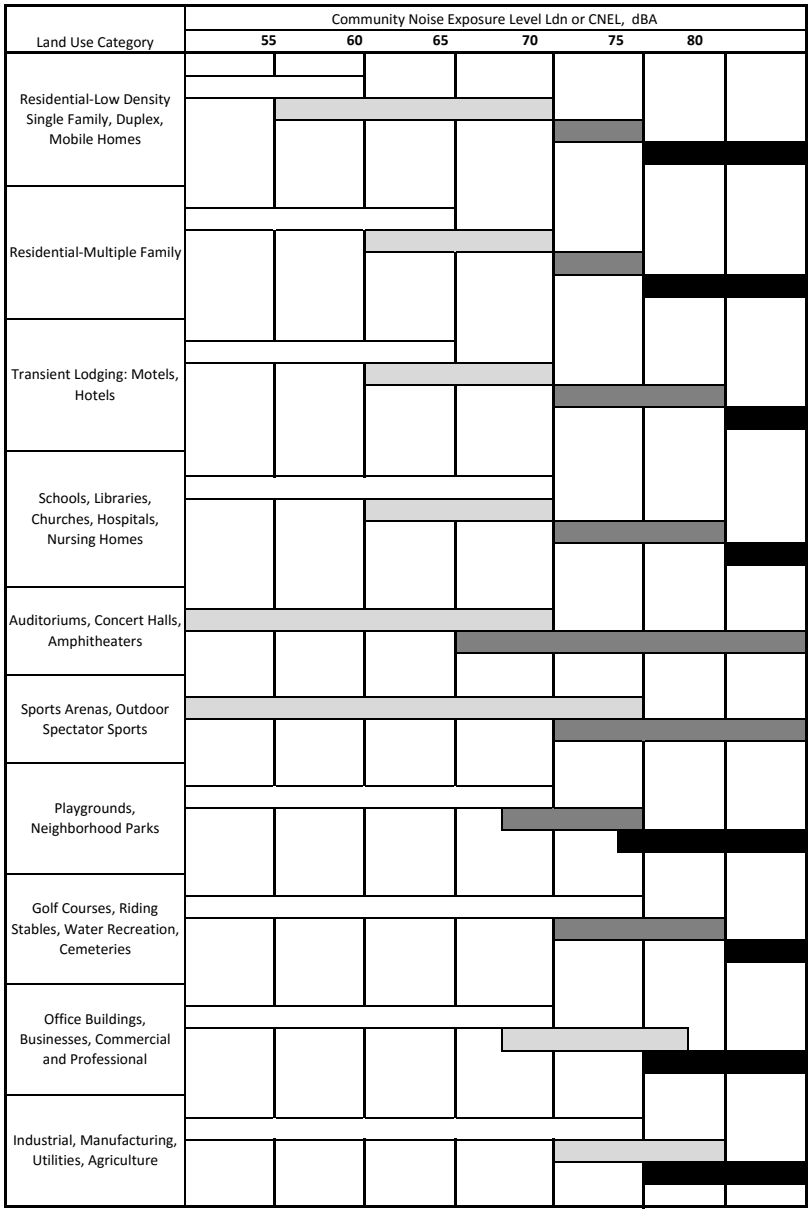
C. Activities conducted on the grounds of any public or private school during regular hours of operation.
D. Outdoor gatherings, public dances, shows, and sporting and entertainment events provided said events are authorized by the City.
E. Activities conducted at public spaces during regular hours of operation.
F. Any mechanical devices, apparatus, or equipment used, related to, or connected with emergency machinery, vehicle, or work.
G. Construction, repair, or excavation necessary for the immediate preservation of life or property.
H. Construction, operation, maintenance, and repairs of equipment, apparatus, or facilities of park and recreation departments, public work projects, or essential public services and facilities, including, but not limited to, trash collection and those of public utilities subject to the regulatory jurisdiction of the California Public Utilities Commission.
I. Construction, repair, or excavation work performed pursuant to a valid written agreement with the City, or any of its political subdivisions, which provides for noise mitigation measures.
J. Any activity to the extent that regulation thereof has been preempted by State and Federal law.
K. Sounds generated in connection with speech or communication protected by the United States Constitution or the California Constitution, except to the extent such sounds are subject to permissible time, place, and manner restrictions.

8.54.070 Disturbances from Construction Activity.

No person shall be engaged or employed, or cause any other person to be engaged or employed, in any work of construction, erection, alteration, repair, addition, movement, demolition, or improvement to any building or structure except within the hours of 7:00 AM and 8:00 PM.

Table 4

City of San Bernardino Land Use Compatibility Matrix[1]



Normally Acceptable: Specified land uses is satisfactory based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation or requirements.	**Conditionally Acceptable:** New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice. Outdoor environment will seem noisy.	**Normally Unacceptable:** New construction and development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made with needed noise insulation features included in the design. Outdoor areas must be shielded.	**Clearly Unacceptable:** New construction or development should generally not be undertaken. Construction costs to make the indoor environment acceptable would be prohibitive and the outdoor environment would not be usable.

[1] Source: San Bernardino General Plan 2005: Figure N-1, 2005.

Table 5

City of San Bernardino Interior and Exterior Noise Standards[1]

Land Use Categories		CNEL (dBA)	
Categories	Uses	Interior[2]	Exterior[3]
Residential	Single and Multiple-Family, Duplex	45[4]	65
	Mobile Homes	---	65[5]
Commercial	Hotel, Motel, Transient Housing	45	---
	Commercial Retail, Bank, Restaurant	55	---
	Office Building, Research and Development, Professional Offices	50	---
	Amphitheatre, Concert Hall, Auditorium, Meeting Hall	45	---
	Gymnasium (Multipurpose)	50	---
	Sports Club	55	---
	Manufacturing, Warehousing, Wholesale, Utilities	65	---
	Movie Theaters	45	---
Institutional/ Public	Hospital, School Classrooms/Playgrounds	45	65
	Church, Library	45	---
Open Space	Parks	---	65

[1] Source: City of San Bernardino General Plan 2005: Figure N-3, 2005.

[2] Indoor environment excluding: bathrooms, kitchens, toilets, closets, and corridors.

[3] Outdoor environment limited to:

- Private yard of single-family dwellings
- Multiple-family private patios or balconies accessed from within the dwelling (Balconies 6 feet deep or less are exempt)
- Mobile home parks
- Hotel and motel recreation area
- Park picnic areas
- School playgrounds
- Hospital patios

[4] Noise level requirement with closed windows, mechanical ventilation or other means of natural ventilation shall be provided as per Chapter 12, Section 1205 of the Uniform Building Code.

[5] Exterior noise levels should be such that interior noise levels will not exceed 45 dBA CNEL.

V. FUTURE NOISE ENVIRONMENT

Potential noise impacts are commonly divided into two groups; temporary and long term. Temporary impacts are usually associated with noise generated by construction activities. Long-term impacts are further divided into transportation related noise impacts and stationary noise impacts.

A. Temporary Noise Impacts

1. Demolition and Construction Noise

Construction noise represents a short-term impact on ambient noise levels. Noise generated by construction equipment, including trucks, graders, bulldozers, concrete mixers and portable generators can reach high levels. Demolition and grading activities will have similar noise levels.

Examples of construction noise at 50 feet are presented in Table 6. The maximum noise level for most of the equipment that will be used during construction is 70 to 95 dBA at a distance of 50 feet. Stationary noise typically attenuates by 6 dB for every doubling of distance from the receiver. At 100 feet, the maximum construction noise levels can be expected to range between 64 and 89 dBA L_{max}; and at 200 feet, the maximum construction noise levels range from 58 to 83 dBA L_{max}. Note that these noise levels are based upon worst-case conditions. Typical construction noise levels shown in Table 6 will be used as the basis for the estimates presented here and represent a worst-case estimate. A summary of the potential construction noise impacts to each proposed District is presented below. It should be noted that Municipal Code Section 8.54.070 prohibits any person from engaging in or causing any other person to be engaged or employed in any work of construction, erection, alteration, repair, addition, movement, demolition, or improvement to any building or structure except within the hours of 7:00 AM and 8:00 PM. In addition, Section 8.54.060 exempts noise resulting from construction, repair, or excavation work performed pursuant to a valid written agreement with the City, or any of its political subdivisions, which provides for noise mitigation measures from the standards set forth in Section 8.54 of the Municipal Code.

District 1- Uptown Professional District. The Uptown Professional District is approximately 82 acres in size with the purpose of consolidating the medical uses scattered along Waterman Avenue into a focused district to assist the demand generated by St. Bernardine Medical Center. In addition, this mixed-use district will accommodate office uses, neighborhood serving commercial uses, and limited residential uses up to 20 dwelling units an acre focused on senior housing. Existing residential land uses located to the east and west of this District as well as those existing along Waterman Avenue may be subjected to short-term construction noise impacts during the development of this district. As stated above, construction noise may range between 70 to 95 dBA at a distance of 50 feet. Existing medical offices may be subject to short-term construction noise impacts during the development of this district. Measures to reduce impacts are listed in Section VI of this report.

District 2- Westside Neighborhood District. The Westside Neighborhood District encompasses approximately 127 acres. The primary intent of this district is to improve and preserve the existing single family neighborhoods to the west of Waterman Avenue. The District would accommodate mixed use development primarily including neighborhood serving commercial uses along Baseline Street and Waterman Avenue. Existing land uses within this District that lie in close proximity to Baseline Street, Waterman Avenue, and 9th Street may be subject to short-term construction noise impacts during the development of this district. As stated above, construction noise may range between 70 to 95 dBA at a distance of 50 feet. Specific noise levels that may result due to construction will depend on the type of equipment and the proximity of the equipment to the sensitive receptors. Measures to reduce impacts are listed in Section VI of this report.

District 3- Midtown Core District. The Midtown Core District is located in the center of the Specific Plan and covers approximately 120 acres. This District would replace 252 units of existing public housing with approximately 400 units of mixed income housing, a central park, community center, and other community and recreational resources with residential uses covering up to 30 dwelling units an acre. Olive Avenue would be re-designed. As the majority of this District is to be redesigned and existing uses are to be replaced, short-term construction impacts would be minimal. However, existing residential and school uses could be subject to potential noise impacts during the renovation process. Measures to reduce potential impacts are listed in Section VI of this report.

District 4- Eastside Neighborhood District. The Eastside Neighborhood District covers approximately 144 acres and would primarily accommodate mixed use development including neighborhood serving commercial uses along Baseline Avenue consistent with the existing single family neighborhoods to the south. Portions of this district would be included in a linear park or trail system. Existing single-family detached residential dwelling units located in close proximity to Baseline Avenue may be impacted by short-term noise impacts associated with the development of this area. As stated above, construction noise may range between 70 to 95 dBA at a distance of 50 feet and between 64 and 89 dBA L_{max} at a distance of 100 feet. Specific noise levels that may result due to construction will depend on the type of equipment and the proximity of the equipment to the sensitive receptors. Measures to reduce impacts are listed in Section VI of this report.

District 5- Gateway District. The Gateway District is approximately 97 acres and is intended to promote the identity of San Bernardino through enhanced landscaping and signage as well as mixed-use development at Seccombe Lake. This district accommodates mixed use development along Waterman Avenue, with a small single family enhancement area in the center of district. The majority of the district would allow for higher density residential development up to 30 dwelling units per acre with compatible neighborhood serving commercial uses in the form of vertical or horizontal mixed use. Any existing residential dwelling units located in close proximity to roadways within this district would have the potential to be affected by short-term construction noise. As stated above, construction noise may range

between 70 to 95 dBA at a distance of 50 feet and 89 dBA L_{max} at a distance of 100 feet. Specific noise levels that may result due to construction will depend on the type of equipment and the proximity of the equipment to the sensitive receptors. Measures to reduce impacts are listed in Section VI of this report.

District 6- Employment District. The Employment District covers approximately 140 acres and has been designed as an employment generating and flexible business use district accommodating office, commercial, and Business Park uses (mix of business and support services). The portion between 5th and 4th Streets would remain as an existing residential neighborhood. The District includes residential up to 20 dwelling units per acre and portions of the District are to be included in a linear park or trail system. The existing residential dwelling units between 5th and 4th Streets may be impacted by short-term noise impacts associated with development of this area. As stated above, construction noise may range between 70 to 95 dBA at a distance of 100 feet and from 58 to 83 dBA L_{max} at a distance of 200 feet. Specific noise levels that may result due to construction will depend on the type of equipment and the proximity of the equipment to the sensitive receptors. Measures to reduce impacts are listed in Section VI of this report.

B. Long-Term Noise Impacts

Increased traffic associated with buildout of the Specific Plan will result in increased traffic noise levels along the roadways in the vicinity of the project. This section examines noise impacts from the proposed project on the surrounding land uses. Specifically, traffic noise increases due to the project are examined.

1. Project Generated Traffic Noise Impacts

Table 7 shows existing and existing plus project traffic noise levels on affected road segments in the project area. The noise level increases were calculated using forecast traffic volumes provided by Fehr & Peers (2016). The City of San Bernardino does not have published vehicle/truck mixes or Day/Evening/Night (D/E/N) splits published for use in acoustical studies. Vehicle/truck mixes and D/E/N splits for use in acoustical studies published by the Riverside County Department of Industrial Hygiene were utilized for noise modeling. FHWA traffic modeling output is presented in Appendix C.

Modeled Existing traffic noise levels range between 62.04-78.80 dBA CNEL and the modeled Existing Plus Project traffic noise levels range between 62.04-78.95 dBA CNEL at 50 feet from the centerline of the affected road segments. As can been seen in the column entitled “Increase” in Table 7, project generated traffic noise will not result in noise increases of 3 dB or greater along road segments acoustically affected by project generated increases in ambient noise levels. Implementation of the Specific Plan will not result in substantial increases in ambient noise levels related to increases in vehicle traffic.

2. Future Traffic Noise Exposure to the Proposed Project

There are several busy arterial roadways in the Specific Plan area that will accommodate most of the project generated vehicle traffic. As discussed previously, the FHWA Noise Model was utilized to calculate buildout with and without project noise levels associated with vehicle traffic travelling on roads in the project area. The distances from the centerline to the 60, 65, and 70 CNEL contours for each of the acoustically significant roadways within the project area were calculated and are shown in Table 8. Note that the contours do not include the shielding effects of buildings, topography, or sound barriers that would lower the noise levels from what is shown in Table 8, and therefore represent a worst-case estimate. FHWA spreadsheets utilized to calculate the location of noise contours are included in this report as Appendix C.

As shown in Table 8, future noise levels are expected to exceed 65 dBA CNEL at the existing and proposed land uses along Waterman Avenue, Baseline Street, and 5th Street. The majority of the affected land uses adjacent to Waterman Avenue and Baseline Street are and will be commercial land uses. The existing and proposed land uses adjacent to 5th Street include residential uses as well as commercial uses.

As shown in Table 5, the City has not adopted exterior noise level limits for commercial land uses. Interior noise level standards for commercial land uses range between 45-65 dBA CNEL depending on the type of commercial use. Residential land uses within the Specific Plan area that are along Waterman Avenue, Baseline Street, and 5th Street would be exposed to noise levels of up to 70 dBA CNEL and may exceed the 65 dB CNEL exterior noise level limit for residential land uses or the 45 dBA CNEL interior noise level limit for interior noise levels depending on the distance of the receptor from the roadway. Outdoor use areas (i.e., backyards) should be shielded from vehicle noise whenever possible. Mitigation Measures N-9 and N-10 in Section VI, will minimize potential impacts related to future traffic.

3. Operational Noise Impacts Associated with Proposed Land Uses

In addition to roadway traffic noise impacts discussed above, on-site activities associated with existing residential and commercial uses and the proposed uses within the six districts have the potential to impact both on-site and off-site sensitive receptors. Specifically, the activities associated with commercial establishments such as parking lot noise, air conditioning units, delivery trucks, loading and unloading.

Instantaneous sound events generated by vehicle door slamming, engine start-up, alarm activation and vehicle pass-bys associated with parking lots will not be of sufficient volume to exceed community noise standards that are based on a time averaged scale such as the CNEL scale. Estimates of the maximum noise levels associated with some parking lot activities are presented in Table 9. These noise levels, which are based on measurements conducted at a distance of 50 feet from the source, are the maximum noise level generated. A range is given to reflect the variability of noise generated by various automobile types and driving styles. Due to the unavailability of detailed plans, the exact locations of all parking lots within the

boundaries of each property are not yet known. For the purposes of determining worst-case noise impacts to residences due to parking lot related activities, it will be assumed that a parking lot could be located anywhere within the confines of the property containing the parking lot.

Truck deliveries, loading dock activities and air conditioning noise are difficult to assess at this stage of the project. Loading dock noise includes the movement of the goods into the store and possibly forklift operations. Truck delivery noise is generated when a truck drives to or from the loading dock. Formerly, delivery truck drivers could also leave the truck idling during unloading operations. However, trucks are now prohibited from idling in any one location for more than 5 minutes per the South Coast Air Quality Management District regulations. The number of truck deliveries and the time of day that unloading would occur is not known. Nighttime operations can be particularly annoying to residences. However, noise levels could be loud enough that they would be disturbing to the residences.

Mechanical equipment noise associated with the heating, ventilation, and air conditioning system (HVAC) is often present with several of the land use types being proposed as part of the project. HVAC equipment is sometimes located on the ground and sometimes located on the roof of the buildings. The type, size and number of mechanical equipment are not known at this time. If the equipment is located on the roof, often parapet walls are used to control the noise from the equipment. Similarly, sound walls can be located around HVAC equipment that is located on the ground.

C. Short-Term Vibration Impacts

Construction activity can result in varying degrees of ground vibration, depending on the equipment used on the site. Operation of construction equipment causes ground vibrations that spread through the ground and diminish in strength with distance. Buildings in the vicinity of future construction activities could respond to these vibrations with varying results ranging from no perceptible effects at the low levels to slight damage at the highest levels. It is highly unlikely, however, that damage would occur. Table 1 gives approximate vibration levels for particular construction activities. This data provides a reasonable estimate for a wide range of soil conditions.

A vibratory roller, loaded trucks, a hoe ram and jackhammers could be utilized to demolish, renovate and to build new structures. The vibratory roller would primarily be used during the laying of asphalt and a jackhammer may be utilized during utility relocation or installation. As shown in Table 1, a vibratory roller could produce up to a PPV of up to 0.21 inch per second at 25 feet. Use of vibratory equipment within 70 feet of a sensitive receptor could be perceptible but is expected to be short-term. Damage to buildings of normal construction is possible if vibratory equipment is utilized within 25 feet of a sensitive receptor.

In addition to adherence with allowed hours for construction, implementation of Mitigation Measures N-7 and N-8 listed in Section VI of this report, will minimize potential impacts related to demolition and construction activities.

D. Long-Term Vibration Impacts

Medium and heavy delivery trucks can be expected to visit the project site on a regular basis. Heavy trucks would not be anticipated to exceed 0.10 in/sec peak particle velocity (ppv) at 10 feet (Caltrans 2002). Predicted operational related vibration levels at the nearest on and off-site structures, which are located in excess of 10 feet from the traveled roadway segments, would not be anticipated to exceed even the most conservative threshold of 0.2 inch/second ppv. No mitigation is necessary.

Table 6

Typical Construction Equipment Noise Levels[1]

Type of Equipment	Sound Levels Measured (dBA at 50 feet)	Suggested Maximum Sound Levels for Analysis (dBA at 50 feet)
Rock Drills	83-99	96
Jack Hammers	75-85	82
Pneumatic Tools	78-88	85
Pumps	74-84	80
Dozers	77-90	85
Scrapers	83-91	87
Haul Trucks	83-94	88
Cranes	79-86	82
Portable Generators	71-87	80
Rollers	75-82	80
Tractors	77-82	80
Front-End Loaders	77-90	86
Hydraulic Backhoe	81-90	86
Hydraulic Excavators	81-90	86
Graders	79-89	86
Air Compressors	76-89	86
Trucks	81-87	86

[1] Source: Bolt, Beranek & Newman; Noise Control for Buildings and Manufacturing Plants, 1987.

Table 7

Comparison of Existing and Existing Plus Project Traffic Noise Levels

Roadway	Segment	Distance from roadway centerline to receiver (feet)	Modeled Noise Levels (dBA CNEL)				
			Existing	Existing Plus Project	Increase		Substantial Increase
Waterman Avenue	North of 30th Street	50	73.62	73.58		-0.04	NO
	30th Street to I-210 Freeway EB Ramps	50	74.14	74.25	+	0.11	NO
	I-210 Freeway EB Ramps to Highland Avenue	50	73.23	73.52	+	0.29	NO
	Highland Avenue to Baseline Street	50	72.99	73.37	+	0.38	NO
	Baseline Street to 9th Street	50	73.42	74.13	+	0.71	NO
	9th Street to 5th Street	50	73.72	74.48	+	0.76	NO
	5th Street to 2nd Street	50	73.72	74.07	+	0.35	NO
	South of 2nd Street	50	68.86	68.92	+	0.06	NO
	North of I-10 Freeway WB On-Ramp	50	78.80	78.95	+	0.15	NO
	South of I-10 Freeway WB On-Ramp	50	78.80	78.91	+	0.11	NO
Baseline Street	I-215 Freeway SB Ramps to I-215 Freeway NB Ramps	50	75.25	75.42	+	0.17	NO
	I-215 Freeway NB Ramps to E Street	50	75.65	75.95	+	0.30	NO
	E Street to Sierra Way	50	74.92	75.28	+	0.36	NO
	Sierra Way to Waterman Avenue	50	74.23	74.63	+	0.40	NO
	Waterman Avenue to Tippecanoe Avenue	50	73.61	74.09	+	0.48	NO
5th Street	I-215 Freeway SB Ramps to I-215 Freeway NB Ramps	50	74.99	75.18	+	0.19	NO
	I-215 Freeway NB Ramps to Sierra Way	50	74.61	75.05	+	0.44	NO
	Sierra Way to Waterman Avenue	50	71.89	72.73	+	0.84	NO
	Waterman Avenue to Tippecanoe Avenue	50	70.33	71.21	+	0.88	NO
	East of Tippecanoe Avenue	50	69.82	70.97	+	1.15	NO
	West of I-210 Freeway SB Ramps	50	74.39	74.83	+	0.44	NO
	I-210 Freeway SB Ramps and I-210 Freeway NB Ramps	50	74.70	74.93	+	0.23	NO
	East of I-210 Freeway NB Ramps	50	75.69	75.73		0.04	NO
3rd Street	West of I-215 Freeway SB Ramps	50	62.04	62.04		0.00	NO
	I-215 Freeway SB Ramps to I-215 Freeway NB Ramps	50	63.85	64.15	+	0.30	NO
	East of I-215 Freeway NB Ramps	50	65.48	65.88	+	0.40	NO
2nd Street	West of I-215 Freeway SB Ramps	50	71.77	71.77		0.00	NO
	I-215 Freeway SB Ramps to I-215 Freeway NB Ramps	50	73.82	73.83		0.01	NO
	I-215 Freeway NB Ramps to Waterman Avenue	50	72.85	72.88		0.03	NO

Table 8

Modeled Future Traffic Noise Levels (CNEL)

Roadway	Segment	Future Year (2035) Average Daily Traffic[1]	Future Year (2035) CNEL Contours (feet from centerline)			Future Year (2035) With Project Average Daily Traffic[1]	Future Year (2035) With Project CNEL Contours (feet from centerline)		
			70 dBA	65 dBA	60 dBA		70 dBA	65 dBA	60 dBA
Waterman Avenue	North of 30th Street	18,840	129	409	1294	18,430	126	400	1294
	30th Street to State Route 210 EB Ramps	22,275	153	483	1530	23,615	162	513	1620
	State Route 210 EB Ramps to Highland Avenue	18,910	129	410	1299	21,840	150	474	1500
	Highland Avenue to Baseline Street	15,985	110	347	1098	19,665	135	427	1350
	Baseline Street to 9th Street	19,615	134	426	1345	27,565	189	598	1893
	9th Street to 5th Street	19,820	136	430	1360	28,870	198	626	1982
	5th Street to 2nd Street	21,030	144	456	1442	25,005	171	543	1716
	South of 2nd Street	8,890	61	193	610	9,130	63	198	627
	North of I-10 Freeway WB On-Ramp	37,700	432	1367	4318	40,180	460	1456	4600
	South of I-10 Freeway WB On-Ramp	34,670	397	1257	3976	36,540	419	1324	4192
Baseline Street	I-215 Freeway SB Ramps to I-215 Freeway NB Ramps	20,590	169	537	1698	22,680	187	591	1870
	I-215 Freeway NB Ramps to E Street	20,645	170	538	1700	24,745	204	645	2038
	E Street to Sierra Way	17,755	146	463	1462	21,850	180	569	1800
	Sierra Way to Waterman Avenue	17,545	144	457	1446	21,470	177	559	1770
	Waterman Avenue to Tippecanoe Avenue	16,290	134	424	1343	20,390	168	531	1680
5th Street	I-215 Freeway SB Ramps to I-215 Freeway NB Ramps	17,290	142	450	1424	19,500	160	508	1608
	I-215 Freeway NB Ramps to Sierra Way	16,680	137	435	1373	21,380	176	557	1762
	Sierra Way to Waterman Avenue	13,115	108	342	1080	18,180	149	474	1499
	Waterman Avenue to Tippecanoe Avenue	11,170	92	291	920	14,870	122	387	1225
	East of Tippecanoe Avenue	9,450	78	246	779	13,890	114	362	1145
	West of I-210 Freeway SB Ramps	18,250	150	475	1505	22,690	187	591	1868
	I-210 Freeway SB Ramps and I-210 Freeway NB Ramps	19,610	161	511	1614	22,110	182	576	1823
	East of I-210 Freeway NB Ramps	28,100	231	732	2315	28,660	236	747	2362
3rd Street	West of I-215 Freeway SB Ramps	4,520	11	35	110	4,520	11	35	110
	I-215 Freeway SB Ramps to I-215 Freeway NB Ramps	6,635	16	51	161	6,995	17	54	170
	East of I-215 Freeway NB Ramps	9,100	22	70	221	9,800	24	75	238
2nd Street	West of I-215 Freeway SB Ramps	13,740	94	298	942	13,740	94	298	942
	I-215 Freeway SB Ramps to I-215 Freeway NB Ramps	21,035	144	456	1445	21,125	145	458	1449
	I-215 Freeway NB Ramps to Waterman Avenue	15,735	108	341	1080	15,970	109	346	1096

[1] Roadway segment average daily traffic volume forecasts provided by Fehr & Peers (2016)

Table 9

Parking Lot Noise Sources[1,2]

Source	Level (dBA)	
	50 feet	100 feet
Autos at 14 mph	50	44
Sweepers	72	66
Car Alarm Signal	69	63
Car Alarm Chirp	54	48
Car Horns	69	63
Door Slams	64	58
Talking	36	30
Radios	64	58
Tire Squeals	66	60

[1] Adapted from: Gordon Bricken & Associates, 1996. (as cited in Trancas Canyon Community Park EIR, 2007).

[2] Estimates are based on actual noise measurements taken at various parking lots as measured by Kunzman Associates, I

VI. RECOMMENDED NOISE REDUCTION MEASURES

A. Temporary Noise Impacts

1. Demolition and Construction Noise

The analysis presented in Section 2.2.1 shows that project demolition and construction noise could result in significant impacts to nearby residences if uncontrolled. The most effective method of controlling construction noise is through limiting construction hours. In addition to adherence to allowed construction hours outlined in Municipal Ordinance 12.16.300, the following mitigation measures should be implemented.

Mitigation Measure N-1:
The construction contractor shall limit haul truck deliveries to the same hours specified for construction equipment (7:00 AM and 8:00 PM).

Mitigation Measure N-2:
To the extent feasible, haul routes shall not pass sensitive land uses or residential dwellings and should avoid using alleyways adjacent to said uses.

Mitigation Measure N-3:
The project contractor shall use power construction equipment with state-of-the-art noise shielding and muffling devices.

Mitigation Measure N-4:
During all project site excavation and grading on-site, construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturers' standards.

Mitigation Measure N-5:
The construction contractor shall locate equipment staging in areas that will create the greatest distance between construction-related noise sources and noise sensitive receptors nearest the project site during all project construction.

Mitigation Measure N-6:
The construction contractor shall place all stationary construction equipment so that emitted noise is directed away from the noise sensitive receptors nearest the project site.

Mitigation Measure N-7:
The use of vibratory equipment shall be avoided or minimized within 25 feet of existing vibration-sensitive land uses.

Mitigation Measure N-8:
If vibratory equipment must be used within 25 feet of an existing structure vibration monitoring shall be conducted and work shall be halted and re-evaluated if vibratory

levels near 0.20 PPV are indicated, which is the standard established to protect structures.

B. Long Term Noise Impacts

1. Project Generated Traffic Noise Impacts

No significant impacts related to the increase in ambient noise levels due to project traffic were identified. No mitigation is necessary.

2. Traffic Noise Impacts to Proposed Land Uses

Mitigation Measure N-9:
New non-residential development shall be constructed with roof-ceiling assemblies that make up the building envelope to have an STC of at least 50 and exterior windows must have minimum STC of 30 where sound levels at the property line regularly exceed 65 decibels. This measure would reduce interior noise levels to acceptable levels and mitigate any impact to less than significant.

It is recommended that buildings with few or no occupants and where occupants are not likely to be affected by exterior noise, as determined by the enforcement authority, such as factories, stadiums, storage, enclosed parking structures and utility buildings be exempt from this measure.

Mitigation Measure N-10:
Prior to issuance of building permits for residential land uses located within a 65 dBA CNEL noise contour as shown in Table 8, a detailed noise assessment shall be prepared to show that noise levels in those areas will not exceed the 65 CNEL outdoor noise criteria and the 45 CNEL indoor noise standard. The noise assessment shall be prepared by a qualified acoustical consultant and shall document the sources of noise impacting the areas and describe any measures required to meet the standard. These measures will be incorporated into the project plans. The report shall be completed and approved by the City prior to issuance of building permits.

3. Operational Impacts Associated with Proposed Land Uses

Mitigation Measure N-11:
Prior to issuance of building permits for non-residential land uses located adjacent to residential land uses, City staff shall require the preparation of a detailed noise study that shall be prepared to ensure that these sources do not exceed noise level limits presented in the City's noise ordinance which are dependent on the type of land use. The assessment shall be prepared by a qualified acoustical engineer and shall document the noise generation characteristics of the proposed equipment and the projected noise levels at the nearest use. Compliance with these levels shall be demonstrated and any measures required to comply with the Noise Ordinance will be included in the project plans. The report shall be completed and approved by the City prior to issuance of building permits.

VII. REFERENCES

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APPENDICES

Appendix A –Definitions of Acoustical Terms

Appendix B –Noise Measurement Data Sheets

Appendix C – FHWA Traffic Noise Prediction Model - FHWA-RD-77-108 Output

APPENDIX A

Defintions of Acoustical Terms

Definitions of Acoustical Terms[1]

Term	Definition
CNEL	CNEL is the energy average of the A-weighted sound levels occurring over a 24-hour period, with a 10-dB penalty applied to A-weighted sound levels occurring during the nighttime hours between 10:00 PM and 7:00 AM, and a 5-dB penalty applied to the A-weighted sound levels occurring during evening hours between 7:00 PM and 10:00 PM.
Decibel, dB	A logarithmic unit of noise level measurement that relates the energy of a noise source to that of a constant reference level; the number of decibels is 10 times the logarithm (to the base 10) of this ratio.
Frequency, Hertz	In a function periodic in time, the number of times that the quantity repeats itself in one second (i.e., the number of cycles per second).
A-Weighted Sound Level, dBA	The sound level obtained by use of A-weighting. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear.
Root Mean Square (RMS)	A measure of the magnitude of a varying noise source quantity. The name derives from the calculation of the square root of the mean of the squares of the values. It can be calculated from either a series of lone values or a continuous varying function.
Fast/Slow Meter Response	The fast and slow meter responses are different settings on a sound level meter. The fast response setting takes a measurement every 100 milliseconds, while a slow setting takes one every second.
L_{02}, L_{08}, L_{50}, L_{90}	The A-weighted noise levels that are equaled or exceeded by a fluctuating sound level, 2 percent, 8 percent, 50 percent, and 90 percent of a stated time period, respectively.
Equivalent Continuous Noise Level, L_{eq}	A level of steady state sound that in a stated time period, and a stated location, has the same A-weighted sound energy as the time-varying sound.
L_{max}, L_{min}	L_{max} is the RMS (root mean squared) maximum level of a noise source or environment measured on a sound level meter, during a designated time interval, using fast meter response. L_{min} is the minimum level.
Ambient Noise Level	The all-encompassing noise environment associated with a given environment, at a specified time, usually a composite of sound from many sources, at many directions, near and far, in which usually no particular sound is dominant.
Offensive/ Offending/ Intrusive Noise	The noise that intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of sound depends on its amplitude, duration, frequency, and time of occurrence, and tonal information content as well as the prevailing ambient noise level.

[1] Adapted from: Cyril M. Harris; Handbook of Acoustical Measurement and Noise Control, 1991.

APPENDIX B

Noise Measurement Data Sheets and Field Notes

Noise Measurement
Field Data

Project Name: Waterman Gardens Project | Date: 27-Apr-16

Project #: 6499

Noise Measurement #: NM1 3099 LxT_Data.027.xlsx | Technician: Ian Edward Gallagher

Nearest Address or Cross Street: **4th Street & Palm Lane**

Site Description (Type of Existing Land Use and any other notable features) **Public School/ Commercial/ Residential**

Temperature: 75 deg F | **Wind:** **3 to 5 mph** | **Settings:** **SLOW** **FAST** (Circle one)

Weather: Mostly Sunny skies Humidty : 30% | **Terrain:** Flat

Start Time: **2:24 PM** | **End Time:** **2:34 PM** | **Run Time:** 10 MIN

Leq: 63 **dB**

Lmax 76.1 **dB** | **Primary Noise Source:** **Traffic along 4th Street, continuous operation of leaf blower at 200 yards**

L2 71.4 **dB** | from 2:24pm to 2:28pm.

L8 67.6 **dB** | **Secondary Noise Sources:** **Bird song, rustling leaves , occasional distant train horn**

L25 63.1 **dB** | **Overhead commercial aircraft .**

L50 58.3 **dB**

NOISE METER: SoundTrack LxT Class 1 | **CALIBRATOR** Larson Davis CAL250 Acoustic Calibrator

MAKE: Larson Davis | **MAKE:** Larson Davis

MODEL: LxT1 | **MODEL:** Cal250

SERIAL NUMBER: 3099 | **SER. NUMBER:** 2723

FACTORY CALIBRATION DATE: 11/4/2014 | **FACTORY CALIBRATION DATE:** 11/3/2014

FIELD CALIBRATION DATE: 5/26/2015

Additional Notes/Sketch

Time 2:25pm. Public bus pulls up at bus stop immediately in front of NM1 to let passengers off and on

Summary				
File Name	LxT_Data.027			
Serial Number	0003099			
Model	SoundTrack LxT®			
Firmware Version	2.301			
User				
Start	2016-04-27 14:24:28			
Stop	2016-04-27 14:34:28			
Duration	0:10:00.0			
Run Time	0:10:00.0			
Pause	0:00:00.0			
Pre Calibration	2016-04-27 14:23:23			
Post Calibration	None			
Calibration Deviation	---			
Overall Settings				
RMS Weight	A Weighting			
Peak Weight	Z Weighting			
Detector	Slow			
Preamp	PRMLxT1L			
Microphone Correction	Off			
Integration Method	Linear			
OBA Range	Low			
OBA Bandwidth	1/1 and 1/3			
OBA Freq. Weighting	Z Weighting			
OBA Max Spectrum	Bin Max			
Overload	121.7	dB		
Results				
LAeq	63.0	dB		
LAE	90.8	dB		
EA	132.058	µPa²h		
EA8	6.339	mPa²h		
EA40	31.694	mPa²h		
LZpeak (max)	2016-04-27 14:31:21		96.9	dB
LASmax	2016-04-27 14:30:59		76.1	dB
LASmin	2016-04-27 14:28:21		47.8	dB
SEA	-99.9	dB		

LCeq	70.4	dB	**Statistics**		
LAeq	63.0	dB	**LAS2.00**	71.4	dB
LCeq - LAeq	7.5	dB	**LAS8.00**	67.6	dB
LAIeq	65.1	dB	**LAS25.00**	63.1	dB
LAeq	63.0	dB	**LAS50.00**	58.3	dB
LAIeq - LAeq	2.2	dB	**LAS66.60**	55.1	dB
# Overloads	0		**LAS90.00**	50.4	dB
Overload Duration	0.0	s			

Noise Measurement
Field Data

Project Name:	Waterman Gardens Project	Date:	27-Apr-16
Project #:	6499		
Noise Measurement #:	NM2 3099 LxT_Data.028.xlsx	Technician:	Ian Edward Gallagher
Nearest Address or Cross Street:	**Monterey Ave & N. Waterman Ave**		
Site Description (Type of Existing Land Use and any other notable features)	**Residential**		
Temperature:	73 deg F **Wind:** **10mph**	**Settings:**	**SLOW** **FAST** (Circle one)
Weather:	Mostly Sunny skies Humidty : 33%	**Terrain:**	Flat
Start Time:	**2:57 PM** **End Time:** **3:07 PM**	**Run Time:**	10 MIN

Leq:	54.9 **dB**		
Lmax	69.4 **dB**	**Primary Noise Source:**	**Traffic along N. Waterman Ave**
L2	63.9 **dB**		
L8	55.9 **dB**	**Secondary Noise Sources:**	**Bird song, rustling leaves , occasional distant train horn**
L25	53.9 **dB**		**Overhead commercial aircraft , residential ambiance, distant music being**
L50	52.5 **dB**		played, distant train horn. Chopper overhead at 3:03pm.

NOISE METER:	SoundTrack LxT Class 1	**CALIBRATOR**	Larson Davis CAL250 Acoustic Calibrator
MAKE:	Larson Davis	**MAKE:**	Larson Davis
MODEL:	LxT1	**MODEL:**	Cal250
SERIAL NUMBER:	3099	**SER. NUMBER:**	2723
FACTORY CALIBRATION DATE:	11/4/2014	**FACTORY CALIBRATION DATE:**	11/3/2014
FIELD CALIBRATION DATE:	5/26/2015		

KUNZMAN ASSOCIATES, INC.
OVER 35 YEARS OF EXCELLENT SERVICE

Summary					
File Name	LxT_Data.028				
Serial Number	0003099				
Model	SoundTrack LxT®				
Firmware Version	2.301				
User					
Start	2016-04-27 14:57:19				
Stop	2016-04-27 15:07:19				
Duration	0:10:00.0				
Run Time	0:10:00.0				
Pause	0:00:00.0				
Pre Calibration	2016-04-27 14:56:37				
Post Calibration	None				
Calibration Deviation	---				
Overall Settings					
RMS Weight	A Weighting				
Peak Weight	Z Weighting				
Detector	Slow				
Preamp	PRMLxT1L				
Microphone Correction	Off				
Integration Method	Linear				
OBA Range	Low				
OBA Bandwidth	1/1 and 1/3				
OBA Freq. Weighting	Z Weighting				
OBA Max Spectrum	Bin Max				
Overload	121.5	dB			
Results					
LAeq	54.9	dB			
LAE	82.6	dB			
EA	20.411	µPa²h			
EA8	979.716	µPa²h			
EA40	4.899	mPa²h			
LZpeak (max)	2016-04-27 15:02:26		97.9	dB	
LASmax	2016-04-27 15:06:12		69.4	dB	
LASmin	2016-04-27 15:04:07		47.6	dB	
SEA	-99.9	dB			
LCeq	68.1	dB	**Statistics**		
LAeq	54.9	dB	**LAS2.00**	63.9	dB
LCeq - LAeq	13.3	dB	**LAS8.00**	55.9	dB
LAIeq	56.8	dB	**LAS25.00**	53.9	dB
LAeq	54.9	dB	**LAS50.00**	52.5	dB
LAIeq - LAeq	1.9	dB	**LAS66.60**	51.7	dB
# Overloads	0		**LAS90.00**	50.0	dB
Overload Duration	0.0	s			

Noise Measurement
Field Data

Project Name:	Waterman Gardens Project	Date:	27-Apr-16
Project #:	6499		
Noise Measurement #:	NM3 3099 LxT_Data.029.xlsx	Technician:	Ian Edward Gallagher
Nearest Address or Cross Street:	**East 3rd Street & N. Waterman Ave.**		
Site Description (Type of Existing Land Use and any other notable features)	**Residential**		
Temperature:	74 deg F **Wind:** **10mph**	**Settings:**	**SLOW** **FAST** (Circle one)
Weather:	Mostly Sunny skies Humidty : 33%	**Terrain:**	Flat
Start Time:	**3:33 PM** **End Time:** **3:43 PM**	**Run Time:**	10 MIN

Leq:	57.5 **dB**		
Lmax	67.1 **dB**	**Primary Noise Source:**	**Traffic along E. 3rd Street**
L2	62.7 **dB**		
L8	60.8 **dB**	**Secondary Noise Sources:**	**Constant electronic beeping from somewhere (fire alarm system)**
L25	58.5 **dB**		**Overhead commercial aircraft , residential ambiance, bird song**
L50	51.8 **dB**		rustling leaves, pedestrians

NOISE METER:	SoundTrack LxT Class 1	**CALIBRATOR**	Larson Davis CAL250 Acoustic Calibrator
MAKE:	Larson Davis	**MAKE:**	Larson Davis
MODEL:	LxT1	**MODEL:**	Cal250
SERIAL NUMBER:	3099	**SER. NUMBER:**	2723
FACTORY CALIBRATION DATE:	11/4/2014	**FACTORY CALIBRATION DATE:**	11/3/2014
FIELD CALIBRATION DATE:	5/26/2015		

KUNZMAN ASSOCIATES, INC.
OVER 35 YEARS OF EXCELLENT SERVICE

Summary				
File Name	LxT_Data.029			
Serial Number	0003099			
Model	SoundTrack LxT®			
Firmware Version	2.301			
User				
Start	2016-04-27 15:33:18			
Stop	2016-04-27 15:43:18			
Duration	0:10:00.0			
Run Time	0:10:00.0			
Pause	0:00:00.0			
Pre Calibration	2016-04-27 15:32:40			
Post Calibration	None			
Calibration Deviation	---			
Overall Settings				
RMS Weight	A Weighting			
Peak Weight	Z Weighting			
Detector	Slow			
Preamp	PRMLxT1L			
Microphone Correction	Off			
Integration Method	Linear			
OBA Range	Low			
OBA Bandwidth	1/1 and 1/3			
OBA Freq. Weighting	Z Weighting			
OBA Max Spectrum	Bin Max			
Overload	121.5	dB		
Results				
LAeq	57.5	dB		
LAE	85.3	dB		
EA	37.491	µPa²h		
EA8	1.800	mPa²h		
EA40	8.998	mPa²h		
LZpeak (max)	2016-04-27 15:33:40		97.7	dB
LASmax	2016-04-27 15:39:20		67.1	dB
LASmin	2016-04-27 15:36:17		46.8	dB
SEA	-99.9	dB		

LCeq	68.9	dB	**Statistics**		
LAeq	57.5	dB	**LAS2.00**	62.7	dB
LCeq - LAeq	11.4	dB	**LAS8.00**	60.8	dB
LAIeq	61.6	dB	**LAS25.00**	58.5	dB
LAeq	57.5	dB	**LAS50.00**	56.4	dB
LAIeq - LAeq	4.1	dB	**LAS66.60**	54.9	dB
# Overloads	0		**LAS90.00**	51.8	dB
Overload Duration	0.0	s			

Noise Measurement
Field Data

Project Name: Waterman Gardens Project | Date: 27-Apr-16

Project #: 6499

Noise Measurement #: NM4 3099 LxT_Data.030.xlsx | Technician: Ian Edward Gallagher

Nearest Address or Cross Street: **Bryant Street & N. Allen Street**

Site Description (Type of Existing Land Use and any other notable features) **Residential**

Temperature: 72 deg F **Wind:** **10mph** **Settings:** **SLOW** **FAST** (Circle one)

Weather: Mostly Sunny skies Humidty : 35% **Terrain:** Flat

Start Time: **4:08 PM** **End Time:** **4:18 PM** **Run Time:** 10 MIN

Leq: 56 **dB**

Lmax 68.2 **dB** **Primary Noise Source:** **Traffic along E. 3rd Street**

L2 64.8 **dB**

L8 61.0 **dB** **Secondary Noise Sources:** **Bird song (Mocking bird), rustling leaves, occasional barking dog**

L25 55.0 **dB** **Overhead commercial aircraft , residential ambiance, kids playing in**

L50 51.0 **dB** the street , pedestrians

NOISE METER: SoundTrack LxT Class 1 **CALIBRATOR** Larson Davis CAL250 Acoustic Calibrator

MAKE: Larson Davis **MAKE:** Larson Davis

MODEL: LxT1 **MODEL:** Cal250

SERIAL NUMBER: 3099 **SER. NUMBER:** 2723

FACTORY CALIBRATION DATE: 11/4/2014 **FACTORY CALIBRATION DATE:** 11/3/2014

FIELD CALIBRATION DATE: 5/26/2015

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Summary				
File Name	LxT_Data.030			
Serial Number	0003099			
Model	SoundTrack LxT®			
Firmware Version	2.301			
User				
Start	2016-04-27 16:08:42			
Stop	2016-04-27 16:18:42			
Duration	0:10:00.0			
Run Time	0:10:00.0			
Pause	0:00:00.0			
Pre Calibration	2016-04-27 16:08:15			
Post Calibration	None			
Calibration Deviation	---			
Overall Settings				
RMS Weight	A Weighting			
Peak Weight	Z Weighting			
Detector	Slow			
Preamp	PRMLxT1L			
Microphone Correction	Off			
Integration Method	Linear			
OBA Range	Low			
OBA Bandwidth	1/1 and 1/3			
OBA Freq. Weighting	Z Weighting			
OBA Max Spectrum	Bin Max			
Overload	121.4	dB		
Results				
LAeq	56.0	dB		
LAE	83.8	dB		
EA	26.773	µPa²h		
EA8	1.285	mPa²h		
EA40	6.426	mPa²h		
LZpeak (max)	2016-04-27 16:14:20		94.0	dB
LASmax	2016-04-27 16:17:40		68.2	dB
LASmin	2016-04-27 16:13:24		45.3	dB
SEA	-99.9	dB		

LCeq	65.2	dB	**Statistics**		
LAeq	56.0	dB	**LAS2.00**	64.8	dB
LCeq - LAeq	9.1	dB	**LAS8.00**	61.0	dB
LAIeq	62.6	dB	**LAS25.00**	55.0	dB
LAeq	56.0	dB	**LAS50.00**	51.0	dB
LAIeq - LAeq	6.6	dB	**LAS66.60**	50.0	dB
# Overloads	0		**LAS90.00**	48.0	dB
Overload Duration	0.0	s			

Noise Measurement
Field Data

Project Name: Waterman Gardens Project | Date: 27-Apr-16

Project #: 6499

Noise Measurement #: NM5 3099 LxT_Data.031.xlsx | Technician: Ian Edward Gallagher

Nearest Address or Cross Street: **E. Kingman Street & Interocean Ave.**

Site Description (Type of Existing Land Use and any other notable features) **Residential**

Temperature: 71 deg F **Wind:** **10mph** **Settings:** **SLOW** **FAST** (Circle one)

Weather: Mostly Sunny skies Humidty : 38% **Terrain:** Flat

Start Time: **4:43 PM** **End Time:** **4:53 PM** **Run Time:** 10 MIN

Leq: 63.7 **dB**

Lmax 81.8 **dB** **Primary Noise Source:** **Barking dogs**

L2 75.5 **dB**

L8 64.6 **dB** **Secondary Noise Sources:** **Bird song , rustling leaves, traffic ambiance from distant**

L25 54.6 **dB** **trsaffic, overhead commercial aircraft , residential ambiance, kids playing in**

L50 52.2 **dB** the street , pedestrians

NOISE METER: SoundTrack LxT Class 1 **CALIBRATOR** Larson Davis CAL250 Acoustic Calibrator

MAKE: Larson Davis **MAKE:** Larson Davis

MODEL: LxT1 **MODEL:** Cal250

SERIAL NUMBER: 3099 **SER. NUMBER:** 2723

FACTORY CALIBRATION DATE: 11/4/2014 **FACTORY CALIBRATION DATE:** 11/3/2014

FIELD CALIBRATION DATE: 5/26/2015

KUNZMAN ASSOCIATES, INC.
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Summary				
File Name	LxT_Data.031			
Serial Number	0003099			
Model	SoundTrack LxT®			
Firmware Version	2.301			
User				
Start	2016-04-27 16:43:37			
Stop	2016-04-27 16:53:37			
Duration	0:10:00.0			
Run Time	0:10:00.0			
Pause	0:00:00.0			
Pre Calibration	2016-04-27 16:43:11			
Post Calibration	None			
Calibration Deviation	---			
Overall Settings				
RMS Weight	A Weighting			
Peak Weight	Z Weighting			
Detector	Slow			
Preamp	PRMLxT1L			
Microphone Correction	Off			
Integration Method	Linear			
OBA Range	Low			
OBA Bandwidth	1/1 and 1/3			
OBA Freq. Weighting	Z Weighting			
OBA Max Spectrum	Bin Max			
Overload	121.5	dB		
Results				
LAeq	63.7	dB		
LAE	91.5	dB		
EA	157.672	µPa²h		
EA8	7.568	mPa²h		
EA40	37.841	mPa²h		
LZpeak (max)	2016-04-27 16:48:03		111.8	dB
LASmax	2016-04-27 16:44:33		81.8	dB
LASmin	2016-04-27 16:49:20		47.7	dB
SEA	-99.9	dB		

LCeq	72.2	dB	**Statistics**		
LAeq	63.7	dB	**LAS2.00**	75.5	dB
LCeq - LAeq	8.5	dB	**LAS8.00**	64.6	dB
LAIeq	73.5	dB	**LAS25.00**	54.6	dB
LAeq	63.7	dB	**LAS50.00**	52.2	dB
LAIeq - LAeq	9.8	dB	**LAS66.60**	51.1	dB
# Overloads	0		**LAS90.00**	50.2	dB
Overload Duration	0.0	s			

Noise Measurement
Field Data

Project Name: Waterman Gardens Project | Date: 27-Apr-16

Project #: 6499

Noise Measurement #: NM6 3099 LxT_Data.032.xlsx | Technician: Ian Edward Gallagher

Nearest Address or Cross Street: **7th Street & N. Sierra Way**

Site Description (Type of Existing Land Use and any other notable features) **Public Park, cemetery to the North**

Temperature: 70 deg F **Wind:** **12mph** **Settings:** **SLOW** **FAST** (Circle one)

Weather: Mostly Sunny skies Humidty : 38% **Terrain:** Flat

Start Time: **5:21 PM** **End Time:** **5:31 PM** **Run Time:** 10 MIN

Leq: 53.3 **dB**

Lmax 63.5 **dB** **Primary Noise Source:** **Bird Song**

L2 59.3 **dB**

L8 55.4 **dB** **Secondary Noise Sources:** **Traffic ambiance from distant traffic**

L25 53.1 **dB** **overhead commercial aircraft , rustling leaves**

L50 52.3 **dB**

NOISE METER: SoundTrack LxT Class 1 **CALIBRATOR** Larson Davis CAL250 Acoustic Calibrator

MAKE: Larson Davis **MAKE:** Larson Davis

MODEL: LxT1 **MODEL:** Cal250

SERIAL NUMBER: 3099 **SER. NUMBER:** 2723

FACTORY CALIBRATION DATE: 11/4/2014 **FACTORY CALIBRATION DATE:** 11/3/2014

FIELD CALIBRATION DATE: 5/26/2015

Summary				
File Name	LxT_Data.032			
Serial Number	0003099			
Model	SoundTrack LxT®			
Firmware Version	2.301			
User				
Start	2016-04-27 17:21:37			
Stop	2016-04-27 17:31:37			
Duration	0:10:00.0			
Run Time	0:10:00.0			
Pause	0:00:00.0			
Pre Calibration	2016-04-27 17:20:02			
Post Calibration	None			
Calibration Deviation	---			
Overall Settings				
RMS Weight	A Weighting			
Peak Weight	Z Weighting			
Detector	Slow			
Preamp	PRMLxT1L			
Microphone Correction	Off			
Integration Method	Linear			
OBA Range	Low			
OBA Bandwidth	1/1 and 1/3			
OBA Freq. Weighting	Z Weighting			
OBA Max Spectrum	Bin Max			
Overload	121.2	dB		
Results				
LAeq	53.3	dB		
LAE	81.0	dB		
EA	14.109	µPa²h		
EA8	677.244	µPa²h		
EA40	3.386	mPa²h		
LZpeak (max)	2016-04-27 17:22:00		101.5	dB
LASmax	2016-04-27 17:30:44		63.5	dB
LASmin	2016-04-27 17:23:17		49.1	dB
SEA	-99.9	dB		

LCeq	68.0	dB	**Statistics**		
LAeq	53.3	dB	**LAS2.00**	59.3	dB
LCeq - LAeq	14.7	dB	**LAS8.00**	55.4	dB
LAIeq	55.0	dB	**LAS25.00**	53.1	dB
LAeq	53.3	dB	**LAS50.00**	52.3	dB
LAIeq - LAeq	1.8	dB	**LAS66.60**	51.7	dB
# Overloads	0		**LAS90.00**	50.3	dB
Overload Duration	0.0	s			

Noise Measurement
Field Data

Project Name: Waterman Gardens Project | Date: 27-Apr-16

Project #: 6499

Noise Measurement #: NM7 3099 LxT_Data.033.xlsx | Technician: Ian Edward Gallagher

Nearest Address or Cross Street: **W. 8th Street & N. Sierra Way**

Site Description (Type of Existing Land Use and any other notable features) **Public School, cemetery to the West / commercial/ residential.**

Temperature: 66 deg F **Wind:** **15mph** **Settings:** **SLOW** **FAST** (Circle one)

Weather: Mostly cloudy skies Humidty : 38% **Terrain:** Flat

Start Time: **5:59 PM** **End Time:** **6:09 PM** **Run Time:** 10 MIN

Leq: 59.4 **dB**

Lmax 72.3 **dB** **Primary Noise Source:** **Traffic along 8th Street & N. Sierra Way**

L2 65.8 **dB**

L8 63.2 **dB** **Secondary Noise Sources:** **Kids playing afterschool sports,**

L25 59.3 **dB** **overhead commercial aircraft , rustling leaves**

L50 57.0 **dB**

NOISE METER:	SoundTrack LxT Class 1	**CALIBRATOR**	Larson Davis CAL250 Acoustic Calibrator
MAKE:	Larson Davis	**MAKE:**	Larson Davis
MODEL:	LxT1	**MODEL:**	Cal250
SERIAL NUMBER:	3099	**SER. NUMBER:**	2723
FACTORY CALIBRATION DATE:	11/4/2014	**FACTORY CALIBRATION DATE:**	11/3/2014
FIELD CALIBRATION DATE:	5/26/2015		

Summary				
File Name	LxT_Data.033			
Serial Number	0003099			
Model	SoundTrack LxT®			
Firmware Version	2.301			
User				
Start	2016-04-27 17:59:04			
Stop	2016-04-27 18:09:04			
Duration	0:10:00.0			
Run Time	0:10:00.0			
Pause	0:00:00.0			
Pre Calibration	2016-04-27 17:58:28			
Post Calibration	None			
Calibration Deviation	---			
Overall Settings				
RMS Weight	A Weighting			
Peak Weight	Z Weighting			
Detector	Slow			
Preamp	PRMLxT1L			
Microphone Correction	Off			
Integration Method	Linear			
OBA Range	Low			
OBA Bandwidth	1/1 and 1/3			
OBA Freq. Weighting	Z Weighting			
OBA Max Spectrum	Bin Max			
Overload	121.1	dB		
Results				
LAeq	59.4	dB		
LAE	87.2	dB		
EA	58.459	µPa²h		
EA8	2.806	mPa²h		
EA40	14.030	mPa²h		
LZpeak (max)	2016-04-27 18:03:31		111.7	dB
LASmax	2016-04-27 18:08:07		72.3	dB
LASmin	2016-04-27 18:05:56		52.1	dB
SEA	-99.9	dB		

LCeq	73.7	dB	**Statistics**		
LAeq	59.4	dB	**LAS2.00**	65.8	dB
LCeq - LAeq	14.3	dB	**LAS8.00**	63.2	dB
LAIeq	61.0	dB	**LAS25.00**	59.3	dB
LAeq	59.4	dB	**LAS50.00**	57.0	dB
LAIeq - LAeq	1.6	dB	**LAS66.60**	55.8	dB
# Overloads	0		**LAS90.00**	54.0	dB
Overload Duration	0.0	s			

Noise Measurement
Field Data

Project Name: Waterman Gardens Project | Date: 28-Apr-16

Project #: 6499

Noise Measurement #: NM8 3099 LxT_Data.034.xlsx | Technician: Ian Edward Gallagher

Nearest Address or Cross Street: **9th Street & N. Lugo Ave**

Site Description (Type of Existing Land Use and any other notable features) **Residential.**

Temperature: 55 deg F | **Wind:** **4 to 6 mph** | **Settings:** **SLOW** **FAST** (Circle one)

Weather: Overcast Humidty : 64% | **Terrain:** Flat

Start Time: **8:05 AM** | **End Time:** **8:15 AM** | **Run Time:** 10 MIN

Leq: 68.7 **dB**

Lmax 80.2 **dB** | **Primary Noise Source:** **Traffic along 9th Street**

L2 76.0 **dB**

L8 73.1 **dB** | **Secondary Noise Sources:** **Pedestrians, bird song**

L25 70.0 **dB** | **overhead commercial aircraft , rustling leaves**

L50 65.0 **dB**

NOISE METER: SoundTrack LxT Class 1 | **CALIBRATOR** Larson Davis CAL250 Acoustic Calibrator

MAKE: Larson Davis | **MAKE:** Larson Davis

MODEL: LxT1 | **MODEL:** Cal250

SERIAL NUMBER: 3099 | **SER. NUMBER:** 2723

FACTORY CALIBRATION DATE: 11/4/2014 | **FACTORY CALIBRATION DATE:** 11/3/2014

FIELD CALIBRATION DATE: 5/26/2015

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OVER 35 YEARS OF EXCELLENT SERVICE

Summary	
File Name	LxT_Data.034
Serial Number	0003099
Model	SoundTrack LxT®
Firmware Version	2.301
User	Ian Edward Gallagher
Job Description	JN# 6499 Waterman Gardens Project
Start	2016-04-28 08:05:22
Stop	2016-04-28 08:15:22
Duration	00:10:00.0
Run Time	00:10:00.0
Pause	00:00:00.0
Pre Calibration	2016-04-28 08:04:33
Post Calibration	None
Calibration Deviation	---

Overall Settings	
RMS Weight	A Weighting
Peak Weight	Z Weighting
Detector	Slow
Preamp	PRMLxT1L
Microphone Correction	Off
Integration Method	Linear
OBA Range	Low
OBA Bandwidth	1/1 and 1/3
OBA Freq. Weighting	Z Weighting
OBA Max Spectrum	Bin Max
Overload	121.1 dB

Results		
LAeq	68.7 dB	
LAE	96.5 dB	
EA	490.998 µPa²h	
EA8	23.568 mPa²h	
EA40	117.840 mPa²h	
LZpeak (max)	2016-04-28 08:13:31	102.1 dB
LASmax	2016-04-28 08:13:32	80.2 dB
LASmin	2016-04-28 08:10:38	46.6 dB
SEA	-99.9 dB	
LCeq	73.8 dB	
LAeq	68.7 dB	
LCeq - LAeq	5.1 dB	
LAIeq	70.2 dB	
LAeq	68.7 dB	
LAIeq - LAeq	1.6 dB	
# Overloads	0	
Overload Duration	0.0 s	

Statistics	
LAS2.00	76.0 dB
LAS8.00	73.1 dB
LAS25.00	70.0 dB
LAS50.00	65.0 dB
LAS66.60	61.2 dB
LAS90.00	53.7 dB

Noise Measurement
Field Data

Project Name:	Waterman Gardens Project	Date:	28-Apr-16
Project #:	6499		
Noise Measurement #:	NM9 3099 LxT_Data.035.xlsx	Technician:	Ian Edward Gallagher
Nearest Address or Cross Street:	**E 11th Street & N Sierra Way**		
Site Description (Type of Existing Land Use and any other notable features)	**Residential.**		
Temperature:	54 deg F **Wind:** **Calm**	**Settings:**	**SLOW** **FAST** (Circle one)
Weather:	Overcast Humidty : 70%	**Terrain:**	Flat
Start Time:	**8:43 AM** **End Time:** **8:53 AM**	**Run Time:**	10 MIN

Leq:	59.5 **dB**		
Lmax	72.7 **dB**	**Primary Noise Source:**	**Traffic along both 11th Street & N Sierra Way**
L2	66.5 **dB**		
L8	63.6 **dB**	**Secondary Noise Sources:**	**Pedestrians, bird song, barking dogs, crowing cockerel,**
L25	60.1 **dB**		**overhead commercial aircraft .**
L50	56.5 **dB**		

NOISE METER:	SoundTrack LxT Class 1	**CALIBRATOR**	Larson Davis CAL250 Acoustic Calibrator
MAKE:	Larson Davis	**MAKE:**	Larson Davis
MODEL:	LxT1	**MODEL:**	Cal250
SERIAL NUMBER:	3099	**SER. NUMBER:**	2723
FACTORY CALIBRATION DATE:	11/4/2014	**FACTORY CALIBRATION DATE:**	11/3/2014
FIELD CALIBRATION DATE:	5/26/2015		

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Summary	
File Name	LxT_Data.035
Serial Number	0003099
Model	SoundTrack LxT®
Firmware Version	2.301
User	Ian Edward Gallagher
Job Description	JN# 6499 Waterman Gardens Project
Start	2016-04-28 08:43:58
Stop	2016-04-28 08:53:58
Duration	00:10:00.0
Run Time	00:10:00.0
Pause	00:00:00.0
Pre Calibration	2016-04-28 08:43:20
Post Calibration	None
Calibration Deviation	---

Overall Settings	
RMS Weight	A Weighting
Peak Weight	Z Weighting
Detector	Slow
Preamp	PRMLxT1L
Microphone Correction	Off
Integration Method	Linear
OBA Range	Low
OBA Bandwidth	1/1 and 1/3
OBA Freq. Weighting	Z Weighting
OBA Max Spectrum	Bin Max
Overload	121.1 dB

Results		
LAeq	59.5 dB	
LAE	87.3 dB	
EA	59.665 µPa²h	
EA8	2.864 mPa²h	
EA40	14.320 mPa²h	
LZpeak (max)	2016-04-28 08:48:25	98.2 dB
LASmax	2016-04-28 08:53:22	72.7 dB
LASmin	2016-04-28 08:46:41	43.2 dB
SEA	-99.9 dB	
LCeq	70.4 dB	
LAeq	59.5 dB	
LCeq - LAeq	10.8 dB	
LAIeq	61.6 dB	
LAeq	59.5 dB	
LAIeq - LAeq	2.0 dB	
# Overloads	0	
Overload Duration	0.0 s	

Statistics	
LAS2.00	66.5 dB
LAS8.00	63.6 dB
LAS25.00	60.1 dB
LAS50.00	56.5 dB
LAS66.60	53.8 dB
LAS90.00	49.2 dB

Noise Measurement
Field Data

Project Name:	Waterman Gardens Project	Date:	28-Apr-16
Project #:	6499		
Noise Measurement #:	NM10 3099 LxT_Data.036.xlsx	Technician:	Ian Edward Gallagher
Nearest Address or Cross Street:	**E 10th Street & N Waterman Ave**		
Site Description (Type of Existing Land Use and any other notable features)	**Residential.**		
Temperature:	56 deg F **Wind:** **Calm**	**Settings:**	**SLOW** **FAST** (Circle one)
Weather:	Overcast Humidty : 64%	**Terrain:**	Flat
Start Time:	**9:19 AM** **End Time:** **9:29 AM**	**Run Time:**	10 MIN

Leq:	56.8 **dB**		
Lmax	69.4 **dB**	**Primary Noise Source:**	**Traffic along W Waterman Ave**
L2	63.8 **dB**		
L8	60.4 **dB**	**Secondary Noise Sources:**	**Pedestrians, bird song, barking dogs, residential ambiance**
L25	57.7 **dB**		**overhead commercial aircraft .**
L50	54.6 **dB**		Slight Mechanical noise, constant pitch and intensity. Source unknown.

NOISE METER:	SoundTrack LxT Class 1	**CALIBRATOR**	Larson Davis CAL250 Acoustic Calibrator
MAKE:	Larson Davis	**MAKE:**	Larson Davis
MODEL:	LxT1	**MODEL:**	Cal250
SERIAL NUMBER:	3099	**SER. NUMBER:**	2723
FACTORY CALIBRATION DATE:	11/4/2014	**FACTORY CALIBRATION DATE:**	11/3/2014
FIELD CALIBRATION DATE:	5/26/2015		

Summary	
File Name	LxT_Data.036
Serial Number	0003099
Model	SoundTrack LxT®
Firmware Version	2.301
User	Ian Edward Gallagher
Job Description	JN#6499 Waterman Gardens Project
Start	2016-04-28 09:19:51
Stop	2016-04-28 09:29:51
Duration	00:10:00.0
Run Time	00:10:00.0
Pause	00:00:00.0
Pre Calibration	2016-04-28 09:18:27
Post Calibration	None
Calibration Deviation	---

Overall Settings	
RMS Weight	A Weighting
Peak Weight	Z Weighting
Detector	Slow
Preamp	PRMLxT1L
Microphone Correction	Off
Integration Method	Linear
OBA Range	Low
OBA Bandwidth	1/1 and 1/3
OBA Freq. Weighting	Z Weighting
OBA Max Spectrum	Bin Max
Overload	121.1 dB

Results		
LAeq	56.8 dB	
LAE	84.6 dB	
EA	31.985 µPa²h	
EA8	1.535 mPa²h	
EA40	7.676 mPa²h	
LZpeak (max)	2016-04-28 09:25:12	93.2 dB
LASmax	2016-04-28 09:23:16	69.4 dB
LASmin	2016-04-28 09:27:32	45.5 dB
SEA	-99.9 dB	

LCeq	68.4 dB
LAeq	56.8 dB
LCeq - LAeq	11.6 dB
LAIeq	58.7 dB
LAeq	56.8 dB
LAIeq - LAeq	1.9 dB
# Overloads	0
Overload Duration	0.0 s

Statistics	
LAS2.00	63.8 dB
LAS8.00	60.4 dB
LAS25.00	57.7 dB
LAS50.00	54.6 dB
LAS66.60	52.4 dB
LAS90.00	48.1 dB

Noise Measurement
Field Data

Project Name: Waterman Gardens Project | Date: 28-Apr-16

Project #: 6499

Noise Measurement #: NM11 3099 LxT_Data.037.xlsx | Technician: Ian Edward Gallagher

Nearest Address or Cross Street: **9th Street & Preston Street**

Site Description (Type of Existing Land Use and any other notable features) **Public school/ Commercial**

Temperature: 60 deg F | **Wind:** **Calm** | **Settings:** **SLOW** **FAST** (Circle one)

Weather: Overcast Humidty : 64% | **Terrain:** Flat

Start Time: **10:21 AM** | **End Time:** **10:31 AM** | **Run Time:** 10 MIN

Leq: 69.8 **dB**

Lmax 82.5 **dB** | **Primary Noise Source:** **Traffic along 9th Street**

L2 76.8 **dB**

L8 74.4 **dB** | **Secondary Noise Sources:** **Pedestrians, bird song,** commercial aircraft and the occasional

L25 70.9 **dB** | **passing chopper overhead**

L50 67.0 **dB**

NOISE METER: SoundTrack LxT Class 1 | **CALIBRATOR** Larson Davis CAL250 Acoustic Calibrator

MAKE: Larson Davis | **MAKE:** Larson Davis

MODEL: LxT1 | **MODEL:** Cal250

SERIAL NUMBER: 3099 | **SER. NUMBER:** 2723

FACTORY CALIBRATION DATE: 11/4/2014 | **FACTORY CALIBRATION DATE:** 11/3/2014

FIELD CALIBRATION DATE: 5/26/2015

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Summary	
File Name	LxT_Data.037
Serial Number	0003099
Model	SoundTrack LxT®
Firmware Version	2.301
User	Ian Edward Gallagher
Job Description	JN# 6499 Waterman Gardens Project
Start	2016-04-28 10:21:12
Stop	2016-04-28 10:31:12
Duration	00:10:00.0
Run Time	00:10:00.0
Pause	00:00:00.0
Pre Calibration	2016-04-28 10:20:44
Post Calibration	None
Calibration Deviation	---

Overall Settings	
RMS Weight	A Weighting
Peak Weight	Z Weighting
Detector	Slow
Preamp	PRMLxT1L
Microphone Correction	Off
Integration Method	Linear
OBA Range	Low
OBA Bandwidth	1/1 and 1/3
OBA Freq. Weighting	Z Weighting
OBA Max Spectrum	Bin Max
Overload	121.1 dB

Results		
LAeq	69.8 dB	
LAE	97.6 dB	
EA	634.920 µPa²h	
EA8	30.476 mPa²h	
EA40	152.381 mPa²h	
LZpeak (max)	2016-04-28 10:22:30	109.1 dB
LASmax	2016-04-28 10:22:30	82.5 dB
LASmin	2016-04-28 10:27:00	50.6 dB
SEA	-99.9 dB	
LCeq	75.8 dB	
LAeq	69.8 dB	
LCeq - LAeq	6.0 dB	
LAIeq	71.8 dB	
LAeq	69.8 dB	
LAIeq - LAeq	2.0 dB	
# Overloads	0	
Overload Duration	0.0 s	

Statistics	
LAS2.00	76.8 dB
LAS8.00	74.4 dB
LAS25.00	70.9 dB
LAS50.00	67.0 dB
LAS66.60	63.8 dB
LAS90.00	55.5 dB

Noise Measurement
Field Data

Project Name: Waterman Gardens Project | Date: 28-Apr-16

Project #: 6499

Noise Measurement #: NM12 3099 LxT_Data.038.xlsx | Technician: Ian Edward Gallagher

Nearest Address or Cross Street: **9th Street & N Valencia Ave**

Site Description (Type of Existing Land Use and any other notable features) **Residential**

Temperature: 60 deg F **Wind:** **Calm** **Settings:** **SLOW** **FAST** (Circle one)

Weather: Mosty Sunny Skies Humidty : 64% **Terrain:** Flat

Start Time: **10:57 AM** **End Time:** **11:07 AM** **Run Time:** 10 MIN

Leq: 54 **dB**

Lmax 70.4 **dB** **Primary Noise Source:** **Noisy residents**

L2 60.5 **dB**

L8 57.4 **dB** **Secondary Noise Sources:** **Bird song, traffic ambiamce from 9th street, residenrtial ambiance,**

L25 53.5 **dB** **passing chopper & commercial aircraft overhead,**

L50 50.3 **dB**

NOISE METER: SoundTrack LxT Class 1 **CALIBRATOR** Larson Davis CAL250 Acoustic Calibrator

MAKE: Larson Davis **MAKE:** Larson Davis

MODEL: LxT1 **MODEL:** Cal250

SERIAL NUMBER: 3099 **SER. NUMBER:** 2723

FACTORY CALIBRATION DATE: 11/4/2014 **FACTORY CALIBRATION DATE:** 11/3/2014

FIELD CALIBRATION DATE: 5/26/2015

Summary	
File Name	LxT_Data.038
Serial Number	0003099
Model	SoundTrack LxT®
Firmware Version	2.301
User	Ian Edward Gallagher
Job Description	JN# 6499 Waterman Gardens Project
Start	2016-04-28 10:57:59
Stop	2016-04-28 11:07:59
Duration	00:10:00.0
Run Time	00:10:00.0
Pause	00:00:00.0
Pre Calibration	2016-04-28 10:57:36
Post Calibration	None
Calibration Deviation	---

Overall Settings	
RMS Weight	A Weighting
Peak Weight	Z Weighting
Detector	Slow
Preamp	PRMLxT1L
Microphone Correction	Off
Integration Method	Linear
OBA Range	Low
OBA Bandwidth	1/1 and 1/3
OBA Freq. Weighting	Z Weighting
OBA Max Spectrum	Bin Max
Overload	121.1 dB

Results		
LAeq	54.0 dB	
LAE	81.8 dB	
EA	16.708 µPa²h	
EA8	801.990 µPa²h	
EA40	4.010 mPa²h	
LZpeak (max)	2016-04-28 10:58:50	99.4 dB
LASmax	2016-04-28 10:58:50	70.4 dB
LASmin	2016-04-28 11:01:07	40.4 dB
SEA	-99.9 dB	

LCeq	63.9 dB
LAeq	54.0 dB
LCeq - LAeq	9.9 dB
LAIeq	60.4 dB
LAeq	54.0 dB
LAIeq - LAeq	6.4 dB
# Overloads	0
Overload Duration	0.0 s

Statistics	
LAS2.00	60.5 dB
LAS8.00	57.4 dB
LAS25.00	53.5 dB
LAS50.00	50.3 dB
LAS66.60	48.5 dB
LAS90.00	45.0 dB

Noise Measurement
Field Data

Project Name: Waterman Gardens Project | Date: 28-Apr-16

Project #: 6499

Noise Measurement #: NM13 3099 LxT_Data.039.xlsx | Technician: Ian Edward Gallagher

Nearest Address or Cross Street: **N Tippecanoe Ave & E Baseline Street**

Site Description (Type of Existing Land Use and any other notable features) **Residential/** open field

Temperature: 67 deg F **Wind:** **Calm** **Settings:** **SLOW** **FAST** (Circle one)

Weather: Mosty Sunny Skies Humidty : 67% **Terrain:** Flat

Start Time: **11:40 AM** **End Time:** **11:50 AM** **Run Time:** 10 MIN

Leq: 65 **dB**

Lmax 76.4 **dB** **Primary Noise Source:** **Traffic along N Tippercanoe Ave**

L2 73.2 **dB**

L8 70.5 **dB** **Secondary Noise Sources:** **Bird song, pedestrians, residenrtial ambiance, distant emergency siren**

L25 65.5 **dB** **passing chopper & commercial aircraft overhead,**

L50 59.4 **dB**

NOISE METER: SoundTrack LxT Class 1 **CALIBRATOR** Larson Davis CAL250 Acoustic Calibrator

MAKE: Larson Davis **MAKE:** Larson Davis

MODEL: LxT1 **MODEL:** Cal250

SERIAL NUMBER: 3099 **SER. NUMBER:** 2723

FACTORY CALIBRATION DATE: 11/4/2014 **FACTORY CALIBRATION DATE:** 11/3/2014

FIELD CALIBRATION DATE: 5/26/2015

Summary	
File Name	LxT_Data.039
Serial Number	0003099
Model	SoundTrack LxT®
Firmware Version	2.301
User	Ian Edward Gallagher
Job Description	JN# 6499 Waterman Gardens Project
Start	2016-04-28 11:40:48
Stop	2016-04-28 11:50:48
Duration	00:10:00.0
Run Time	00:10:00.0
Pause	00:00:00.0
Pre Calibration	2016-04-28 11:39:59
Post Calibration	None
Calibration Deviation	---

Overall Settings	
RMS Weight	A Weighting
Peak Weight	Z Weighting
Detector	Slow
Preamp	PRMLxT1L
Microphone Correction	Off
Integration Method	Linear
OBA Range	Low
OBA Bandwidth	1/1 and 1/3
OBA Freq. Weighting	Z Weighting
OBA Max Spectrum	Bin Max
Overload	121.2 dB

Results		
LAeq	65.0 dB	
LAE	92.8 dB	
EA	210.485 µPa²h	
EA8	10.103 mPa²h	
EA40	50.516 mPa²h	
LZpeak (max)	2016-04-28 11:47:23	101.0 dB
LASmax	2016-04-28 11:47:24	76.4 dB
LASmin	2016-04-28 11:49:18	41.5 dB
SEA	-99.9 dB	

LCeq	73.5 dB
LAeq	65.0 dB
LCeq - LAeq	8.5 dB
LAIeq	66.3 dB
LAeq	65.0 dB
LAIeq - LAeq	1.3 dB
# Overloads	0
Overload Duration	0.0 s

Statistics	
LAS2.00	73.2 dB
LAS8.00	70.5 dB
LAS25.00	65.5 dB
LAS50.00	59.4 dB
LAS66.60	54.2 dB
LAS90.00	46.1 dB

Noise Measurement
Field Data

Project Name:	Waterman Gardens Project	Date:	28-Apr-16
Project #:	6499		
Noise Measurement #:	NM14 3099 LxT_Data.040.xlsx	Technician:	Ian Edward Gallagher
Nearest Address or Cross Street:	**Bobbett Drive & E 11th Street**		
Site Description (Type of Existing Land Use and any other notable features)	**Residential/** commercial		
Temperature:	67 deg F **Wind:** **Calm to 2 mph**	**Settings:**	**SLOW** **FAST** (Circle one)
Weather:	Mosty Sunny Skies Humidty : 41%	**Terrain:**	Flat
Start Time:	**12:46 PM** **End Time:** **12:56 PM**	**Run Time:**	10 MIN

Leq:	61.7 **dB**		
Lmax	77.6 **dB**	**Primary Noise Source:**	**Traffic along Bobett Drive**
L2	72.4 **dB**		
L8	66.6 **dB**	**Secondary Noise Sources:**	**Bird song, pedestrians, residenrtial ambiance, rustling leaves**
L25	57.3 **dB**		**passing chopper & commercial aircraft overhead,**
L50	47.5 **dB**		

NOISE METER:	SoundTrack LxT Class 1	**CALIBRATOR**	Larson Davis CAL250 Acoustic Calibrator
MAKE:	Larson Davis	**MAKE:**	Larson Davis
MODEL:	LxT1	**MODEL:**	Cal250
SERIAL NUMBER:	3099	**SER. NUMBER:**	2723
FACTORY CALIBRATION DATE:	11/4/2014	**FACTORY CALIBRATION DATE:**	11/3/2014
FIELD CALIBRATION DATE:	5/26/2015		

Summary	
File Name	LxT_Data.040
Serial Number	0003099
Model	SoundTrack LxT®
Firmware Version	2.301
User	Ian Edward Gallagher
Job Description	JN# 6499 Waterman Gardens Project
Start	2016-04-28 12:46:58
Stop	2016-04-28 12:56:58
Duration	00:10:00.0
Run Time	00:10:00.0
Pause	00:00:00.0
Pre Calibration	2016-04-28 12:46:19
Post Calibration	None
Calibration Deviation	---

Overall Settings	
RMS Weight	A Weighting
Peak Weight	Z Weighting
Detector	Slow
Preamp	PRMLxT1L
Microphone Correction	Off
Integration Method	Linear
OBA Range	Low
OBA Bandwidth	1/1 and 1/3
OBA Freq. Weighting	Z Weighting
OBA Max Spectrum	Bin Max
Overload	121.2 dB

Results		
LAeq	61.7 dB	
LAE	89.5 dB	
EA	98.281 µPa²h	
EA8	4.717 mPa²h	
EA40	23.587 mPa²h	
LZpeak (max)	2016-04-28 12:47:13	97.5 dB
LASmax	2016-04-28 12:47:13	77.6 dB
LASmin	2016-04-28 12:54:37	39.3 dB
SEA	-99.9 dB	

LCeq	68.9 dB
LAeq	61.7 dB
LCeq - LAeq	7.3 dB
LAIeq	64.3 dB
LAeq	61.7 dB
LAIeq - LAeq	2.6 dB
# Overloads	0
Overload Duration	0.0 s

Statistics	
LAS2.00	72.4 dB
LAS8.00	66.6 dB
LAS25.00	57.3 dB
LAS50.00	47.5 dB
LAS66.60	45.3 dB
LAS90.00	41.7 dB

Noise Measurement
Field Data

Project Name:	Waterman Gardens Project	Date:	28-Apr-16
Project #:	6499		
Noise Measurement #:	NM15 3099 LxT_Data.041.xlsx	Technician:	Ian Edward Gallagher
Nearest Address or Cross Street:	**Crestview Ave & N Alder Street**		
Site Description (Type of Existing Land Use and any other notable features)	**Residential/** park		
Temperature:	66 deg F **Wind:** **2 to 4 mph**	**Settings:**	**SLOW** **FAST** (Circle one)
Weather:	Mosty Sunny Skies Humidty : 41%	**Terrain:**	Flat
Start Time:	**1:26 PM** **End Time:** **1:36 PM**	**Run Time:**	10 MIN

Leq:	50.9 **dB**		
Lmax	60.3 **dB**	**Primary Noise Source:**	**Bird Song**
L2	57.4 **dB**		
L8	54.3 **dB**	**Secondary Noise Sources:**	**Distant school yard ambiance, traffic ambiance, residential ambiance**
L25	51.4 **dB**		**distant emergency siren**
L50	49.0 **dB**		

NOISE METER:	SoundTrack LxT Class 1	**CALIBRATOR**	Larson Davis CAL250 Acoustic Calibrator
MAKE:	Larson Davis	**MAKE:**	Larson Davis
MODEL:	LxT1	**MODEL:**	Cal250
SERIAL NUMBER:	3099	**SER. NUMBER:**	2723
FACTORY CALIBRATION DATE:	11/4/2014	**FACTORY CALIBRATION DATE:**	11/3/2014
FIELD CALIBRATION DATE:	5/26/2015		

Summary	
File Name	LxT_Data.041
Serial Number	0003099
Model	SoundTrack LxT®
Firmware Version	2.301
User	Ian Edward Gallagher
Job Description	JN# 6499 Watetrman Gardens Project
Start	2016-04-28 13:26:43
Stop	2016-04-28 13:36:43
Duration	00:10:00.0
Run Time	00:10:00.0
Pause	00:00:00.0
Pre Calibration	2016-04-28 13:26:14
Post Calibration	None
Calibration Deviation	---

Overall Settings	
RMS Weight	A Weighting
Peak Weight	Z Weighting
Detector	Slow
Preamp	PRMLxT1L
Microphone Correction	Off
Integration Method	Linear
OBA Range	Low
OBA Bandwidth	1/1 and 1/3
OBA Freq. Weighting	Z Weighting
OBA Max Spectrum	Bin Max
Overload	121.2 dB

Results		
LAeq	50.9 dB	
LAE	78.6 dB	
EA	8.128 µPa²h	
EA8	390.122 µPa²h	
EA40	1.951 mPa²h	
LZpeak (max)	2016-04-28 13:34:54	95.1 dB
LASmax	2016-04-28 13:32:52	60.3 dB
LASmin	2016-04-28 13:27:43	43.6 dB
SEA	-99.9 dB	

LCeq	64.1 dB
LAeq	50.9 dB
LCeq - LAeq	13.2 dB
LAIeq	54.4 dB
LAeq	50.9 dB
LAIeq - LAeq	3.5 dB
# Overloads	0
Overload Duration	0.0 s

Statistics	
LAS2.00	57.4 dB
LAS8.00	54.3 dB
LAS25.00	51.4 dB
LAS50.00	49.0 dB
LAS66.60	48.0 dB
LAS90.00	46.5 dB

Noise Measurement
Field Data

Project Name:	Waterman Gardens Project	Date:	28-Apr-16
Project #:	6499		
Noise Measurement #:	NM16 3099 LxT_Data.042.xlsx	Technician:	Ian Edward Gallagher
Nearest Address or Cross Street:	**Crestview Ave & E Baseline Street**		
Site Description (Type of Existing Land Use and any other notable features)	**Residential/** school		
Temperature:	66 deg F	**Wind:**	**2 to 4 mph**
Settings:	**SLOW** **FAST** (Circle one)		
Weather:	Mosty Sunny Skies Humidty : 40%	**Terrain:**	Flat
Start Time:	**2:10 PM**	**End Time:**	**2:20 PM**
Run Time:	10 MIN		

Leq:	61.4 **dB**		
Lmax	76.7 **dB**	**Primary Noise Source:**	**School children**
L2	70.4 **dB**		
L8	66.4 **dB**	**Secondary Noise Sources:**	**School yard ambiance, traffic ambiance, residential ambiance, cars driving**
L25	60.5 **dB**		**up and down Crestview Ave, bird song, dogs barking,**
L50	55.7 **dB**		overhead commercial aircraft

NOISE METER:	SoundTrack LxT Class 1	**CALIBRATOR**	Larson Davis CAL250 Acoustic Calibrator
MAKE:	Larson Davis	**MAKE:**	Larson Davis
MODEL:	LxT1	**MODEL:**	Cal250
SERIAL NUMBER:	3099	**SER. NUMBER:**	2723
FACTORY CALIBRATION DATE:	11/4/2014	**FACTORY CALIBRATION DATE:**	11/3/2014
FIELD CALIBRATION DATE:	5/26/2015		

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Summary	
File Name	LxT_Data.042
Serial Number	0003099
Model	SoundTrack LxT®
Firmware Version	2.301
User	Ian Edward Gallagher
Job Description	JN# 6499 Waterman Gardens project
Start	2016-04-28 14:10:08
Stop	2016-04-28 14:20:08
Duration	00:10:00.0
Run Time	00:10:00.0
Pause	00:00:00.0
Pre Calibration	2016-04-28 14:09:17
Post Calibration	None
Calibration Deviation	---

Overall Settings	
RMS Weight	A Weighting
Peak Weight	Z Weighting
Detector	Slow
Preamp	PRMLxT1L
Microphone Correction	Off
Integration Method	Linear
OBA Range	Low
OBA Bandwidth	1/1 and 1/3
OBA Freq. Weighting	Z Weighting
OBA Max Spectrum	Bin Max
Overload	121.2 dB

Results		
LAeq	61.4 dB	
LAE	89.2 dB	
EA	92.054 µPa²h	
EA8	4.419 mPa²h	
EA40	22.093 mPa²h	
LZpeak (max)	2016-04-28 14:18:43	95.6 dB
LASmax	2016-04-28 14:18:43	76.7 dB
LASmin	2016-04-28 14:15:58	45.4 dB
SEA	-99.9 dB	

LCeq	68.8 dB
LAeq	61.4 dB
LCeq - LAeq	7.4 dB
LAIeq	66.9 dB
LAeq	61.4 dB
LAIeq - LAeq	5.5 dB
# Overloads	0
Overload Duration	0.0 s

Statistics	
LAS2.00	70.4 dB
LAS8.00	66.4 dB
LAS25.00	60.5 dB
LAS50.00	55.7 dB
LAS66.60	53.4 dB
LAS90.00	49.8 dB

Noise Measurement
Field Data

Project Name:	Waterman Gardens Project	Date:	28-Apr-16
Project #:	6499		
Noise Measurement #:	NM17 3099 LxT_Data.043.xlsx	Technician:	Ian Edward Gallagher
Nearest Address or Cross Street:	**Wabash Street & N Waterman Ave**		
Site Description (Type of Existing Land Use and any other notable features)	**Residential**		
Temperature:	66 deg F	**Wind:**	**2 to 4 mph**
Settings:	**SLOW** **FAST** (Circle one)		
Weather:	Mosty Sunny Skies Humidty : 40%	**Terrain:**	Flat
Start Time:	**2:52 PM**	**End Time:**	**3:02 PM**
Run Time:	10 MIN		

Leq:	62.2 **dB**		
Lmax	81.4 **dB**	**Primary Noise Source:**	**Cars Driving by, barking dogs**
L2	71.1 **dB**		
L8	66.1 **dB**	**Secondary Noise Sources:**	**Traffic ambiance, bird song**
L25	59.5 **dB**		**Fire truck siren at 2:54pm alomg N Waterman Ave**
L50	54.1 **dB**		overhead commercial aircraft

NOISE METER:	SoundTrack LxT Class 1	**CALIBRATOR**	Larson Davis CAL250 Acoustic Calibrator
MAKE:	Larson Davis	**MAKE:**	Larson Davis
MODEL:	LxT1	**MODEL:**	Cal250
SERIAL NUMBER:	3099	**SER. NUMBER:**	2723
FACTORY CALIBRATION DATE:	11/4/2014	**FACTORY CALIBRATION DATE:**	11/3/2014
FIELD CALIBRATION DATE:	5/26/2015		

Summary	
File Name	LxT_Data.043
Serial Number	0003099
Model	SoundTrack LxT®
Firmware Version	2.301
User	Ian Edward Gallagher
Job Description	JN# 6499 Waterman Gardens Project
Start	2016-04-28 14:52:26
Stop	2016-04-28 15:02:26
Duration	00:10:00.0
Run Time	00:10:00.0
Pause	00:00:00.0
Pre Calibration	2016-04-28 14:49:50
Post Calibration	None
Calibration Deviation	---

Overall Settings	
RMS Weight	A Weighting
Peak Weight	Z Weighting
Detector	Slow
Preamp	PRMLxT1L
Microphone Correction	Off
Integration Method	Linear
OBA Range	Low
OBA Bandwidth	1/1 and 1/3
OBA Freq. Weighting	Z Weighting
OBA Max Spectrum	Bin Max
Overload	121.1 dB

Results			
LAeq	62.2 dB		
LAE	90.0 dB		
EA	111.769 µPa²h		
EA8	5.365 mPa²h		
EA40	26.825 mPa²h		
LZpeak (max)	2016-04-28 14:54:23	101.1 dB	
LASmax	2016-04-28 14:54:23	81.4 dB	
LASmin	2016-04-28 14:57:40	44.0 dB	
SEA	-99.9 dB		
			Statistics
LCeq	71.8 dB		**LAS2.00** 71.1 dB
LAeq	62.2 dB		**LAS8.00** 66.1 dB
LCeq - LAeq	9.6 dB		**LAS25.00** 59.5 dB
LAIeq	65.8 dB		**LAS50.00** 54.1 dB
LAeq	62.2 dB		**LAS66.60** 51.5 dB
LAIeq - LAeq	3.6 dB		**LAS90.00** 47.4 dB
# Overloads	0		
Overload Duration	0.0 s		

Noise Measurement
Field Data

Project Name:	Waterman Gardens Project	Date:	28-Apr-16
Project #:	6499		
Noise Measurement #:	NM18 3099 LxT_Data.044.xlsx	Technician:	Ian Edward Gallagher
Nearest Address or Cross Street:	**Belle Street & E 14th Street**		
Site Description (Type of Existing Land Use and any other notable features)	**Residential**		
Temperature:	66 deg F	**Wind:**	**2 to 4 mph**
Settings:	**SLOW** **FAST** (Circle one)		
Weather:	Overcast Humidty : 40%	**Terrain:**	Flat
Start Time:	**4:19 PM**	**End Time:**	**4:29 PM**
Run Time:	10 MIN		

Leq:	64.4 **dB**		
Lmax	77.5 **dB**	**Primary Noise Source:**	**Cars Driving by, barking dogs, squawking parrot in cage**
L2	72.5 **dB**		
L8	69.9 **dB**	**Secondary Noise Sources:**	**Traffic ambiance, bird song**
L25	64.9 **dB**		**Leaves rustling**
L50	57.1 **dB**		overhead commercial aircraft

NOISE METER:	SoundTrack LxT Class 1	**CALIBRATOR**	Larson Davis CAL250 Acoustic Calibrator
MAKE:	Larson Davis	**MAKE:**	Larson Davis
MODEL:	LxT1	**MODEL:**	Cal250
SERIAL NUMBER:	3099	**SER. NUMBER:**	2723
FACTORY CALIBRATION DATE:	11/4/2014	**FACTORY CALIBRATION DATE:**	11/3/2014
FIELD CALIBRATION DATE:	5/26/2015		

Summary	
File Name	LxT_Data.044
Serial Number	0003099
Model	SoundTrack LxT®
Firmware Version	2.301
User	Ian Edward Gallagher
Job Description	JN# 6499 Waterman Gardens Project
Start	2016-04-28 16:19:35
Stop	2016-04-28 16:29:35
Duration	00:10:00.0
Run Time	00:10:00.0
Pause	00:00:00.0
Pre Calibration	2016-04-28 16:19:11
Post Calibration	None
Calibration Deviation	---

Overall Settings	
RMS Weight	A Weighting
Peak Weight	Z Weighting
Detector	Slow
Preamp	PRMLxT1L
Microphone Correction	Off
Integration Method	Linear
OBA Range	Low
OBA Bandwidth	1/1 and 1/3
OBA Freq. Weighting	Z Weighting
OBA Max Spectrum	Bin Max
Overload	121.2 dB

Results		
LAeq	64.4 dB	
LAE	92.2 dB	
EA	182.687 µPa²h	
EA8	8.769 mPa²h	
EA40	43.845 mPa²h	
LZpeak (max)	2016-04-28 16:20:12	100.7 dB
LASmax	2016-04-28 16:25:15	77.5 dB
LASmin	2016-04-28 16:21:57	46.8 dB
SEA	-99.9 dB	

LCeq	70.0 dB
LAeq	64.4 dB
LCeq - LAeq	5.6 dB
LAIeq	72.8 dB
LAeq	64.4 dB
LAIeq - LAeq	8.4 dB
# Overloads	0
Overload Duration	0.0 s

Statistics	
LAS2.00	72.5 dB
LAS8.00	69.9 dB
LAS25.00	64.9 dB
LAS50.00	57.1 dB
LAS66.60	53.6 dB
LAS90.00	49.9 dB

Noise Measurement
Field Data

Project Name:	Waterman Gardens Project	Date:	28-Apr-16
Project #:	6499		
Noise Measurement #:	NM19 3099 LxT_Data.045.xlsx	Technician:	Ian Edward Gallagher
Nearest Address or Cross Street:	**N Waterman Ave & E 17th Street**		
Site Description (Type of Existing Land Use and any other notable features)	**Residential** / commercial		
Temperature:	65 deg F **Wind:** **2 to 4 mph**	**Settings:**	**SLOW** **FAST** (Circle one)
Weather:	Overcast Humidty : 44%	**Terrain:**	Flat
Start Time:	**5:00 PM** **End Time:** **5:10 PM**	**Run Time:**	10 MIN

Leq:	73.5 **dB**		
Lmax	81.9 **dB**	**Primary Noise Source:**	**Traffic along N Waterman Ave**
L2	79.6 **dB**		
L8	77.9 **dB**	**Secondary Noise Sources:**	**Birds singing, dogs barking**
L25	75.3 **dB**		**Leaves rustling**
L50	70.7 **dB**		overhead commercial aircraft

NOISE METER:	SoundTrack LxT Class 1	**CALIBRATOR**	Larson Davis CAL250 Acoustic Calibrator
MAKE:	Larson Davis	**MAKE:**	Larson Davis
MODEL:	LxT1	**MODEL:**	Cal250
SERIAL NUMBER:	3099	**SER. NUMBER:**	2723
FACTORY CALIBRATION DATE:	11/4/2014	**FACTORY CALIBRATION DATE:**	11/3/2014
FIELD CALIBRATION DATE:	5/26/2015		

Summary	
File Name	LxT_Data.045
Serial Number	0003099
Model	SoundTrack LxT®
Firmware Version	2.301
User	Ian Edward Gallagher
Job Description	JN# 6499 Waterman Gardens Project
Start	2016-04-28 17:00:38
Stop	2016-04-28 17:10:38
Duration	00:10:00.0
Run Time	00:10:00.0
Pause	00:00:00.0
Pre Calibration	2016-04-28 17:00:14
Post Calibration	None
Calibration Deviation	---

Overall Settings	
RMS Weight	A Weighting
Peak Weight	Z Weighting
Detector	Slow
Preamp	PRMLxT1L
Microphone Correction	Off
Integration Method	Linear
OBA Range	Low
OBA Bandwidth	1/1 and 1/3
OBA Freq. Weighting	Z Weighting
OBA Max Spectrum	Bin Max
Overload	121.2 dB

Results		
LAeq	73.5 dB	
LAE	101.3 dB	
EA	1.503 mPa²h	
EA8	72.140 mPa²h	
EA40	360.702 mPa²h	
LZpeak (max)	2016-04-28 17:03:54	102.2 dB
LASmax	2016-04-28 17:00:50	81.9 dB
LASmin	2016-04-28 17:10:17	54.7 dB
SEA	-99.9 dB	

LCeq	77.8 dB
LAeq	73.5 dB
LCeq - LAeq	4.3 dB
LAIeq	75.1 dB
LAeq	73.5 dB
LAIeq - LAeq	1.6 dB
# Overloads	0
Overload Duration	0.0 s

Statistics	
LAS2.00	79.6 dB
LAS8.00	77.9 dB
LAS25.00	75.3 dB
LAS50.00	70.7 dB
LAS66.60	68.4 dB
LAS90.00	63.6 dB

Noise Measurement
Field Data

Project Name:	Waterman Gardens Project	Date:	28-Apr-16
Project #:	6499		
Noise Measurement #:	NM20 3099 LxT_Data.046.xlsx	Technician:	Ian Edward Gallagher
Nearest Address or Cross Street:	**E. Highlands Ave & Crestview Ave**		
Site Description (Type of Existing Land Use and any other notable features)	**Hospital/ Hospital parking lot**		
Temperature:	65 deg F **Wind:** **2 to 4 mph**	**Settings:**	**SLOW** **FAST** (Circle one)
Weather:	Mostly cloudy Humidty : 48%	**Terrain:**	Flat
Start Time:	**5:34 PM** **End Time:** **5:44 PM**	**Run Time:**	10 MIN

Leq:	58.3 **dB**		
Lmax	74.5 **dB**	**Primary Noise Source:**	**Cars Driving by, entering / exiting parking lot**
L2	64.8 **dB**		
L8	60.5 **dB**	**Secondary Noise Sources:**	**Traffic ambiance ftom E. Highlands Ave, bird song**
L25	58.8 **dB**		**Leaves rustling**
L50	56.4 **dB**		overhead commercial aircraft

NOISE METER:	SoundTrack LxT Class 1	**CALIBRATOR**	Larson Davis CAL250 Acoustic Calibrator
MAKE:	Larson Davis	**MAKE:**	Larson Davis
MODEL:	LxT1	**MODEL:**	Cal250
SERIAL NUMBER:	3099	**SER. NUMBER:**	2723
FACTORY CALIBRATION DATE:	11/4/2014	**FACTORY CALIBRATION DATE:**	11/3/2014
FIELD CALIBRATION DATE:	5/26/2015		

Summary	
File Name	LxT_Data.046
Serial Number	0003099
Model	SoundTrack LxT®
Firmware Version	2.301
User	Ian Edward Gallagher
Job Description	JN# 6499 Waterman Gardens Project
Start	2016-04-28 17:34:52
Stop	2016-04-28 17:44:52
Duration	00:10:00.0
Run Time	00:10:00.0
Pause	00:00:00.0
Pre Calibration	2016-04-28 17:34:06
Post Calibration	None
Calibration Deviation	---

Overall Settings	
RMS Weight	A Weighting
Peak Weight	Z Weighting
Detector	Slow
Preamp	PRMLxT1L
Microphone Correction	Off
Integration Method	Linear
OBA Range	Low
OBA Bandwidth	1/1 and 1/3
OBA Freq. Weighting	Z Weighting
OBA Max Spectrum	Bin Max
Overload	121.2 dB

Results		
LAeq	58.3 dB	
LAE	86.1 dB	
EA	45.349 µPa²h	
EA8	2.177 mPa²h	
EA40	10.884 mPa²h	
LZpeak (max)	2016-04-28 17:37:07	100.3 dB
LASmax	2016-04-28 17:37:07	74.5 dB
LASmin	2016-04-28 17:43:32	46.9 dB
SEA	-99.9 dB	
LCeq	71.6 dB	
LAeq	58.3 dB	
LCeq - LAeq	13.2 dB	
LAIeq	60.6 dB	
LAeq	58.3 dB	
LAIeq - LAeq	2.2 dB	
# Overloads	0	
Overload Duration	0.0 s	

Statistics	
LAS2.00	64.8 dB
LAS8.00	60.5 dB
LAS25.00	58.8 dB
LAS50.00	56.4 dB
LAS66.60	55.3 dB
LAS90.00	52.0 dB

Noise Measurement
Field Data

Project Name:	Waterman Gardens Project	Date:	28-Apr-16
Project #:	6499		
Noise Measurement #:	NM21 3099 LxT_Data.047.xlsx	Technician:	Ian Edward Gallagher
Nearest Address or Cross Street:	**E 20th Street & N Kenwood ave**		
Site Description (Type of Existing Land Use and any other notable features)	**Residential**		
Temperature:	65 deg F **Wind:** **2 to 4 mph**	**Settings:**	**SLOW** **FAST** (Circle one)
Weather:	Mostly cloudy Humidty : 48%	**Terrain:**	Flat
Start Time:	**6:32 PM** **End Time:** **6:42 PM**	**Run Time:**	10 MIN

Leq:	56.7 **dB**		
Lmax	71.4 **dB**	**Primary Noise Source:**	**Cars driving by,**
L2	65.0 **dB**		
L8	61.4 **dB**	**Secondary Noise Sources:**	**Kids playing in back yards, occasiomnal dog bark,**
L25	55.2 **dB**		**Talking pedestrians, leaves rustling**
L50	52.2 **dB**		overhead commercial aircraft

NOISE METER:	SoundTrack LxT Class 1	**CALIBRATOR**	Larson Davis CAL250 Acoustic Calibrator
MAKE:	Larson Davis	**MAKE:**	Larson Davis
MODEL:	LxT1	**MODEL:**	Cal250
SERIAL NUMBER:	3099	**SER. NUMBER:**	2723
FACTORY CALIBRATION DATE:	11/4/2014	**FACTORY CALIBRATION DATE:**	11/3/2014
FIELD CALIBRATION DATE:	5/26/2015		

Summary	
File Name	LxT_Data.047
Serial Number	0003099
Model	SoundTrack LxT®
Firmware Version	2.301
User	Ian Edward Gallagher
Job Description	JN# 6499 Waterman Gardens Project
Start	2016-04-28 18:32:29
Stop	2016-04-28 18:42:29
Duration	00:10:00.0
Run Time	00:10:00.0
Pause	00:00:00.0
Pre Calibration	2016-04-28 18:31:52
Post Calibration	None
Calibration Deviation	---

Overall Settings	
RMS Weight	A Weighting
Peak Weight	Z Weighting
Detector	Slow
Preamp	PRMLxT1L
Microphone Correction	Off
Integration Method	Linear
OBA Range	Low
OBA Bandwidth	1/1 and 1/3
OBA Freq. Weighting	Z Weighting
OBA Max Spectrum	Bin Max
Overload	121.1 dB

Results		
LAeq	56.7 dB	
LAE	84.5 dB	
EA	31.438 µPa²h	
EA8	1.509 mPa²h	
EA40	7.545 mPa²h	
LZpeak (max)	2016-04-28 18:34:34	94.5 dB
LASmax	2016-04-28 18:42:11	71.4 dB
LASmin	2016-04-28 18:33:43	48.1 dB
SEA	-99.9 dB	
LCeq	67.3 dB	
LAeq	56.7 dB	
LCeq - LAeq	10.6 dB	
LAIeq	62.0 dB	
LAeq	56.7 dB	
LAIeq - LAeq	5.3 dB	
# Overloads	0	
Overload Duration	0.0 s	

Statistics	
LAS2.00	65.0 dB
LAS8.00	61.4 dB
LAS25.00	55.2 dB
LAS50.00	52.2 dB
LAS66.60	51.0 dB
LAS90.00	49.5 dB

Noise Measurement
Field Data

Project Name:	Waterman Gardens Project	Date:	28-Apr-16
Project #:	6499		
Noise Measurement #:	NM22 3099 LxT_Data.048.xlsx	Technician:	Ian Edward Gallagher
Nearest Address or Cross Street:	**Valencia Ave & E Highland Ave**		
Site Description (Type of Existing Land Use and any other notable features)	**Park/ Parking Lot**		
Temperature:	63 deg F **Wind:** **2 to 4 mph**	**Settings:**	**SLOW** **FAST** (Circle one)
Weather:	Mostly cloudy Humidty : 48%	**Terrain:**	Flat
Start Time:	**7:15 PM** **End Time:** **7:25 PM**	**Run Time:**	10 MIN

Leq:	58.3 **dB**		
Lmax	72.2 **dB**	**Primary Noise Source:**	**Traffic ambiance from Valencia Ave, E Highland Ave and E 21st Street**
L2	63.1 **dB**		
L8	61.2 **dB**	**Secondary Noise Sources:**	**Kids playing, dogs barking, birds singing**
L25	58.9 **dB**		**leaves rustling**
L50	56.5 **dB**		overhead commercial aircraft

NOISE METER:	SoundTrack LxT Class 1	**CALIBRATOR**	Larson Davis CAL250 Acoustic Calibrator
MAKE:	Larson Davis	**MAKE:**	Larson Davis
MODEL:	LxT1	**MODEL:**	Cal250
SERIAL NUMBER:	3099	**SER. NUMBER:**	2723
FACTORY CALIBRATION DATE:	11/4/2014	**FACTORY CALIBRATION DATE:**	11/3/2014
FIELD CALIBRATION DATE:	5/26/2015		

Summary	
File Name	LxT_Data.048
Serial Number	0003099
Model	SoundTrack LxT®
Firmware Version	2.301
User	Ian Edward Gallagher
Job Description	JN# 6499 Waterman Gardens Project
Start	2016-04-28 19:15:04
Stop	2016-04-28 19:25:04
Duration	00:10:00.0
Run Time	00:10:00.0
Pause	00:00:00.0
Pre Calibration	2016-04-28 19:14:45
Post Calibration	None
Calibration Deviation	---

Overall Settings	
RMS Weight	A Weighting
Peak Weight	Z Weighting
Detector	Slow
Preamp	PRMLxT1L
Microphone Correction	Off
Integration Method	Linear
OBA Range	Low
OBA Bandwidth	1/1 and 1/3
OBA Freq. Weighting	Z Weighting
OBA Max Spectrum	Bin Max
Overload	121.1 dB

Results			
LAeq		58.3 dB	
LAE		86.1 dB	
EA		45.096 µPa²h	
EA8		2.165 mPa²h	
EA40		10.823 mPa²h	
LZpeak (max)	2016-04-28 19:17:03		93.9 dB
LASmax	2016-04-28 19:17:03		72.2 dB
LASmin	2016-04-28 19:21:35		49.4 dB
SEA		-99.9 dB	

LCeq	70.0 dB
LAeq	58.3 dB
LCeq - LAeq	11.7 dB
LAIeq	59.2 dB
LAeq	58.3 dB
LAIeq - LAeq	0.9 dB
# Overloads	0
Overload Duration	0.0 s

Statistics	
LAS2.00	63.1 dB
LAS8.00	61.2 dB
LAS25.00	58.9 dB
LAS50.00	56.5 dB
LAS66.60	55.2 dB
LAS90.00	52.7 dB

APPENDIX C

FHWA Traffic Noise Prediction Model
- FHWA-RD-77-108 Output

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **North of 30th Street**

	DAYTIME			EVENING			NIGHTTIME			ADT	16750.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	50.00
INPUT PARAMETERS											
Vehicles per hour	970.10	20.10	33.50	720.25	3.35	5.58	178.67	27.92	46.53	% A	92
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	5
ADJUSTMENTS											
Flow	24.12	7.29	9.50	22.83	-0.50	1.72	16.77	8.71	10.93		
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	73.62
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	67.72
LEQ	64.16	57.04	64.48	62.87	49.26	56.70	56.81	58.47	65.91	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	67.72		EVENING LEQ	63.96		NIGHT LEQ	67.06		Use hour?	no
										GRADE dB	0.00
		CNEL	**73.62**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **North of 30th Street**

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	16340.08
										SPEED	35.00
										DISTANCE	50.00
INPUT PARAMETERS											
Vehicles per hour	944.96	19.80	33.38	701.59	3.30	5.56	174.04	27.50	46.36	% A	91.86
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3.03
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	5.11
ADJUSTMENTS											
Flow	24.01	7.22	9.49	22.71	-0.56	1.71	16.66	8.65	10.91		
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	73.58
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	67.66
LEQ	64.05	56.98	64.46	62.75	49.20	56.68	56.70	58.40	65.89	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	67.66		EVENING LEQ	63.86		NIGHT LEQ	67.03		Use hour?	no
										GRADE dB	0.00
		CNEL	**73.58**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**

Road: **Waterman Avenue**

Segment: **30th Street to State Route 210 EB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	18905.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	50.00
INPUT PARAMETERS											
Vehicles per hour	1094.91	22.69	37.81	812.92	3.78	6.30	201.65	31.51	52.51	% A	92
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	5
ADJUSTMENTS											
Flow	24.65	7.81	10.03	23.35	0.03	2.25	17.30	9.24	11.46		
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	74.14
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	68.25
LEQ	64.69	57.57	65.01	63.39	49.79	57.22	57.34	59.00	66.43	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	68.25		EVENING LEQ	64.48		NIGHT LEQ	67.58		Use hour?	no
										GRADE dB	0.00
		CNEL	**74.14**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **30th Street to State Route 210 EB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	20244.73
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	50.00
INPUT PARAMETERS											
Vehicles per hour	1177.08	23.67	38.21	873.92	3.95	6.37	216.79	32.88	53.06	% A	92.36
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.92
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	4.72
ADJUSTMENTS											
Flow	24.96	8.00	10.07	23.67	0.21	2.29	17.61	9.42	11.50		
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	74.25
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	68.43
LEQ	65.00	57.75	65.05	63.71	49.97	57.27	57.65	59.18	66.48	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	68.43		EVENING LEQ	64.74		NIGHT LEQ	67.67		Use hour?	no
										GRADE dB	0.00
		CNEL	**74.25**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**

Road: **Waterman Avenue**

Segment: **State Route 210 EB Ramps to Highland Avenue**

	DAYTIME			EVENING			NIGHTTIME			ADT	15335.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	50.00
INPUT PARAMETERS											
Vehicles per hour	888.15	18.40	30.67	659.41	3.07	5.11	163.57	25.56	42.60	% A	92
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	5
ADJUSTMENTS											
Flow	23.74	6.90	9.12	22.45	-0.88	1.34	16.39	8.33	10.55		
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	73.23
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	67.34
LEQ	63.78	56.66	64.10	62.48	48.88	56.32	56.43	58.09	65.52	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	67.34		EVENING LEQ	63.57		NIGHT LEQ	66.68		Use hour?	no
										GRADE dB	0.00
		CNEL	**73.23**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **State Route 210 EB Ramps to Highland Avenue**

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	18264.41
										SPEED	35.00
										DISTANCE	50.00
INPUT PARAMETERS											
Vehicles per hour	1067.81	20.56	31.54	792.79	3.43	5.26	196.66	28.55	43.80	% A	92.87
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.81
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	4.32
ADJUSTMENTS											
Flow	24.54	7.38	9.24	23.25	-0.40	1.46	17.19	8.81	10.67		
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	73.52
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	67.80
LEQ	64.58	57.14	64.22	63.28	49.36	56.44	57.23	58.57	65.64	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	67.80		EVENING LEQ	64.24		NIGHT LEQ	66.92		Use hour?	no
										GRADE dB	0.00
		CNEL	**73.52**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **Highland Avenue to Baseline Street**

	DAYTIME			EVENING			NIGHTTIME			ADT	14510.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	50.00
INPUT PARAMETERS											
Vehicles per hour	840.37	17.41	29.02	623.93	2.90	4.84	154.77	24.18	40.31	% A	92
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	5
ADJUSTMENTS											
Flow	23.50	6.66	8.88	22.20	-1.12	1.10	16.15	8.09	10.31		
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	72.99
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	67.10
LEQ	63.54	56.42	63.86	62.24	48.64	56.07	56.19	57.85	65.28	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	67.10		EVENING LEQ	63.33		NIGHT LEQ	66.43		Use hour?	no
										GRADE dB	0.00
		CNEL	**72.99**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **Highland Avenue to Baseline Street**

	DAYTIME			EVENING			NIGHTTIME			ADT	18189.26
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	50.00
INPUT PARAMETERS											
Vehicles per hour	1066.01	20.12	30.11	791.46	3.35	5.02	196.33	27.95	41.82	% A	93.10
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.77
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	4.14
ADJUSTMENTS											
Flow	24.53	7.29	9.04	23.24	-0.49	1.26	17.18	8.72	10.47		
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	73.37
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	67.70
LEQ	64.57	57.05	64.02	63.28	49.27	56.24	57.22	58.47	65.44	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	67.70		EVENING LEQ	64.20		NIGHT LEQ	66.75		Use hour?	no
										GRADE dB	0.00
		CNEL	**73.37**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **Baseline Street to 9th Street**

	DAYTIME			EVENING			NIGHTTIME			ADT	15995.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	50.00
INPUT PARAMETERS											
Vehicles per hour	926.38	19.19	31.99	687.79	3.20	5.33	170.61	26.66	44.43	% A	92
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	5
ADJUSTMENTS											
Flow	23.92	7.09	9.30	22.63	-0.70	1.52	16.57	8.51	10.73		
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	73.42
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	67.52
LEQ	63.96	56.84	64.28	62.67	49.06	56.50	56.61	58.27	65.71	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	67.52		EVENING LEQ	63.76		NIGHT LEQ	66.86		Use hour?	no
										GRADE dB	0.00
		CNEL	**73.42**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **Baseline Street to 9th Street**

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	23943.41
										SPEED	35.00
										DISTANCE	50.00
INPUT PARAMETERS											
Vehicles per hour	1413.84	25.05	34.34	1049.70	4.17	5.72	260.39	34.79	47.70	% A	93.80
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.62
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	3.59
ADJUSTMENTS											
Flow	25.76	8.24	9.61	24.46	0.46	1.83	18.41	9.67	11.04		
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	74.13
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	68.64
LEQ	65.80	58.00	64.59	64.50	50.22	56.81	58.45	59.43	66.01	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	68.64		EVENING LEQ	65.32		NIGHT LEQ	67.46		Use hour?	no
										GRADE dB	0.00
		CNEL	**74.13**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **9th Street to 5th Street**

	DAYTIME			EVENING			NIGHTTIME			ADT	17170.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	50.00
INPUT PARAMETERS											
Vehicles per hour	994.43	20.60	34.34	738.31	3.43	5.72	183.15	28.62	47.69	% A	92
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	5
ADJUSTMENTS											
Flow	24.23	7.39	9.61	22.94	-0.39	1.83	16.88	8.82	11.04		
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	73.72
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	67.83
LEQ	64.27	57.15	64.59	62.98	49.37	56.81	56.92	58.58	66.01	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	67.83		EVENING LEQ	64.07		NIGHT LEQ	67.17		Use hour?	no
										GRADE dB	0.00
		CNEL	**73.72**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **9th Street to 5th Street**

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	26218.19
										SPEED	35.00
										DISTANCE	50.00
INPUT PARAMETERS											
Vehicles per hour	1549.34	27.26	37.02	1150.30	4.54	6.17	285.35	37.87	51.42	% A	93.87
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.60
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	3.53
ADJUSTMENTS											
Flow	26.15	8.61	9.94	24.86	0.83	2.16	18.81	10.04	11.36		
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	74.48
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	69.00
LEQ	66.19	58.37	64.91	64.90	50.59	57.13	58.85	59.79	66.34	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	69.00		EVENING LEQ	65.71		NIGHT LEQ	67.80		Use hour?	no
										GRADE dB	0.00
		CNEL	**74.48**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **5th Street to 2nd Street**

	DAYTIME			EVENING			NIGHTTIME			ADT	17170.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	50.00
INPUT PARAMETERS											
Vehicles per hour	994.43	20.60	34.34	738.31	3.43	5.72	183.15	28.62	47.69	% A	92
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	5
ADJUSTMENTS											
Flow	24.23	7.39	9.61	22.94	-0.39	1.83	16.88	8.82	11.04		
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	73.72
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	67.83
LEQ	64.27	57.15	64.59	62.98	49.37	56.81	56.92	58.58	66.01	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	67.83		EVENING LEQ	64.07		NIGHT LEQ	67.17		Use hour?	no
										GRADE dB	0.00
		CNEL	**73.72**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **5th Street to 2nd Street**

	DAYTIME			EVENING			NIGHTTIME			ADT	21144.21
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	50.00
INPUT PARAMETERS											
Vehicles per hour	1238.16	23.53	35.52	919.27	3.92	5.92	228.04	32.68	49.33	% A	93.02
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.78
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	4.20
ADJUSTMENTS											
Flow	25.18	7.97	9.76	23.89	0.19	1.98	17.83	9.40	11.18		
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	74.07
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	68.38
LEQ	65.22	57.73	64.73	63.93	49.95	56.95	57.87	59.15	66.16	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	68.38		EVENING LEQ	64.86		NIGHT LEQ	67.46		Use hour?	no
										GRADE dB	0.00
		CNEL	**74.07**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **South of 2nd Street**

	DAYTIME			EVENING			NIGHTTIME			ADT	5600.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	50.00
INPUT PARAMETERS											
Vehicles per hour	324.33	6.72	11.20	240.80	1.12	1.87	59.73	9.33	15.56	% A	92
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	5
ADJUSTMENTS											
Flow	19.36	2.53	4.75	18.07	-5.25	-3.04	12.02	3.95	6.17		
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	68.86
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	62.96
LEQ	59.40	52.29	59.72	58.11	44.50	51.94	52.06	53.71	61.15	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	62.96		EVENING LEQ	59.20		NIGHT LEQ	62.30		Use hour?	no
										GRADE dB	0.00
		CNEL	**68.86**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **South of 2nd Street**

	DAYTIME			EVENING			NIGHTTIME			ADT	5839.95
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	50.00
INPUT PARAMETERS											
Vehicles per hour	339.05	6.90	11.27	251.73	1.15	1.88	62.44	9.58	15.65	% A	92.22
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.95
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	4.82
ADJUSTMENTS											
Flow	19.56	2.64	4.77	18.26	-5.14	-3.01	12.21	4.07	6.20		
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	68.92
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	63.07
LEQ	59.60	52.40	59.75	58.30	44.62	51.97	52.25	53.82	61.18	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	63.07		EVENING LEQ	59.36		NIGHT LEQ	62.36		Use hour?	no
										GRADE dB	0.00
		CNEL	**68.92**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **North of Interstate 10 WB Ramp**

	DAYTIME			EVENING			NIGHTTIME			ADT	33080.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	50.00
										DISTANCE	50.00
INPUT PARAMETERS											
Vehicles per hour	1915.88	39.70	66.16	1422.44	6.62	11.03	352.85	55.13	91.89	% A	92
Speed in MPH	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	71.12	78.79	83.02	71.12	78.79	83.02	71.12	78.79	83.02	% HT	5
ADJUSTMENTS											
Flow	25.53	8.69	10.91	24.23	0.91	3.13	18.18	10.12	12.34		
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	78.80
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	73.77
LEQ	71.58	62.42	68.86	70.28	54.63	61.08	64.23	63.84	70.29	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	73.77		EVENING LEQ	70.88		NIGHT LEQ	71.97		Use hour?	no
										GRADE dB	0.00
		CNEL	**78.80**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **North of Interstate 10 WB Ramp**

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	35559.50
										SPEED	50.00
										DISTANCE	50.00
INPUT PARAMETERS											
Vehicles per hour	2067.95	41.52	66.89	1535.34	6.92	11.15	380.86	57.67	92.91	% A	92.38
Speed in MPH	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.92
NOISE CALCULATIONS											
Reference levels	71.12	78.79	83.02	71.12	78.79	83.02	71.12	78.79	83.02	% HT	4.70
ADJUSTMENTS											
Flow	25.86	8.89	10.96	24.57	1.11	3.18	18.51	10.31	12.39		
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	78.95
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	74.00
LEQ	71.91	62.61	68.91	70.62	54.83	61.13	64.56	64.04	70.34	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	74.00		EVENING LEQ	71.18		NIGHT LEQ	72.09		Use hour?	no
										GRADE dB	0.00
		CNEL	**78.95**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **South of Interstate 10 WB On-Ramp**

	DAYTIME			EVENING			NIGHTTIME			ADT	33080.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	50.00
										DISTANCE	50.00
INPUT PARAMETERS											
Vehicles per hour	1915.88	39.70	66.16	1422.44	6.62	11.03	352.85	55.13	91.89	% A	92
Speed in MPH	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	71.12	78.79	83.02	71.12	78.79	83.02	71.12	78.79	83.02	% HT	5
ADJUSTMENTS											
Flow	25.53	8.69	10.91	24.23	0.91	3.13	18.18	10.12	12.34		
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	78.80
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	73.77
LEQ	71.58	62.42	68.86	70.28	54.63	61.08	64.23	63.84	70.29	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	73.77		EVENING LEQ	70.88		NIGHT LEQ	71.97		Use hour?	no
										GRADE dB	0.00
		CNEL	**78.80**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **South of Interstate 10 WB On-Ramp**

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	34949.63
										SPEED	50.00
										DISTANCE	50.00
INPUT PARAMETERS											
Vehicles per hour	2030.54	41.07	66.71	1507.57	6.85	11.12	373.97	57.04	92.66	% A	92.29
Speed in MPH	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.94
NOISE CALCULATIONS											
Reference levels	71.12	78.79	83.02	71.12	78.79	83.02	71.12	78.79	83.02	% HT	4.77
ADJUSTMENTS											
Flow	25.78	8.84	10.95	24.49	1.06	3.17	18.43	10.27	12.37		
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	78.91
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	73.95
LEQ	71.83	62.56	68.90	70.54	54.78	61.12	64.48	63.99	70.32	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	73.95		EVENING LEQ	71.11		NIGHT LEQ	72.06		Use hour?	no
										GRADE dB	0.00
		CNEL	**78.91**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**

Road: **Baseline Street**

Segment: **Interstate 215 SB Ramps to Interstate 215 NB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	20335.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	50.00
INPUT PARAMETERS											
Vehicles per hour	1177.74	24.40	40.67	874.41	4.07	6.78	216.91	33.89	56.49	% A	92
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	5
ADJUSTMENTS											
Flow	24.38	7.55	9.77	23.09	-0.23	1.98	17.04	8.97	11.19		
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	75.25
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	69.66
LEQ	66.67	58.79	65.86	65.38	51.01	58.07	59.33	60.22	67.28	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	69.66		EVENING LEQ	66.25		NIGHT LEQ	68.61		Use hour?	no
										GRADE dB	0.00
		CNEL	**75.25**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Baseline Street**
Segment: **Interstate 215 SB Ramps to Interstate 215 NB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	22424.58
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	50.00
INPUT PARAMETERS											
Vehicles per hour	1305.89	25.94	41.29	969.55	4.32	6.88	240.51	36.03	57.35	% A	92.51
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.89
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	4.60
ADJUSTMENTS											
Flow	24.83	7.81	9.83	23.54	0.03	2.05	17.48	9.24	11.26		
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	75.42
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	69.94
LEQ	67.12	59.06	65.92	65.83	51.27	58.14	59.77	60.48	67.35	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	69.94		EVENING LEQ	66.64		NIGHT LEQ	68.75		Use hour?	no
										GRADE dB	0.00
		CNEL	**75.42**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Baseline Street**
Segment: **Interstate 215 NB Ramps to E Street**

	DAYTIME			EVENING			NIGHTTIME			ADT	22280.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	50.00
INPUT PARAMETERS											
Vehicles per hour	1290.38	26.74	44.56	958.04	4.46	7.43	237.65	37.13	61.89	% A	92
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	5
ADJUSTMENTS											
Flow	24.78	7.94	10.16	23.49	0.16	2.38	17.43	9.37	11.59		
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	75.65
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	70.06
LEQ	67.07	59.19	66.25	65.78	51.41	58.47	59.72	60.61	67.68	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	70.06		EVENING LEQ	66.65		NIGHT LEQ	69.00		Use hour?	no
										GRADE dB	0.00
		CNEL	**75.65**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Baseline Street**
Segment: **Interstate 215 NB Ramps to E Street**

	DAYTIME			EVENING			NIGHTTIME			ADT	26379.18
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	50.00
INPUT PARAMETERS											
Vehicles per hour	1541.78	29.75	45.77	1144.69	4.96	7.63	283.95	41.32	63.57	% A	92.84
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.82
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	4.34
ADJUSTMENTS											
Flow	25.55	8.41	10.28	24.26	0.63	2.50	18.21	9.84	11.71		
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	75.95
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	70.55
LEQ	67.84	59.65	66.37	66.55	51.87	58.59	60.50	61.08	67.80	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	70.55		EVENING LEQ	67.32		NIGHT LEQ	69.25		Use hour?	no
										GRADE dB	0.00
		CNEL	**75.95**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Baseline Street**
Segment: **E Street to Sierra Way**

	DAYTIME			EVENING			NIGHTTIME			ADT	18840.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	50.00
INPUT PARAMETERS											
Vehicles per hour	1091.15	22.61	37.68	810.12	3.77	6.28	200.96	31.40	52.33	% A	92
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	5
ADJUSTMENTS											
Flow	24.05	7.22	9.43	22.76	-0.57	1.65	16.70	8.64	10.86		
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	74.92
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	69.33
LEQ	66.34	58.46	65.52	65.05	50.68	57.74	58.99	59.89	66.95	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	69.33		EVENING LEQ	65.92		NIGHT LEQ	68.28		Use hour?	no
										GRADE dB	0.00
		CNEL	**74.92**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Baseline Street**
Segment: **E Street to Sierra Way**

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	22934.18
										SPEED	40.00
										DISTANCE	50.00
INPUT PARAMETERS											
Vehicles per hour	1342.24	25.62	38.89	996.54	4.27	6.48	247.20	35.59	54.02	% A	92.97
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.79
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	4.24
ADJUSTMENTS											
Flow	24.95	7.76	9.57	23.66	-0.02	1.79	17.60	9.19	11.00		
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	75.28
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	69.90
LEQ	67.24	59.00	65.66	65.95	51.22	57.88	59.89	60.43	67.09	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	69.90		EVENING LEQ	66.70		NIGHT LEQ	68.57		Use hour?	no
										GRADE dB	0.00
		CNEL	**75.28**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Baseline Street**
Segment: **Sierra Way to Waterman Avenue**

	DAYTIME			EVENING			NIGHTTIME			ADT	16055.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	50.00
INPUT PARAMETERS											
Vehicles per hour	929.85	19.27	32.11	690.37	3.21	5.35	171.25	26.76	44.60	% A	92
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	5
ADJUSTMENTS											
Flow	23.36	6.52	8.74	22.06	-1.26	0.96	16.01	7.95	10.17		
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	74.23
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	68.64
LEQ	65.65	57.76	64.83	64.35	49.98	57.05	58.30	59.19	66.26	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	68.64		EVENING LEQ	65.23		NIGHT LEQ	67.58		Use hour?	no
										GRADE dB	0.00
		CNEL	**74.23**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Baseline Street**
Segment: **Sierra Way to Waterman Avenue**

	DAYTIME			EVENING			NIGHTTIME			ADT	19979.22
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	50.00
INPUT PARAMETERS											
Vehicles per hour	1170.52	22.15	33.27	869.05	3.69	5.55	215.58	30.77	46.21	% A	93.06
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.77
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	4.16
ADJUSTMENTS											
Flow	24.36	7.13	8.89	23.06	-0.65	1.11	17.01	8.55	10.32		
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	74.63
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	69.27
LEQ	66.65	58.37	64.98	65.35	50.59	57.20	59.30	59.80	66.41	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	69.27		EVENING LEQ	66.10		NIGHT LEQ	67.91		Use hour?	no
										GRADE dB	0.00
		CNEL	**74.63**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**

Road: **Baseline Street**

Segment: **Waterman Avenue to Tippecanoe Avenue**

	DAYTIME			EVENING			NIGHTTIME			ADT	13930.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	50.00
INPUT PARAMETERS											
Vehicles per hour	806.78	16.72	27.86	598.99	2.79	4.64	148.59	23.22	38.69	% A	92
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	5
ADJUSTMENTS											
Flow	22.74	5.90	8.12	21.45	-1.88	0.34	15.39	7.33	9.55		
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	73.61
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	68.02
LEQ	65.03	57.15	64.21	63.74	49.37	56.43	57.68	58.57	65.64	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	68.02		EVENING LEQ	64.61		NIGHT LEQ	66.96		Use hour?	no
										GRADE dB	0.00
		CNEL	**73.61**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Baseline Street**
Segment: **Waterman Avenue to Tippecanoe Avenue**

	DAYTIME			EVENING			NIGHTTIME			ADT	18029.18
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	50.00
INPUT PARAMETERS											
Vehicles per hour	1058.18	19.73	29.07	785.64	3.29	4.85	194.89	27.41	40.38	% A	93.23
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.74
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	4.03
ADJUSTMENTS											
Flow	23.92	6.63	8.31	22.63	-1.16	0.53	16.57	8.05	9.74		
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	74.09
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	68.78
LEQ	66.21	57.87	64.40	64.92	50.09	56.62	58.86	59.29	65.82	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	68.78		EVENING LEQ	65.64		NIGHT LEQ	67.36		Use hour?	no
										GRADE dB	0.00
		CNEL	**74.09**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**

Road: **5th Street**

Segment: **Interstate 215 SB Ramps to Interstate 215 NB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	19130.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	50.00
INPUT PARAMETERS											
Vehicles per hour	1107.95	22.96	38.26	822.59	3.83	6.38	204.05	31.88	53.14	% A	92
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	5
ADJUSTMENTS											
Flow	24.12	7.28	9.50	22.83	-0.50	1.72	16.77	8.71	10.93		
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	74.99
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	69.40
LEQ	66.41	58.53	65.59	65.12	50.74	57.81	59.06	59.95	67.02	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	69.40		EVENING LEQ	65.99		NIGHT LEQ	68.34		Use hour?	no
										GRADE dB	0.00
		CNEL	**74.99**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **5th Street**
Segment: **Interstate 215 SB Ramps to Interstate 215 NB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	21339.56
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	50.00
INPUT PARAMETERS											
Vehicles per hour	1243.45	24.58	38.91	923.20	4.10	6.49	229.01	34.14	54.05	% A	92.56
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.88
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	4.56
ADJUSTMENTS											
Flow	24.62	7.58	9.57	23.33	-0.20	1.79	17.27	9.01	11.00		
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	75.18
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	69.71
LEQ	66.91	58.82	65.66	65.62	51.04	57.88	59.56	60.25	67.09	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	69.71		EVENING LEQ	66.42		NIGHT LEQ	68.50		Use hour?	no
										GRADE dB	0.00
		CNEL	**75.18**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **5th Street**
Segment: **Interstate 215 NB Ramps to Sierra Way**

	DAYTIME			EVENING			NIGHTTIME			ADT	17535.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	50.00
INPUT PARAMETERS											
Vehicles per hour	1015.57	21.04	35.07	754.01	3.51	5.85	187.04	29.23	48.71	% A	92
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	5
ADJUSTMENTS											
Flow	23.74	6.90	9.12	22.45	-0.88	1.34	16.39	8.33	10.55		
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	74.61
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	69.02
LEQ	66.03	58.15	65.21	64.74	50.37	57.43	58.68	59.57	66.64	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	69.02		EVENING LEQ	65.61		NIGHT LEQ	67.96		Use hour?	no
										GRADE dB	0.00
		CNEL	**74.61**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **5th Street**
Segment: **Interstate 215 NB Ramps to Sierra Way**

	DAYTIME			EVENING			NIGHTTIME			ADT	22234.06
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	50.00
INPUT PARAMETERS											
Vehicles per hour	1303.75	24.50	36.46	967.97	4.08	6.08	240.12	34.03	50.64	% A	93.15
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.75
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	4.10
ADJUSTMENTS											
Flow	24.83	7.57	9.29	23.53	-0.22	1.51	17.48	8.99	10.72		
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	75.05
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	69.71
LEQ	67.12	58.81	65.38	65.82	51.03	57.60	59.77	60.23	66.81	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	69.71		EVENING LEQ	66.55		NIGHT LEQ	68.32		Use hour?	no
										GRADE dB	0.00
		CNEL	**75.05**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **5th Street**
Segment: **Sierra Way to Waterman Avenue**

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	9385.00
										SPEED	40.00
										DISTANCE	50.00
INPUT PARAMETERS											
Vehicles per hour	543.55	11.26	18.77	403.56	1.88	3.13	100.11	15.64	26.07	% A	92
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	5
ADJUSTMENTS											
Flow	21.03	4.19	6.41	19.73	-3.59	-1.37	13.68	5.62	7.83		
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	71.89
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	66.31
LEQ	63.32	55.43	62.50	62.02	47.65	54.72	55.97	56.86	63.92	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	66.31		EVENING LEQ	62.89		NIGHT LEQ	65.25		Use hour?	no
										GRADE dB	0.00
		CNEL	**71.89**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **5th Street**
Segment: **Sierra Way to Waterman Avenue**

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	14448.99
										SPEED	40.00
										DISTANCE	50.00
INPUT PARAMETERS											
Vehicles per hour	854.11	14.99	20.27	634.13	2.50	3.38	157.30	20.82	28.15	% A	93.90
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.59
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	3.51
ADJUSTMENTS											
Flow	22.99	5.43	6.74	21.70	-2.35	-1.04	15.64	6.86	8.17		
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	72.73
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	67.60
LEQ	65.28	56.67	62.83	63.99	48.89	55.05	57.93	58.10	64.26	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	67.60		EVENING LEQ	64.63		NIGHT LEQ	65.95		Use hour?	no
										GRADE dB	0.00
		CNEL	**72.73**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**

Road: **5th Street**

Segment: **Waterman Avenue to Tippecanoe Avenue**

	DAYTIME			EVENING			NIGHTTIME			ADT	6555.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	50.00
INPUT PARAMETERS											
Vehicles per hour	379.64	7.87	13.11	281.87	1.31	2.19	69.92	10.93	18.21	% A	92
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	5
ADJUSTMENTS											
Flow	19.47	2.63	4.85	18.17	-5.15	-2.93	12.12	4.06	6.28		
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	70.33
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	64.75
LEQ	61.76	53.87	60.94	60.46	46.09	53.16	54.41	55.30	62.37	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	64.75		EVENING LEQ	61.34		NIGHT LEQ	63.69		Use hour?	no
										GRADE dB	0.00
		CNEL	**70.33**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **5th Street**
Segment: **Waterman Avenue to Tippecanoe Avenue**

	DAYTIME			EVENING			NIGHTTIME			ADT	10254.26
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	50.00
INPUT PARAMETERS											
Vehicles per hour	606.51	10.59	14.21	450.30	1.76	2.37	111.70	14.71	19.73	% A	93.96
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.58
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	3.46
ADJUSTMENTS											
Flow	21.50	3.92	5.20	20.21	-3.86	-2.58	14.15	5.35	6.62		
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	71.21
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	66.09
LEQ	63.79	55.16	61.29	62.50	47.38	53.51	56.44	56.59	62.71	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	66.09		EVENING LEQ	63.13		NIGHT LEQ	64.42		Use hour?	no
										GRADE dB	0.00
		CNEL	**71.21**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **5th Street**
Segment: **East of Tippecanoe Avenue**

	DAYTIME			EVENING			NIGHTTIME			ADT	5820.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	50.00
INPUT PARAMETERS											
Vehicles per hour	337.08	6.98	11.64	250.26	1.16	1.94	62.08	9.70	16.17	% A	92
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	5
ADJUSTMENTS											
Flow	18.95	2.11	4.33	17.66	-5.67	-3.45	11.60	3.54	5.76		
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	69.82
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	64.23
LEQ	61.24	53.36	60.42	59.95	45.58	52.64	53.89	54.78	61.85	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	64.23		EVENING LEQ	60.82		NIGHT LEQ	63.17		Use hour?	no
										GRADE dB	0.00
		CNEL	**69.82**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **5th Street**
Segment: **East of Tippecanoe Avenue**

	DAYTIME			EVENING			NIGHTTIME			ADT	10259.11
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	50.00
INPUT PARAMETERS											
Vehicles per hour	609.32	10.25	12.95	452.39	1.71	2.16	112.22	14.24	17.99	% A	94.35
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.50
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	3.16
ADJUSTMENTS											
Flow	21.52	3.78	4.80	20.23	-4.00	-2.98	14.17	5.21	6.22		
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	70.97
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	65.97
LEQ	63.81	55.02	60.89	62.52	47.24	53.11	56.46	56.45	62.31	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	65.97		EVENING LEQ	63.10		NIGHT LEQ	64.13		Use hour?	no
										GRADE dB	0.00
		CNEL	**70.97**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **5th Street**
Segment: **West of Interstate 210 SB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	16680.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	50.00
INPUT PARAMETERS											
Vehicles per hour	966.05	20.02	33.36	717.24	3.34	5.56	177.92	27.80	46.33	% A	92
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	5
ADJUSTMENTS											
Flow	23.52	6.69	8.91	22.23	-1.09	1.12	16.18	8.11	10.33		
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	74.39
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	68.80
LEQ	65.81	57.93	65.00	64.52	50.15	57.21	58.47	59.36	66.42	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	68.80		EVENING LEQ	65.39		NIGHT LEQ	67.75		Use hour?	no
										GRADE dB	0.00
		CNEL	**74.39**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **5th Street**
Segment: **West of Interstate 210 SB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	21119.11
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	50.00
INPUT PARAMETERS											
Vehicles per hour	1238.29	23.28	34.67	919.37	3.88	5.78	228.06	32.34	48.16	% A	93.14
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.76
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	4.10
ADJUSTMENTS											
Flow	24.60	7.34	9.07	23.31	-0.44	1.29	17.25	8.77	10.50		
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	74.83
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	69.49
LEQ	66.89	58.59	65.16	65.60	50.81	57.38	59.54	60.01	66.59	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	69.49		EVENING LEQ	66.33		NIGHT LEQ	68.10		Use hour?	no
										GRADE dB	0.00
		CNEL	**74.83**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**

Road: **5th Street**

Segment: **Interstate 210 SB Ramps to Interstate 210 NB Ramps**

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	17905.00
										SPEED	40.00
										DISTANCE	50.00
INPUT PARAMETERS											
Vehicles per hour	1037.00	21.49	35.81	769.92	3.58	5.97	190.99	29.84	49.74	% A	92
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	5
ADJUSTMENTS											
Flow	23.83	7.00	9.21	22.54	-0.79	1.43	16.48	8.42	10.64		
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	74.70
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	69.11
LEQ	66.12	58.24	65.30	64.83	50.46	57.52	58.77	59.66	66.73	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	69.11		EVENING LEQ	65.70		NIGHT LEQ	68.05		Use hour?	no
										GRADE dB	0.00
		CNEL	**74.70**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **5th Street**
Segment: **Interstate 210 SB Ramps to Interstate 210 NB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	20404.50
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	50.00
INPUT PARAMETERS											
Vehicles per hour	1190.29	23.33	36.55	883.72	3.89	6.09	219.22	32.40	50.76	% A	92.66
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.86
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	4.48
ADJUSTMENTS											
Flow	24.43	7.35	9.30	23.14	-0.43	1.52	17.08	8.78	10.73		
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	74.93
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	69.49
LEQ	66.72	58.59	65.39	65.43	50.81	57.61	59.37	60.02	66.82	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	69.49		EVENING LEQ	66.22		NIGHT LEQ	68.25		Use hour?	no
										GRADE dB	0.00
		CNEL	**74.93**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **5th Street**
Segment: **East of Interstate 210 NB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	22490.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	50.00
INPUT PARAMETERS											
Vehicles per hour	1302.55	26.99	44.98	967.07	4.50	7.50	239.89	37.48	62.47	% A	92
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	5
ADJUSTMENTS											
Flow	24.82	7.99	10.20	23.53	0.20	2.42	17.47	9.41	11.63		
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	75.69
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	70.10
LEQ	67.11	59.23	66.29	65.82	51.45	58.51	59.76	60.65	67.72	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	70.10		EVENING LEQ	66.69		NIGHT LEQ	69.04		Use hour?	no
										GRADE dB	0.00
		CNEL	**75.69**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **5th Street**
Segment: **East of Interstate 210 NB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	23049.89
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	50.00
INPUT PARAMETERS											
Vehicles per hour	1336.88	27.40	45.15	992.56	4.57	7.52	246.22	38.06	62.70	% A	92.13
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.97
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	4.90
ADJUSTMENTS											
Flow	24.93	8.05	10.22	23.64	0.27	2.44	17.59	9.48	11.65		
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	75.73
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	70.17
LEQ	67.22	59.29	66.31	65.93	51.51	58.53	59.88	60.72	67.74	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	70.17		EVENING LEQ	66.79		NIGHT LEQ	69.08		Use hour?	no
										GRADE dB	0.00
		CNEL	**75.73**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **3rd Street**
Segment: **West of Interstate 215 SB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	3270.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	50.00
INPUT PARAMETERS											
Vehicles per hour	200.55	2.45	0.95	148.21	0.44	0.44	37.12	3.27	1.27	% A	97.4
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	1.84
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	0.74
ADJUSTMENTS											
Flow	17.28	-1.85	-5.95	15.96	-9.36	-9.35	9.95	-0.60	-4.70		
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	62.04
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	58.33
LEQ	57.32	47.91	49.02	56.00	40.40	45.63	49.99	49.16	50.27	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	58.33		EVENING LEQ	56.49		NIGHT LEQ	54.60		Use hour?	no
										GRADE dB	0.00
		CNEL	**62.04**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **3rd Street**
Segment: **West of Interstate 215 SB Ramps**

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	3270.00
										SPEED	35.00
										DISTANCE	50.00
INPUT PARAMETERS											
Vehicles per hour	200.55	2.45	0.95	148.21	0.44	0.44	37.12	3.27	1.27	% A	97.40
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	1.84
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	0.74
ADJUSTMENTS											
Flow	17.28	-1.85	-5.95	15.96	-9.36	-9.35	9.95	-0.60	-4.70		
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	62.04
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	58.33
LEQ	57.32	47.91	49.02	56.00	40.40	45.63	49.99	49.16	50.27	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	58.33		EVENING LEQ	56.49		NIGHT LEQ	54.60		Use hour?	no
										GRADE dB	0.00
		CNEL	**62.04**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**

Road: **3rd Street**

Segment: **Interstate 215 SB Ramps to Interstate 215 NB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	4960.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	50.00
INPUT PARAMETERS											
Vehicles per hour	304.19	3.72	1.45	224.80	0.66	0.66	56.31	4.96	1.93	% A	97.4
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	1.84
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	0.74
ADJUSTMENTS											
Flow	19.08	-0.04	-4.14	17.77	-7.55	-7.54	11.76	1.21	-2.89		
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	63.85
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	60.14
LEQ	59.12	49.72	50.83	57.81	42.21	47.44	51.80	50.97	52.08	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	60.14		EVENING LEQ	58.30		NIGHT LEQ	56.41		Use hour?	no
										GRADE dB	0.00
		CNEL	**63.85**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **3rd Street**
Segment: **Interstate 215 SB Ramps to Interstate 215 NB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	5319.93
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	50.00
INPUT PARAMETERS											
Vehicles per hour	326.27	3.99	1.55	241.12	0.71	0.71	60.40	5.32	2.07	% A	97.40
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	1.84
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	0.74
ADJUSTMENTS											
Flow	19.39	0.26	-3.84	18.08	-7.25	-7.23	12.06	1.51	-2.59		
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	64.15
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	60.44
LEQ	59.43	50.02	51.14	58.12	42.51	47.74	52.10	51.27	52.39	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	60.44		EVENING LEQ	58.60		NIGHT LEQ	56.72		Use hour?	no
										GRADE dB	0.00
		CNEL	**64.15**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **3rd Street**
Segment: **East of Interstate 215 NB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	7220.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	50.00
INPUT PARAMETERS											
Vehicles per hour	442.80	5.41	2.11	327.24	0.96	0.96	81.97	7.22	2.81	% A	97.4
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	1.84
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	0.74
ADJUSTMENTS											
Flow	20.72	1.59	-2.51	19.40	-5.92	-5.91	13.39	2.84	-1.26		
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	65.48
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	61.77
LEQ	60.76	51.35	52.46	59.44	43.84	49.07	53.43	52.60	53.71	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	61.77		EVENING LEQ	59.93		NIGHT LEQ	58.04		Use hour?	no
										GRADE dB	0.00
		CNEL	**65.48**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **3rd Street**
Segment: **East of Interstate 215 NB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	7919.86
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	50.00
INPUT PARAMETERS											
Vehicles per hour	485.73	5.94	2.31	358.96	1.05	1.06	89.91	7.92	3.08	% A	97.40
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	1.84
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	0.74
ADJUSTMENTS											
Flow	21.12	1.99	-2.11	19.80	-5.52	-5.51	13.79	3.24	-0.86		
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	65.88
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	62.17
LEQ	61.16	51.75	52.87	59.84	44.24	49.47	53.83	53.00	54.12	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	62.17		EVENING LEQ	60.33		NIGHT LEQ	58.44		Use hour?	no
										GRADE dB	0.00
		CNEL	**65.88**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **2nd Street**
Segment: **West of Interstate 215 SB Ramps**

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	10960.00
										SPEED	35.00
										DISTANCE	50.00
INPUT PARAMETERS											
Vehicles per hour	634.77	13.15	21.92	471.28	2.19	3.65	116.91	18.27	30.44	% A	92
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	5
ADJUSTMENTS											
Flow	22.28	5.44	7.66	20.99	-2.34	-0.12	14.93	6.87	9.09		
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	71.77
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	65.88
LEQ	62.32	55.20	62.64	61.03	47.42	54.86	54.97	56.63	64.06	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	65.88		EVENING LEQ	62.12		NIGHT LEQ	65.22		Use hour?	no
										GRADE dB	0.00
		CNEL	**71.77**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **2nd Street**
Segment: **West of Interstate 215 SB Ramps**

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	10960.00
										SPEED	35.00
										DISTANCE	50.00
INPUT PARAMETERS											
Vehicles per hour	634.77	13.15	21.92	471.28	2.19	3.65	116.91	18.27	30.44	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	5.00
ADJUSTMENTS											
Flow	22.28	5.44	7.66	20.99	-2.34	-0.12	14.93	6.87	9.09		
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	71.77
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	65.88
LEQ	62.32	55.20	62.64	61.03	47.42	54.86	54.97	56.63	64.06	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	65.88		EVENING LEQ	62.12		NIGHT LEQ	65.22		Use hour?	no
										GRADE dB	0.00
		CNEL	**71.77**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**

Road: **2nd Street**

Segment: **Interstate 215 SB Ramps to Interstate 215 NB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	17560.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	50.00
INPUT PARAMETERS											
Vehicles per hour	1017.02	21.07	35.12	755.08	3.51	5.85	187.31	29.27	48.78	% A	92
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	5
ADJUSTMENTS											
Flow	24.33	7.49	9.71	23.03	-0.29	1.93	16.98	8.92	11.14		
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	73.82
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	67.93
LEQ	64.37	57.25	64.69	63.07	49.47	56.90	57.02	58.68	66.11	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	67.93		EVENING LEQ	64.16		NIGHT LEQ	67.26		Use hour?	no
										GRADE dB	0.00
		CNEL	**73.82**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **2nd Street**
Segment: **Interstate 215 SB Ramps to Interstate 215 NB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	17649.98
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	50.00
INPUT PARAMETERS											
Vehicles per hour	1022.54	21.14	35.15	759.18	3.52	5.86	188.32	29.36	48.81	% A	92.03
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.99
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	4.98
ADJUSTMENTS											
Flow	24.35	7.50	9.71	23.06	-0.28	1.93	17.00	8.93	11.14		
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	73.83
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	67.94
LEQ	64.39	57.26	64.69	63.10	49.48	56.91	57.04	58.69	66.12	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	67.94		EVENING LEQ	64.18		NIGHT LEQ	67.27		Use hour?	no
										GRADE dB	0.00
		CNEL	**73.83**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**

Road: **2nd Street**

Segment: **Interstate 215 NB Ramps to Waterman Avenue**

	DAYTIME			EVENING			NIGHTTIME			ADT	14055.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	50.00
INPUT PARAMETERS											
Vehicles per hour	814.02	16.87	28.11	604.37	2.81	4.69	149.92	23.43	39.04	% A	92
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	5
ADJUSTMENTS											
Flow	23.36	6.52	8.74	22.07	-1.26	0.96	16.01	7.95	10.17		
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	72.85
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	66.96
LEQ	63.40	56.28	63.72	62.11	48.50	55.94	56.05	57.71	65.14	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	66.96		EVENING LEQ	63.20		NIGHT LEQ	66.30		Use hour?	no
										GRADE dB	0.00
		CNEL	**72.85**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **2nd Street**
Segment: **Interstate 215 NB Ramps to Waterman Avenue**

	DAYTIME			EVENING			NIGHTTIME			ADT	14289.95
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	50.00
INPUT PARAMETERS											
Vehicles per hour	828.43	17.04	28.18	615.06	2.84	4.70	152.57	23.67	39.14	% A	92.09
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.98
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	4.93
ADJUSTMENTS											
Flow	23.44	6.57	8.75	22.14	-1.21	0.97	16.09	7.99	10.18		
Distance	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	-0.07	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	72.88
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	67.00
LEQ	63.48	56.33	63.73	62.18	48.54	55.95	56.13	57.75	65.16	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	67.00		EVENING LEQ	63.26		NIGHT LEQ	66.32		Use hour?	no
										GRADE dB	0.00
		CNEL	**72.88**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **North of 30th Street**

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	16750.00
										SPEED	35.00
										DISTANCE	1150.00
INPUT PARAMETERS											
Vehicles per hour	970.10	20.10	33.50	720.25	3.35	5.58	178.67	27.92	46.53	% A	92
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	5
ADJUSTMENTS											
Flow	24.12	7.29	9.50	22.83	-0.50	1.72	16.77	8.71	10.93		
Distance	-13.69	-13.69	-13.69	-13.69	-13.69	-13.69	-13.69	-13.69	-13.69	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	60.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	54.10
LEQ	50.54	43.43	50.86	49.25	35.64	43.08	43.20	44.85	52.29	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	54.10		EVENING LEQ	50.34		NIGHT LEQ	53.44		Use hour?	no
										GRADE dB	0.00
		CNEL	**60.00**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **North of 30th Street**

	DAYTIME			EVENING			NIGHTTIME			ADT	16750.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	363.00
INPUT PARAMETERS											
Vehicles per hour	970.10	20.10	33.50	720.25	3.35	5.58	178.67	27.92	46.53	% A	92
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	5
ADJUSTMENTS											
Flow	24.12	7.29	9.50	22.83	-0.50	1.72	16.77	8.71	10.93		
Distance	-8.68	-8.68	-8.68	-8.68	-8.68	-8.68	-8.68	-8.68	-8.68	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	65.01
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	59.11
LEQ	55.55	48.43	55.87	54.26	40.65	48.09	48.20	49.86	57.30	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	59.11		EVENING LEQ	55.35		NIGHT LEQ	58.45		Use hour?	no
										GRADE dB	0.00
		CNEL	**65.01**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **North of 30th Street**

	DAYTIME			EVENING			NIGHTTIME			ADT	16750.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	115.00
INPUT PARAMETERS											
Vehicles per hour	970.10	20.10	33.50	720.25	3.35	5.58	178.67	27.92	46.53	% A	92
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	5
ADJUSTMENTS											
Flow	24.12	7.29	9.50	22.83	-0.50	1.72	16.77	8.71	10.93		
Distance	-3.69	-3.69	-3.69	-3.69	-3.69	-3.69	-3.69	-3.69	-3.69	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	70.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	64.10
LEQ	60.54	53.43	60.86	59.25	45.64	53.08	53.20	54.85	62.29	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	64.10		EVENING LEQ	60.34		NIGHT LEQ	63.44		Use hour?	no
										GRADE dB	0.00
		CNEL	**70.00**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**

Road: **Waterman Avenue**

Segment: **30th Street to State Route 210 EB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	18905.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	1298.00
INPUT PARAMETERS											
Vehicles per hour	1094.91	22.69	37.81	812.92	3.78	6.30	201.65	31.51	52.51	% A	92
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	5
ADJUSTMENTS											
Flow	24.65	7.81	10.03	23.35	0.03	2.25	17.30	9.24	11.46		
Distance	-14.21	-14.21	-14.21	-14.21	-14.21	-14.21	-14.21	-14.21	-14.21	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	60.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	54.10
LEQ	50.54	43.43	50.86	49.25	35.64	43.08	43.20	44.85	52.29	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	54.10		EVENING LEQ	50.34		NIGHT LEQ	53.44		Use hour?	no
										GRADE dB	0.00
		CNEL	**60.00**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**

Road: **Waterman Avenue**

Segment: **30th Street to State Route 210 EB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	18905.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	410.00
INPUT PARAMETERS											
Vehicles per hour	1094.91	22.69	37.81	812.92	3.78	6.30	201.65	31.51	52.51	% A	92
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	5
ADJUSTMENTS											
Flow	24.65	7.81	10.03	23.35	0.03	2.25	17.30	9.24	11.46		
Distance	-9.21	-9.21	-9.21	-9.21	-9.21	-9.21	-9.21	-9.21	-9.21	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	65.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	59.11
LEQ	55.55	48.43	55.87	54.26	40.65	48.09	48.20	49.86	57.29	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	59.11		EVENING LEQ	55.35		NIGHT LEQ	58.45		Use hour?	no
										GRADE dB	0.00
		CNEL	**65.00**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **30th Street to State Route 210 EB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	18905.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	130.00
INPUT PARAMETERS											
Vehicles per hour	1094.91	22.69	37.81	812.92	3.78	6.30	201.65	31.51	52.51	% A	92
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	5
ADJUSTMENTS											
Flow	24.65	7.81	10.03	23.35	0.03	2.25	17.30	9.24	11.46		
Distance	-4.22	-4.22	-4.22	-4.22	-4.22	-4.22	-4.22	-4.22	-4.22	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	69.99
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	64.10
LEQ	60.54	53.42	60.86	59.24	45.64	53.07	53.19	54.85	62.28	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	64.10		EVENING LEQ	60.33		NIGHT LEQ	63.43		Use hour?	no
										GRADE dB	0.00
		CNEL	**69.99**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**

Road: **Waterman Avenue**

Segment: **State Route 210 EB Ramps to Highland Avenue**

	DAYTIME			EVENING			NIGHTTIME			ADT	15335.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	1053.00
INPUT PARAMETERS											
Vehicles per hour	888.15	18.40	30.67	659.41	3.07	5.11	163.57	25.56	42.60	% A	92
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	5
ADJUSTMENTS											
Flow	23.74	6.90	9.12	22.45	-0.88	1.34	16.39	8.33	10.55		
Distance	-13.30	-13.30	-13.30	-13.30	-13.30	-13.30	-13.30	-13.30	-13.30	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	60.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	54.10
LEQ	50.54	43.43	50.86	49.25	35.64	43.08	43.20	44.85	52.29	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	54.10		EVENING LEQ	50.34		NIGHT LEQ	53.44		Use hour?	no
										GRADE dB	0.00
		CNEL	**60.00**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**

Road: **Waterman Avenue**

Segment: **State Route 210 EB Ramps to Highland Avenue**

	DAYTIME			EVENING			NIGHTTIME			ADT	15335.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	333.00
INPUT PARAMETERS											
Vehicles per hour	888.15	18.40	30.67	659.41	3.07	5.11	163.57	25.56	42.60	% A	92
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	5
ADJUSTMENTS											
Flow	23.74	6.90	9.12	22.45	-0.88	1.34	16.39	8.33	10.55		
Distance	-8.30	-8.30	-8.30	-8.30	-8.30	-8.30	-8.30	-8.30	-8.30	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	65.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	59.10
LEQ	55.54	48.43	55.86	54.25	40.64	48.08	48.20	49.85	57.29	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	59.10		EVENING LEQ	55.34		NIGHT LEQ	58.44		Use hour?	no
										GRADE dB	0.00
		CNEL	**65.00**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**

Road: **Waterman Avenue**

Segment: **State Route 210 EB Ramps to Highland Avenue**

	DAYTIME			EVENING			NIGHTTIME			ADT	15335.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	105.00
INPUT PARAMETERS											
Vehicles per hour	888.15	18.40	30.67	659.41	3.07	5.11	163.57	25.56	42.60	% A	92
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	5
ADJUSTMENTS											
Flow	23.74	6.90	9.12	22.45	-0.88	1.34	16.39	8.33	10.55		
Distance	-3.29	-3.29	-3.29	-3.29	-3.29	-3.29	-3.29	-3.29	-3.29	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	70.01
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	64.12
LEQ	60.56	53.44	60.87	59.26	45.66	53.09	53.21	54.86	62.30	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	64.12		EVENING LEQ	60.35		NIGHT LEQ	63.45		Use hour?	no
										GRADE dB	0.00
		CNEL	**70.01**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**

Road: **Waterman Avenue**

Segment: **Highland Avenue to Baseline Street**

	DAYTIME			EVENING			NIGHTTIME			ADT	14510.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	996.00
INPUT PARAMETERS											
Vehicles per hour	840.37	17.41	29.02	623.93	2.90	4.84	154.77	24.18	40.31	% A	92
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	5
ADJUSTMENTS											
Flow	23.50	6.66	8.88	22.20	-1.12	1.10	16.15	8.09	10.31		
Distance	-13.06	-13.06	-13.06	-13.06	-13.06	-13.06	-13.06	-13.06	-13.06	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	60.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	54.11
LEQ	50.55	43.43	50.86	49.25	35.65	43.08	43.20	44.85	52.29	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	54.11		EVENING LEQ	50.34		NIGHT LEQ	53.44		Use hour?	no
										GRADE dB	0.00
		CNEL	**60.00**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **Highland Avenue to Baseline Street**

	DAYTIME			EVENING			NIGHTTIME			ADT	14510.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	315.00
INPUT PARAMETERS											
Vehicles per hour	840.37	17.41	29.02	623.93	2.90	4.84	154.77	24.18	40.31	% A	92
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	5
ADJUSTMENTS											
Flow	23.50	6.66	8.88	22.20	-1.12	1.10	16.15	8.09	10.31		
Distance	-8.06	-8.06	-8.06	-8.06	-8.06	-8.06	-8.06	-8.06	-8.06	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	65.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	59.11
LEQ	55.54	48.43	55.86	54.25	40.65	48.08	48.20	49.85	57.29	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	59.11		EVENING LEQ	55.34		NIGHT LEQ	58.44		Use hour?	no
										GRADE dB	0.00
		CNEL	**65.00**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **Highland Avenue to Baseline Street**

	DAYTIME			EVENING			NIGHTTIME			ADT	14510.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	100.00
INPUT PARAMETERS											
Vehicles per hour	840.37	17.41	29.02	623.93	2.90	4.84	154.77	24.18	40.31	% A	92
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	5
ADJUSTMENTS											
Flow	23.50	6.66	8.88	22.20	-1.12	1.10	16.15	8.09	10.31		
Distance	-3.08	-3.08	-3.08	-3.08	-3.08	-3.08	-3.08	-3.08	-3.08	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	69.98
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	64.09
LEQ	60.53	53.41	60.85	59.23	45.63	53.06	53.18	54.84	62.27	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	64.09		EVENING LEQ	60.32		NIGHT LEQ	63.42		Use hour?	no
										GRADE dB	0.00
		CNEL	**69.98**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **Baseline Street to 9th Street**

	DAYTIME			EVENING			NIGHTTIME			ADT	15995.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	1099.00
INPUT PARAMETERS											
Vehicles per hour	926.38	19.19	31.99	687.79	3.20	5.33	170.61	26.66	44.43	% A	92
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	5
ADJUSTMENTS											
Flow	23.92	7.09	9.30	22.63	-0.70	1.52	16.57	8.51	10.73		
Distance	-13.49	-13.49	-13.49	-13.49	-13.49	-13.49	-13.49	-13.49	-13.49	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	60.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	54.10
LEQ	50.54	43.42	50.86	49.25	35.64	43.08	43.19	44.85	52.29	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	54.10		EVENING LEQ	50.34		NIGHT LEQ	53.44		Use hour?	no
										GRADE dB	0.00
		CNEL	**60.00**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **Baseline Street to 9th Street**

	DAYTIME			EVENING			NIGHTTIME			ADT	15995.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	347.00
INPUT PARAMETERS											
Vehicles per hour	926.38	19.19	31.99	687.79	3.20	5.33	170.61	26.66	44.43	% A	92
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	5
ADJUSTMENTS											
Flow	23.92	7.09	9.30	22.63	-0.70	1.52	16.57	8.51	10.73		
Distance	-8.48	-8.48	-8.48	-8.48	-8.48	-8.48	-8.48	-8.48	-8.48	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	65.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	59.11
LEQ	55.55	48.43	55.87	54.25	40.65	48.08	48.20	49.86	57.29	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	59.11		EVENING LEQ	55.34		NIGHT LEQ	58.44		Use hour?	no
										GRADE dB	0.00
		CNEL	**65.00**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **Baseline Street to 9th Street**

	DAYTIME			EVENING			NIGHTTIME			ADT	15995.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	110.00
INPUT PARAMETERS											
Vehicles per hour	926.38	19.19	31.99	687.79	3.20	5.33	170.61	26.66	44.43	% A	92
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	5
ADJUSTMENTS											
Flow	23.92	7.09	9.30	22.63	-0.70	1.52	16.57	8.51	10.73		
Distance	-3.49	-3.49	-3.49	-3.49	-3.49	-3.49	-3.49	-3.49	-3.49	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	69.99
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	64.10
LEQ	60.54	53.42	60.86	59.24	45.64	53.07	53.19	54.85	62.28	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	64.10		EVENING LEQ	60.33		NIGHT LEQ	63.43		Use hour?	no
										GRADE dB	0.00
		CNEL	**69.99**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **9th Street to 5th Street**

	DAYTIME			EVENING			NIGHTTIME			ADT	17170.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	1178.00
INPUT PARAMETERS											
Vehicles per hour	994.43	20.60	34.34	738.31	3.43	5.72	183.15	28.62	47.69	% A	92
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	5
ADJUSTMENTS											
Flow	24.23	7.39	9.61	22.94	-0.39	1.83	16.88	8.82	11.04		
Distance	-13.79	-13.79	-13.79	-13.79	-13.79	-13.79	-13.79	-13.79	-13.79	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	60.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	54.11
LEQ	50.55	43.43	50.87	49.25	35.65	43.08	43.20	44.86	52.29	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	54.11		EVENING LEQ	50.34		NIGHT LEQ	53.44		Use hour?	no
										GRADE dB	0.00
		CNEL	**60.00**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **9th Street to 5th Street**

	DAYTIME			EVENING			NIGHTTIME			ADT	17170.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	373.00
INPUT PARAMETERS											
Vehicles per hour	994.43	20.60	34.34	738.31	3.43	5.72	183.15	28.62	47.69	% A	92
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	5
ADJUSTMENTS											
Flow	24.23	7.39	9.61	22.94	-0.39	1.83	16.88	8.82	11.04		
Distance	-8.80	-8.80	-8.80	-8.80	-8.80	-8.80	-8.80	-8.80	-8.80	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	65.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	59.10
LEQ	55.54	48.42	55.86	54.25	40.64	48.08	48.19	49.85	57.29	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	59.10		EVENING LEQ	55.34		NIGHT LEQ	58.44		Use hour?	no
										GRADE dB	0.00
		CNEL	**65.00**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **9th Street to 5th Street**

	DAYTIME			EVENING			NIGHTTIME			ADT	17170.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	117.00
INPUT PARAMETERS											
Vehicles per hour	994.43	20.60	34.34	738.31	3.43	5.72	183.15	28.62	47.69	% A	92
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	5
ADJUSTMENTS											
Flow	24.23	7.39	9.61	22.94	-0.39	1.83	16.88	8.82	11.04		
Distance	-3.76	-3.76	-3.76	-3.76	-3.76	-3.76	-3.76	-3.76	-3.76	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	70.03
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	64.14
LEQ	60.58	53.46	60.90	59.28	45.68	53.11	53.23	54.89	62.32	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	64.14		EVENING LEQ	60.37		NIGHT LEQ	63.47		Use hour?	no
										GRADE dB	0.00
		CNEL	**70.03**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **5th Street to 2nd Street**

	DAYTIME			EVENING			NIGHTTIME			ADT	17170.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	1179.00
INPUT PARAMETERS											
Vehicles per hour	994.43	20.60	34.34	738.31	3.43	5.72	183.15	28.62	47.69	% A	92
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	5
ADJUSTMENTS											
Flow	24.23	7.39	9.61	22.94	-0.39	1.83	16.88	8.82	11.04		
Distance	-13.80	-13.80	-13.80	-13.80	-13.80	-13.80	-13.80	-13.80	-13.80	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	60.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	54.10
LEQ	50.54	43.43	50.86	49.25	35.64	43.08	43.20	44.85	52.29	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	54.10		EVENING LEQ	50.34		NIGHT LEQ	53.44		Use hour?	no
										GRADE dB	0.00
		CNEL	**60.00**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **5th Street to 2nd Street**

	DAYTIME			EVENING			NIGHTTIME			ADT	17170.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	373.00
INPUT PARAMETERS											
Vehicles per hour	994.43	20.60	34.34	738.31	3.43	5.72	183.15	28.62	47.69	% A	92
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	5
ADJUSTMENTS											
Flow	24.23	7.39	9.61	22.94	-0.39	1.83	16.88	8.82	11.04		
Distance	-8.80	-8.80	-8.80	-8.80	-8.80	-8.80	-8.80	-8.80	-8.80	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	65.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	59.10
LEQ	55.54	48.42	55.86	54.25	40.64	48.08	48.19	49.85	57.29	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	59.10		EVENING LEQ	55.34		NIGHT LEQ	58.44		Use hour?	no
										GRADE dB	0.00
		CNEL	**65.00**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **5th Street to 2nd Street**

	DAYTIME			EVENING			NIGHTTIME			ADT	17170.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	118.00
INPUT PARAMETERS											
Vehicles per hour	994.43	20.60	34.34	738.31	3.43	5.72	183.15	28.62	47.69	% A	92
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	5
ADJUSTMENTS											
Flow	24.23	7.39	9.61	22.94	-0.39	1.83	16.88	8.82	11.04		
Distance	-3.80	-3.80	-3.80	-3.80	-3.80	-3.80	-3.80	-3.80	-3.80	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	69.99
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	64.10
LEQ	60.54	53.42	60.86	59.25	45.64	53.08	53.19	54.85	62.29	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	64.10		EVENING LEQ	60.34		NIGHT LEQ	63.44		Use hour?	no
										GRADE dB	0.00
		CNEL	**69.99**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **South of 2nd Street**

	DAYTIME			EVENING			NIGHTTIME			ADT	5600.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	384.00
INPUT PARAMETERS											
Vehicles per hour	324.33	6.72	11.20	240.80	1.12	1.87	59.73	9.33	15.56	% A	92
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	5
ADJUSTMENTS											
Flow	19.36	2.53	4.75	18.07	-5.25	-3.04	12.02	3.95	6.17		
Distance	-8.92	-8.92	-8.92	-8.92	-8.92	-8.92	-8.92	-8.92	-8.92	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	60.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	54.11
LEQ	50.55	43.43	50.87	49.26	35.65	43.09	43.20	44.86	52.29	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	54.11		EVENING LEQ	50.35		NIGHT LEQ	53.45		Use hour?	no
										GRADE dB	0.00
		CNEL	**60.00**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **South of 2nd Street**

	DAYTIME			EVENING			NIGHTTIME			ADT	5600.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	121.00
INPUT PARAMETERS											
Vehicles per hour	324.33	6.72	11.20	240.80	1.12	1.87	59.73	9.33	15.56	% A	92
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	5
ADJUSTMENTS											
Flow	19.36	2.53	4.75	18.07	-5.25	-3.04	12.02	3.95	6.17		
Distance	-3.91	-3.91	-3.91	-3.91	-3.91	-3.91	-3.91	-3.91	-3.91	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	65.02
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	59.13
LEQ	55.57	48.45	55.88	54.27	40.67	48.10	48.22	49.87	57.31	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	59.13		EVENING LEQ	55.36		NIGHT LEQ	58.46		Use hour?	no
										GRADE dB	0.00
		CNEL	**65.02**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **South of 2nd Street**

	DAYTIME			EVENING			NIGHTTIME			ADT	5600.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	38.00
INPUT PARAMETERS											
Vehicles per hour	324.33	6.72	11.20	240.80	1.12	1.87	59.73	9.33	15.56	% A	92
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	5
ADJUSTMENTS											
Flow	19.36	2.53	4.75	18.07	-5.25	-3.04	12.02	3.95	6.17		
Distance	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	70.05
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	64.16
LEQ	60.60	53.48	60.91	59.30	45.70	53.13	53.25	54.90	62.34	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	64.16		EVENING LEQ	60.39		NIGHT LEQ	63.49		Use hour?	no
										GRADE dB	0.00
		CNEL	**70.05**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **North of Interstate 10 WB On-Ramp**

	DAYTIME			EVENING			NIGHTTIME			ADT	33080.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	50.00
										DISTANCE	3788.00
INPUT PARAMETERS											
Vehicles per hour	1915.88	39.70	66.16	1422.44	6.62	11.03	352.85	55.13	91.89	% A	92
Speed in MPH	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	71.12	78.79	83.02	71.12	78.79	83.02	71.12	78.79	83.02	% HT	5
ADJUSTMENTS											
Flow	25.53	8.69	10.91	24.23	0.91	3.13	18.18	10.12	12.34		
Distance	-18.86	-18.86	-18.86	-18.86	-18.86	-18.86	-18.86	-18.86	-18.86	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	60.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	54.97
LEQ	52.78	43.62	50.07	51.49	35.84	42.28	45.44	45.05	51.49	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	54.97		EVENING LEQ	52.09		NIGHT LEQ	53.18		Use hour?	no
										GRADE dB	0.00
		CNEL	**60.00**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **North of Interstate 10 WB On-Ramp**

	DAYTIME			EVENING			NIGHTTIME			ADT	33080.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	50.00
										DISTANCE	1200.00
INPUT PARAMETERS											
Vehicles per hour	1915.88	39.70	66.16	1422.44	6.62	11.03	352.85	55.13	91.89	% A	92
Speed in MPH	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	71.12	78.79	83.02	71.12	78.79	83.02	71.12	78.79	83.02	% HT	5
ADJUSTMENTS											
Flow	25.53	8.69	10.91	24.23	0.91	3.13	18.18	10.12	12.34		
Distance	-13.87	-13.87	-13.87	-13.87	-13.87	-13.87	-13.87	-13.87	-13.87	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	65.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	59.97
LEQ	57.78	48.61	55.06	56.48	40.83	47.28	50.43	50.04	56.49	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	59.97		EVENING LEQ	57.08		NIGHT LEQ	58.17		Use hour?	no
										GRADE dB	0.00
		CNEL	**65.00**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**

Road: **Waterman Avenue**

Segment: **North of Interstate 10 WB On-Ramp**

	DAYTIME			EVENING			NIGHTTIME			ADT	33080.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	50.00
										DISTANCE	379.00
INPUT PARAMETERS											
Vehicles per hour	1915.88	39.70	66.16	1422.44	6.62	11.03	352.85	55.13	91.89	% A	92
Speed in MPH	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	71.12	78.79	83.02	71.12	78.79	83.02	71.12	78.79	83.02	% HT	5
ADJUSTMENTS											
Flow	25.53	8.69	10.91	24.23	0.91	3.13	18.18	10.12	12.34		
Distance	-8.87	-8.87	-8.87	-8.87	-8.87	-8.87	-8.87	-8.87	-8.87	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	70.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	64.97
LEQ	62.78	53.62	60.06	61.49	45.84	52.28	55.43	55.05	61.49	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	64.97		EVENING LEQ	62.08		NIGHT LEQ	63.18		Use hour?	no
										GRADE dB	0.00
		CNEL	**70.00**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **South of Interstate 10 WB On-Ramp**

	DAYTIME			EVENING			NIGHTTIME			ADT	33080.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	50.00
										DISTANCE	3788.00
INPUT PARAMETERS											
Vehicles per hour	1915.88	39.70	66.16	1422.44	6.62	11.03	352.85	55.13	91.89	% A	92
Speed in MPH	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	71.12	78.79	83.02	71.12	78.79	83.02	71.12	78.79	83.02	% HT	5
ADJUSTMENTS											
Flow	25.53	8.69	10.91	24.23	0.91	3.13	18.18	10.12	12.34		
Distance	-18.86	-18.86	-18.86	-18.86	-18.86	-18.86	-18.86	-18.86	-18.86	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	60.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	54.97
LEQ	52.78	43.62	50.07	51.49	35.84	42.28	45.44	45.05	51.49	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	54.97		EVENING LEQ	52.09		NIGHT LEQ	53.18		Use hour?	no
										GRADE dB	0.00
		CNEL	**60.00**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **South of Interstate 10 WB On-Ramp**

	DAYTIME			EVENING			NIGHTTIME			ADT	33080.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	50.00
										DISTANCE	1200.00
INPUT PARAMETERS											
Vehicles per hour	1915.88	39.70	66.16	1422.44	6.62	11.03	352.85	55.13	91.89	% A	92
Speed in MPH	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	71.12	78.79	83.02	71.12	78.79	83.02	71.12	78.79	83.02	% HT	5
ADJUSTMENTS											
Flow	25.53	8.69	10.91	24.23	0.91	3.13	18.18	10.12	12.34		
Distance	-13.87	-13.87	-13.87	-13.87	-13.87	-13.87	-13.87	-13.87	-13.87	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	65.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	59.97
LEQ	57.78	48.61	55.06	56.48	40.83	47.28	50.43	50.04	56.49	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	59.97		EVENING LEQ	57.08		NIGHT LEQ	58.17		Use hour?	no
										GRADE dB	0.00
		CNEL	**65.00**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **South of Interstate 10 WB On-Ramp**

	DAYTIME			EVENING			NIGHTTIME			ADT	33080.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	50.00
										DISTANCE	379.00
INPUT PARAMETERS											
Vehicles per hour	1915.88	39.70	66.16	1422.44	6.62	11.03	352.85	55.13	91.89	% A	92
Speed in MPH	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	71.12	78.79	83.02	71.12	78.79	83.02	71.12	78.79	83.02	% HT	5
ADJUSTMENTS											
Flow	25.53	8.69	10.91	24.23	0.91	3.13	18.18	10.12	12.34		
Distance	-8.87	-8.87	-8.87	-8.87	-8.87	-8.87	-8.87	-8.87	-8.87	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	70.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	64.97
LEQ	62.78	53.62	60.06	61.49	45.84	52.28	55.43	55.05	61.49	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	64.97		EVENING LEQ	62.08		NIGHT LEQ	63.18		Use hour?	no
										GRADE dB	0.00
		CNEL	**70.00**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**

Road: **Baseline Street**

Segment: **Interstate 215 SB Ramps to Interstate 215 NB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	20335.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	1674.00
INPUT PARAMETERS											
Vehicles per hour	1177.74	24.40	40.67	874.41	4.07	6.78	216.91	33.89	56.49	% A	92
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	5
ADJUSTMENTS											
Flow	24.38	7.55	9.77	23.09	-0.23	1.98	17.04	8.97	11.19		
Distance	-15.32	-15.32	-15.32	-15.32	-15.32	-15.32	-15.32	-15.32	-15.32	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	60.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	54.42
LEQ	51.43	43.54	50.61	50.13	35.76	42.83	44.08	44.97	52.03	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	54.42		EVENING LEQ	51.01		NIGHT LEQ	53.36		Use hour?	no
										GRADE dB	0.00
		CNEL	**60.00**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**

Road: **Baseline Street**

Segment: **Interstate 215 SB Ramps to Interstate 215 NB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	20335.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	530.00
INPUT PARAMETERS											
Vehicles per hour	1177.74	24.40	40.67	874.41	4.07	6.78	216.91	33.89	56.49	% A	92
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	5
ADJUSTMENTS											
Flow	24.38	7.55	9.77	23.09	-0.23	1.98	17.04	8.97	11.19		
Distance	-10.32	-10.32	-10.32	-10.32	-10.32	-10.32	-10.32	-10.32	-10.32	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	65.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	59.41
LEQ	56.42	48.54	55.60	55.13	40.76	47.82	49.07	49.96	57.03	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	59.41		EVENING LEQ	56.00		NIGHT LEQ	58.35		Use hour?	no
										GRADE dB	0.00
		CNEL	**65.00**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**

Road: **Baseline Street**

Segment: **Interstate 215 SB Ramps to Interstate 215 NB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	20335.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	167.00
INPUT PARAMETERS											
Vehicles per hour	1177.74	24.40	40.67	874.41	4.07	6.78	216.91	33.89	56.49	% A	92
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	5
ADJUSTMENTS											
Flow	24.38	7.55	9.77	23.09	-0.23	1.98	17.04	8.97	11.19		
Distance	-5.31	-5.31	-5.31	-5.31	-5.31	-5.31	-5.31	-5.31	-5.31	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	70.01
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	64.43
LEQ	61.44	53.55	60.62	60.14	45.77	52.84	54.09	54.98	62.05	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	64.43		EVENING LEQ	61.02		NIGHT LEQ	63.37		Use hour?	no
										GRADE dB	0.00
		CNEL	**70.01**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Baseline Street**
Segment: **Interstate 215 NB Ramps to E Street**

	DAYTIME			EVENING			NIGHTTIME			ADT	22280.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	1837.00
INPUT PARAMETERS											
Vehicles per hour	1290.38	26.74	44.56	958.04	4.46	7.43	237.65	37.13	61.89	% A	92
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	5
ADJUSTMENTS											
Flow	24.78	7.94	10.16	23.49	0.16	2.38	17.43	9.37	11.59		
Distance	-15.72	-15.72	-15.72	-15.72	-15.72	-15.72	-15.72	-15.72	-15.72	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	60.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	54.41
LEQ	51.42	43.54	50.60	50.13	35.75	42.82	44.07	44.96	52.03	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	54.41		EVENING LEQ	51.00		NIGHT LEQ	53.35		Use hour?	no
										GRADE dB	0.00
		CNEL	**60.00**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Baseline Street**
Segment: **Interstate 215 NB Ramps to E Street**

	DAYTIME			EVENING			NIGHTTIME			ADT	22280.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	581.00
INPUT PARAMETERS											
Vehicles per hour	1290.38	26.74	44.56	958.04	4.46	7.43	237.65	37.13	61.89	% A	92
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	5
ADJUSTMENTS											
Flow	24.78	7.94	10.16	23.49	0.16	2.38	17.43	9.37	11.59		
Distance	-10.72	-10.72	-10.72	-10.72	-10.72	-10.72	-10.72	-10.72	-10.72	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	65.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	59.41
LEQ	56.42	48.54	55.60	55.13	40.75	47.82	49.07	49.96	57.03	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	59.41		EVENING LEQ	56.00		NIGHT LEQ	58.35		Use hour?	no
										GRADE dB	0.00
		CNEL	**65.00**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Baseline Street**
Segment: **Interstate 215 NB Ramps to E Street**

	DAYTIME			EVENING			NIGHTTIME			ADT	22280.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	183.00
INPUT PARAMETERS											
Vehicles per hour	1290.38	26.74	44.56	958.04	4.46	7.43	237.65	37.13	61.89	% A	92
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	5
ADJUSTMENTS											
Flow	24.78	7.94	10.16	23.49	0.16	2.38	17.43	9.37	11.59		
Distance	-5.70	-5.70	-5.70	-5.70	-5.70	-5.70	-5.70	-5.70	-5.70	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	70.01
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	64.43
LEQ	61.44	53.55	60.62	60.14	45.77	52.84	54.09	54.98	62.04	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	64.43		EVENING LEQ	61.01		NIGHT LEQ	63.37		Use hour?	no
										GRADE dB	0.00
		CNEL	**70.01**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Baseline Street**
Segment: **E Street to Sierra Way**

	DAYTIME			EVENING			NIGHTTIME			ADT	18840.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	1552.00
INPUT PARAMETERS											
Vehicles per hour	1091.15	22.61	37.68	810.12	3.77	6.28	200.96	31.40	52.33	% A	92
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	5
ADJUSTMENTS											
Flow	24.05	7.22	9.43	22.76	-0.57	1.65	16.70	8.64	10.86		
Distance	-14.99	-14.99	-14.99	-14.99	-14.99	-14.99	-14.99	-14.99	-14.99	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	60.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	54.41
LEQ	51.42	43.54	50.60	50.13	35.76	42.82	44.08	44.97	52.03	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	54.41		EVENING LEQ	51.00		NIGHT LEQ	53.36		Use hour?	no
										GRADE dB	0.00
		CNEL	**60.00**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Baseline Street**
Segment: **E Street to Sierra Way**

	DAYTIME			EVENING			NIGHTTIME			ADT	18840.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	491.00
INPUT PARAMETERS											
Vehicles per hour	1091.15	22.61	37.68	810.12	3.77	6.28	200.96	31.40	52.33	% A	92
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	5
ADJUSTMENTS											
Flow	24.05	7.22	9.43	22.76	-0.57	1.65	16.70	8.64	10.86		
Distance	-9.99	-9.99	-9.99	-9.99	-9.99	-9.99	-9.99	-9.99	-9.99	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	65.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	59.41
LEQ	56.42	48.54	55.60	55.13	40.76	47.82	49.07	49.96	57.03	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	59.41		EVENING LEQ	56.00		NIGHT LEQ	58.35		Use hour?	no
										GRADE dB	0.00
		CNEL	**65.00**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Baseline Street**
Segment: **E Street to Sierra Way**

	DAYTIME			EVENING			NIGHTTIME			ADT	18840.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	155.00
INPUT PARAMETERS											
Vehicles per hour	1091.15	22.61	37.68	810.12	3.77	6.28	200.96	31.40	52.33	% A	92
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	5
ADJUSTMENTS											
Flow	24.05	7.22	9.43	22.76	-0.57	1.65	16.70	8.64	10.86		
Distance	-4.98	-4.98	-4.98	-4.98	-4.98	-4.98	-4.98	-4.98	-4.98	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	70.01
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	64.42
LEQ	61.43	53.55	60.61	60.14	45.76	52.83	54.08	54.97	62.04	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	64.42		EVENING LEQ	61.01		NIGHT LEQ	63.36		Use hour?	no
										GRADE dB	0.00
		CNEL	**70.01**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Baseline Street**
Segment: **Sierra Way to Waterman Avenue**

	DAYTIME			EVENING			NIGHTTIME			ADT	16055.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	1322.00
INPUT PARAMETERS											
Vehicles per hour	929.85	19.27	32.11	690.37	3.21	5.35	171.25	26.76	44.60	% A	92
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	5
ADJUSTMENTS											
Flow	23.36	6.52	8.74	22.06	-1.26	0.96	16.01	7.95	10.17		
Distance	-14.29	-14.29	-14.29	-14.29	-14.29	-14.29	-14.29	-14.29	-14.29	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	60.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	54.42
LEQ	51.42	43.54	50.61	50.13	35.76	42.83	44.08	44.97	52.03	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	54.42		EVENING LEQ	51.00		NIGHT LEQ	53.36		Use hour?	no
										GRADE dB	0.00
		CNEL	**60.00**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Baseline Street**
Segment: **Sierra Way to Waterman Avenue**

	DAYTIME			EVENING			NIGHTTIME			ADT	16055.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	418.00
INPUT PARAMETERS											
Vehicles per hour	929.85	19.27	32.11	690.37	3.21	5.35	171.25	26.76	44.60	% A	92
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	5
ADJUSTMENTS											
Flow	23.36	6.52	8.74	22.06	-1.26	0.96	16.01	7.95	10.17		
Distance	-9.29	-9.29	-9.29	-9.29	-9.29	-9.29	-9.29	-9.29	-9.29	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	65.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	59.42
LEQ	56.43	48.54	55.61	55.13	40.76	47.83	49.08	49.97	57.03	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	59.42		EVENING LEQ	56.00		NIGHT LEQ	58.36		Use hour?	no
										GRADE dB	0.00
		CNEL	**65.00**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Baseline Street**
Segment: **Sierra Way to Waterman Avenue**

	DAYTIME			EVENING			NIGHTTIME			ADT	16055.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	132.00
INPUT PARAMETERS											
Vehicles per hour	929.85	19.27	32.11	690.37	3.21	5.35	171.25	26.76	44.60	% A	92
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	5
ADJUSTMENTS											
Flow	23.36	6.52	8.74	22.06	-1.26	0.96	16.01	7.95	10.17		
Distance	-4.29	-4.29	-4.29	-4.29	-4.29	-4.29	-4.29	-4.29	-4.29	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	70.01
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	64.42
LEQ	61.43	53.55	60.61	60.14	45.77	52.83	54.08	54.97	62.04	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	64.42		EVENING LEQ	61.01		NIGHT LEQ	63.36		Use hour?	no
										GRADE dB	0.00
		CNEL	**70.01**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**

Road: **Baseline Street**

Segment: **Waterman Avenue to Tippecanoe Avenue**

	DAYTIME			EVENING			NIGHTTIME			ADT	13930.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	1149.00
INPUT PARAMETERS											
Vehicles per hour	806.78	16.72	27.86	598.99	2.79	4.64	148.59	23.22	38.69	% A	92
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	5
ADJUSTMENTS											
Flow	22.74	5.90	8.12	21.45	-1.88	0.34	15.39	7.33	9.55		
Distance	-13.68	-13.68	-13.68	-13.68	-13.68	-13.68	-13.68	-13.68	-13.68	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	60.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	54.41
LEQ	51.42	43.53	50.60	50.12	35.75	42.82	44.07	44.96	52.03	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	54.41		EVENING LEQ	51.00		NIGHT LEQ	53.35		Use hour?	no
										GRADE dB	0.00
		CNEL	**60.00**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**

Road: **Baseline Street**

Segment: **Waterman Avenue to Tippecanoe Avenue**

	DAYTIME			EVENING			NIGHTTIME			ADT	13930.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	363.00
INPUT PARAMETERS											
Vehicles per hour	806.78	16.72	27.86	598.99	2.79	4.64	148.59	23.22	38.69	% A	92
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	5
ADJUSTMENTS											
Flow	22.74	5.90	8.12	21.45	-1.88	0.34	15.39	7.33	9.55		
Distance	-8.68	-8.68	-8.68	-8.68	-8.68	-8.68	-8.68	-8.68	-8.68	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	65.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	59.41
LEQ	56.42	48.54	55.60	55.13	40.76	47.82	49.07	49.96	57.03	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	59.41		EVENING LEQ	56.00		NIGHT LEQ	58.35		Use hour?	no
										GRADE dB	0.00
		CNEL	**65.00**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**

Road: **Baseline Street**

Segment: **Waterman Avenue to Tippecanoe Avenue**

	DAYTIME			EVENING			NIGHTTIME			ADT	13930.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	115.00
INPUT PARAMETERS											
Vehicles per hour	806.78	16.72	27.86	598.99	2.79	4.64	148.59	23.22	38.69	% A	92
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	5
ADJUSTMENTS											
Flow	22.74	5.90	8.12	21.45	-1.88	0.34	15.39	7.33	9.55		
Distance	-3.69	-3.69	-3.69	-3.69	-3.69	-3.69	-3.69	-3.69	-3.69	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	69.99
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	64.40
LEQ	61.41	53.53	60.60	60.12	45.75	52.81	54.07	54.96	62.02	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	64.40		EVENING LEQ	60.99		NIGHT LEQ	63.35		Use hour?	no
										GRADE dB	0.00
		CNEL	**69.99**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**

Road: **5th Street**

Segment: **Interstate 215 SB Ramps to Interstate 215 NB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	19130.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	1577.00
INPUT PARAMETERS											
Vehicles per hour	1107.95	22.96	38.26	822.59	3.83	6.38	204.05	31.88	53.14	% A	92
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	5
ADJUSTMENTS											
Flow	24.12	7.28	9.50	22.83	-0.50	1.72	16.77	8.71	10.93		
Distance	-15.06	-15.06	-15.06	-15.06	-15.06	-15.06	-15.06	-15.06	-15.06	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	60.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	54.41
LEQ	51.42	43.54	50.60	50.13	35.76	42.82	44.07	44.96	52.03	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	54.41		EVENING LEQ	51.00		NIGHT LEQ	53.35		Use hour?	no
										GRADE dB	0.00
		CNEL	**60.00**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**

Road: **5th Street**

Segment: **Interstate 215 SB Ramps to Interstate 215 NB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	19130.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	498.00
INPUT PARAMETERS											
Vehicles per hour	1107.95	22.96	38.26	822.59	3.83	6.38	204.05	31.88	53.14	% A	92
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	5
ADJUSTMENTS											
Flow	24.12	7.28	9.50	22.83	-0.50	1.72	16.77	8.71	10.93		
Distance	-10.05	-10.05	-10.05	-10.05	-10.05	-10.05	-10.05	-10.05	-10.05	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	65.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	59.42
LEQ	56.43	48.54	55.61	55.13	40.76	47.83	49.08	49.97	57.03	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	59.42		EVENING LEQ	56.01		NIGHT LEQ	58.36		Use hour?	no
										GRADE dB	0.00
		CNEL	**65.00**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**

Road: **5th Street**

Segment: **Interstate 215 SB Ramps to Interstate 215 NB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	19130.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	157.00
INPUT PARAMETERS											
Vehicles per hour	1107.95	22.96	38.26	822.59	3.83	6.38	204.05	31.88	53.14	% A	92
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	5
ADJUSTMENTS											
Flow	24.12	7.28	9.50	22.83	-0.50	1.72	16.77	8.71	10.93		
Distance	-5.04	-5.04	-5.04	-5.04	-5.04	-5.04	-5.04	-5.04	-5.04	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	70.02
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	64.43
LEQ	61.44	53.56	60.62	60.15	45.77	52.84	54.09	54.98	62.05	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	64.43		EVENING LEQ	61.02		NIGHT LEQ	63.37		Use hour?	no
										GRADE dB	0.00
		CNEL	**70.02**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **5th Street**
Segment: **Interstate 215 NB Ramps to Sierra Way**

	DAYTIME			EVENING			NIGHTTIME			ADT	17535.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	1446.00
INPUT PARAMETERS											
Vehicles per hour	1015.57	21.04	35.07	754.01	3.51	5.85	187.04	29.23	48.71	% A	92
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	5
ADJUSTMENTS											
Flow	23.74	6.90	9.12	22.45	-0.88	1.34	16.39	8.33	10.55		
Distance	-14.68	-14.68	-14.68	-14.68	-14.68	-14.68	-14.68	-14.68	-14.68	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	60.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	54.41
LEQ	51.42	43.54	50.60	50.13	35.75	42.82	44.07	44.96	52.03	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	54.41		EVENING LEQ	51.00		NIGHT LEQ	53.35		Use hour?	no
										GRADE dB	0.00
		CNEL	**60.00**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **5th Street**
Segment: **Interstate 215 NB Ramps to Sierra Way**

	DAYTIME			EVENING			NIGHTTIME			ADT	17535.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	457.00
INPUT PARAMETERS											
Vehicles per hour	1015.57	21.04	35.07	754.01	3.51	5.85	187.04	29.23	48.71	% A	92
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	5
ADJUSTMENTS											
Flow	23.74	6.90	9.12	22.45	-0.88	1.34	16.39	8.33	10.55		
Distance	-9.68	-9.68	-9.68	-9.68	-9.68	-9.68	-9.68	-9.68	-9.68	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	65.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	59.41
LEQ	56.42	48.54	55.60	55.13	40.76	47.82	49.07	49.96	57.03	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	59.41		EVENING LEQ	56.00		NIGHT LEQ	58.35		Use hour?	no
										GRADE dB	0.00
		CNEL	**65.00**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **5th Street**
Segment: **Interstate 215 NB Ramps to Sierra Way**

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	17535.00
										SPEED	40.00
										DISTANCE	144.00
INPUT PARAMETERS											
Vehicles per hour	1015.57	21.04	35.07	754.01	3.51	5.85	187.04	29.23	48.71	% A	92
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	5
ADJUSTMENTS											
Flow	23.74	6.90	9.12	22.45	-0.88	1.34	16.39	8.33	10.55		
Distance	-4.66	-4.66	-4.66	-4.66	-4.66	-4.66	-4.66	-4.66	-4.66	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	70.01
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	64.43
LEQ	61.44	53.55	60.62	60.14	45.77	52.84	54.09	54.98	62.05	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	64.43		EVENING LEQ	61.02		NIGHT LEQ	63.37		Use hour?	no
										GRADE dB	0.00
		CNEL	**70.01**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **5th Street**
Segment: **Sierra Way to Waterman Avenue**

	DAYTIME			EVENING			NIGHTTIME			ADT	9385.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	774.00
INPUT PARAMETERS											
Vehicles per hour	543.55	11.26	18.77	403.56	1.88	3.13	100.11	15.64	26.07	% A	92
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	5
ADJUSTMENTS											
Flow	21.03	4.19	6.41	19.73	-3.59	-1.37	13.68	5.62	7.83		
Distance	-11.97	-11.97	-11.97	-11.97	-11.97	-11.97	-11.97	-11.97	-11.97	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	60.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	54.41
LEQ	51.42	43.53	50.60	50.12	35.75	42.82	44.07	44.96	52.03	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	54.41		EVENING LEQ	51.00		NIGHT LEQ	53.35		Use hour?	no
										GRADE dB	0.00
		CNEL	**60.00**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **5th Street**
Segment: **Sierra Way to Waterman Avenue**

	DAYTIME			EVENING			NIGHTTIME			ADT	9385.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	244.00
INPUT PARAMETERS											
Vehicles per hour	543.55	11.26	18.77	403.56	1.88	3.13	100.11	15.64	26.07	% A	92
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	5
ADJUSTMENTS											
Flow	21.03	4.19	6.41	19.73	-3.59	-1.37	13.68	5.62	7.83		
Distance	-6.95	-6.95	-6.95	-6.95	-6.95	-6.95	-6.95	-6.95	-6.95	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	65.01
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	59.42
LEQ	56.43	48.55	55.61	55.14	40.77	47.83	49.08	49.97	57.04	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	59.42		EVENING LEQ	56.01		NIGHT LEQ	58.36		Use hour?	no
										GRADE dB	0.00
		CNEL	**65.01**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **5th Street**
Segment: **Sierra Way to Waterman Avenue**

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	9385.00
										SPEED	40.00
										DISTANCE	77.00
INPUT PARAMETERS											
Vehicles per hour	543.55	11.26	18.77	403.56	1.88	3.13	100.11	15.64	26.07	% A	92
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	5
ADJUSTMENTS											
Flow	21.03	4.19	6.41	19.73	-3.59	-1.37	13.68	5.62	7.83		
Distance	-1.95	-1.95	-1.95	-1.95	-1.95	-1.95	-1.95	-1.95	-1.95	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	70.02
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	64.43
LEQ	61.44	53.56	60.62	60.15	45.78	52.84	54.09	54.98	62.05	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	64.43		EVENING LEQ	61.02		NIGHT LEQ	63.37		Use hour?	no
										GRADE dB	0.00
		CNEL	**70.02**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**

Road: **5th Street**

Segment: **Waterman Avenue to Tippecanoe Avenue**

	DAYTIME			EVENING			NIGHTTIME			ADT	6555.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	540.00
INPUT PARAMETERS											
Vehicles per hour	379.64	7.87	13.11	281.87	1.31	2.19	69.92	10.93	18.21	% A	92
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	5
ADJUSTMENTS											
Flow	19.47	2.63	4.85	18.17	-5.15	-2.93	12.12	4.06	6.28		
Distance	-10.40	-10.40	-10.40	-10.40	-10.40	-10.40	-10.40	-10.40	-10.40	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	60.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	54.41
LEQ	51.42	43.54	50.60	50.13	35.76	42.82	44.08	44.97	52.03	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	54.41		EVENING LEQ	51.00		NIGHT LEQ	53.36		Use hour?	no
										GRADE dB	0.00
		CNEL	**60.00**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**

Road: **5th Street**

Segment: **Waterman Avenue to Tippecanoe Avenue**

	DAYTIME			EVENING			NIGHTTIME			ADT	6555.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	170.00
INPUT PARAMETERS											
Vehicles per hour	379.64	7.87	13.11	281.87	1.31	2.19	69.92	10.93	18.21	% A	92
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	5
ADJUSTMENTS											
Flow	19.47	2.63	4.85	18.17	-5.15	-2.93	12.12	4.06	6.28		
Distance	-5.38	-5.38	-5.38	-5.38	-5.38	-5.38	-5.38	-5.38	-5.38	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	65.02
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	59.43
LEQ	56.44	48.56	55.62	55.15	40.78	47.84	49.09	49.99	57.05	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	59.43		EVENING LEQ	56.02		NIGHT LEQ	58.38		Use hour?	no
										GRADE dB	0.00
		CNEL	**65.02**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**

Road: **5th Street**

Segment: **Waterman Avenue to Tippecanoe Avenue**

	DAYTIME			EVENING			NIGHTTIME			ADT	6555.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	54.00
INPUT PARAMETERS											
Vehicles per hour	379.64	7.87	13.11	281.87	1.31	2.19	69.92	10.93	18.21	% A	92
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	5
ADJUSTMENTS											
Flow	19.47	2.63	4.85	18.17	-5.15	-2.93	12.12	4.06	6.28		
Distance	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	70.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	64.41
LEQ	61.42	53.54	60.60	60.13	45.76	52.82	54.08	54.97	62.03	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	64.41		EVENING LEQ	61.00		NIGHT LEQ	63.36		Use hour?	no
										GRADE dB	0.00
		CNEL	**70.00**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **5th Street**
Segment: **East of Tippecanoe Avenue**

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	5820.00
										SPEED	40.00
										DISTANCE	480.00
INPUT PARAMETERS											
Vehicles per hour	337.08	6.98	11.64	250.26	1.16	1.94	62.08	9.70	16.17	% A	92
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	5
ADJUSTMENTS											
Flow	18.95	2.11	4.33	17.66	-5.67	-3.45	11.60	3.54	5.76		
Distance	-9.89	-9.89	-9.89	-9.89	-9.89	-9.89	-9.89	-9.89	-9.89	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	60.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	54.41
LEQ	51.42	43.53	50.60	50.12	35.75	42.82	44.07	44.96	52.03	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	54.41		EVENING LEQ	51.00		NIGHT LEQ	53.35		Use hour?	no
										GRADE dB	0.00
		CNEL	**60.00**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **5th Street**
Segment: **East of Tippecanoe Avenue**

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	5820.00
										SPEED	40.00
										DISTANCE	152.00
INPUT PARAMETERS											
Vehicles per hour	337.08	6.98	11.64	250.26	1.16	1.94	62.08	9.70	16.17	% A	92
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	5
ADJUSTMENTS											
Flow	18.95	2.11	4.33	17.66	-5.67	-3.45	11.60	3.54	5.76		
Distance	-4.90	-4.90	-4.90	-4.90	-4.90	-4.90	-4.90	-4.90	-4.90	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	64.99
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	59.40
LEQ	56.41	48.53	55.59	55.12	40.75	47.81	49.06	49.96	57.02	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	59.40		EVENING LEQ	55.99		NIGHT LEQ	58.35		Use hour?	no
										GRADE dB	0.00
		CNEL	**64.99**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **5th Street**
Segment: **East of Tippecanoe Avenue**

	DAYTIME			EVENING			NIGHTTIME			ADT	5820.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	48.00
INPUT PARAMETERS											
Vehicles per hour	337.08	6.98	11.64	250.26	1.16	1.94	62.08	9.70	16.17	% A	92
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	5
ADJUSTMENTS											
Flow	18.95	2.11	4.33	17.66	-5.67	-3.45	11.60	3.54	5.76		
Distance	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	70.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	64.41
LEQ	61.42	53.53	60.60	60.12	45.75	52.82	54.07	54.96	62.03	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	64.41		EVENING LEQ	61.00		NIGHT LEQ	63.35		Use hour?	no
										GRADE dB	0.00
		CNEL	**70.00**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **5th Street**
Segment: **West of Interstate 210 SB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	16680.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	1375.00
INPUT PARAMETERS											
Vehicles per hour	966.05	20.02	33.36	717.24	3.34	5.56	177.92	27.80	46.33	% A	92
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	5
ADJUSTMENTS											
Flow	23.52	6.69	8.91	22.23	-1.09	1.12	16.18	8.11	10.33		
Distance	-14.46	-14.46	-14.46	-14.46	-14.46	-14.46	-14.46	-14.46	-14.46	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	60.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	54.41
LEQ	51.42	43.54	50.60	50.13	35.76	42.82	44.07	44.96	52.03	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	54.41		EVENING LEQ	51.00		NIGHT LEQ	53.35		Use hour?	no
										GRADE dB	0.00
		CNEL	**60.00**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **5th Street**
Segment: **West of Interstate 210 SB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	16680.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	435.00
INPUT PARAMETERS											
Vehicles per hour	966.05	20.02	33.36	717.24	3.34	5.56	177.92	27.80	46.33	% A	92
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	5
ADJUSTMENTS											
Flow	23.52	6.69	8.91	22.23	-1.09	1.12	16.18	8.11	10.33		
Distance	-9.47	-9.47	-9.47	-9.47	-9.47	-9.47	-9.47	-9.47	-9.47	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	65.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	59.41
LEQ	56.42	48.53	55.60	55.12	40.75	47.82	49.07	49.96	57.03	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	59.41		EVENING LEQ	56.00		NIGHT LEQ	58.35		Use hour?	no
										GRADE dB	0.00
		CNEL	**65.00**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **5th Street**
Segment: **West of Interstate 210 SB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	16680.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	137.00
INPUT PARAMETERS											
Vehicles per hour	966.05	20.02	33.36	717.24	3.34	5.56	177.92	27.80	46.33	% A	92
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	5
ADJUSTMENTS											
Flow	23.52	6.69	8.91	22.23	-1.09	1.12	16.18	8.11	10.33		
Distance	-4.45	-4.45	-4.45	-4.45	-4.45	-4.45	-4.45	-4.45	-4.45	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	70.01
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	64.43
LEQ	61.44	53.55	60.62	60.14	45.77	52.84	54.09	54.98	62.04	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	64.43		EVENING LEQ	61.02		NIGHT LEQ	63.37		Use hour?	no
										GRADE dB	0.00
		CNEL	**70.01**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**

Road: **5th Street**

Segment: **Interstate 210 SB Ramps to Interstate 210 NB Ramps**

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	17905.00
										SPEED	40.00
										DISTANCE	1475.00
INPUT PARAMETERS											
Vehicles per hour	1037.00	21.49	35.81	769.92	3.58	5.97	190.99	29.84	49.74	% A	92
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	5
ADJUSTMENTS											
Flow	23.83	7.00	9.21	22.54	-0.79	1.43	16.48	8.42	10.64		
Distance	-14.77	-14.77	-14.77	-14.77	-14.77	-14.77	-14.77	-14.77	-14.77	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	60.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	54.41
LEQ	51.42	43.54	50.60	50.13	35.76	42.82	44.08	44.97	52.03	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	54.41		EVENING LEQ	51.00		NIGHT LEQ	53.36		Use hour?	no
										GRADE dB	0.00
		CNEL	**60.00**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**

Road: **5th Street**

Segment: **Interstate 210 SB Ramps to Interstate 210 NB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	17905.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	466.00
INPUT PARAMETERS											
Vehicles per hour	1037.00	21.49	35.81	769.92	3.58	5.97	190.99	29.84	49.74	% A	92
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	5
ADJUSTMENTS											
Flow	23.83	7.00	9.21	22.54	-0.79	1.43	16.48	8.42	10.64		
Distance	-9.76	-9.76	-9.76	-9.76	-9.76	-9.76	-9.76	-9.76	-9.76	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	65.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	59.42
LEQ	56.43	48.54	55.61	55.13	40.76	47.83	49.08	49.97	57.04	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	59.42		EVENING LEQ	56.01		NIGHT LEQ	58.36		Use hour?	no
										GRADE dB	0.00
		CNEL	**65.00**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**

Road: **5th Street**

Segment: **Interstate 210 SB Ramps to Interstate 210 NB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	17905.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	147.00
INPUT PARAMETERS											
Vehicles per hour	1037.00	21.49	35.81	769.92	3.58	5.97	190.99	29.84	49.74	% A	92
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	5
ADJUSTMENTS											
Flow	23.83	7.00	9.21	22.54	-0.79	1.43	16.48	8.42	10.64		
Distance	-4.75	-4.75	-4.75	-4.75	-4.75	-4.75	-4.75	-4.75	-4.75	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	70.02
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	64.43
LEQ	61.44	53.55	60.62	60.14	45.77	52.84	54.09	54.98	62.05	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	64.43		EVENING LEQ	61.02		NIGHT LEQ	63.37		Use hour?	no
										GRADE dB	0.00
		CNEL	**70.02**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **5th Street**
Segment: **East of Interstate 210 NB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	22490.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	1855.00
INPUT PARAMETERS											
Vehicles per hour	1302.55	26.99	44.98	967.07	4.50	7.50	239.89	37.48	62.47	% A	92
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	5
ADJUSTMENTS											
Flow	24.82	7.99	10.20	23.53	0.20	2.42	17.47	9.41	11.63		
Distance	-15.76	-15.76	-15.76	-15.76	-15.76	-15.76	-15.76	-15.76	-15.76	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	60.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	54.41
LEQ	51.42	43.53	50.60	50.12	35.75	42.82	44.07	44.96	52.03	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	54.41		EVENING LEQ	51.00		NIGHT LEQ	53.35		Use hour?	no
										GRADE dB	0.00
		CNEL	**60.00**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **5th Street**
Segment: **East of Interstate 210 NB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	22490.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	586.00
INPUT PARAMETERS											
Vehicles per hour	1302.55	26.99	44.98	967.07	4.50	7.50	239.89	37.48	62.47	% A	92
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	5
ADJUSTMENTS											
Flow	24.82	7.99	10.20	23.53	0.20	2.42	17.47	9.41	11.63		
Distance	-10.76	-10.76	-10.76	-10.76	-10.76	-10.76	-10.76	-10.76	-10.76	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	65.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	59.41
LEQ	56.42	48.54	55.60	55.13	40.76	47.82	49.07	49.97	57.03	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	59.41		EVENING LEQ	56.00		NIGHT LEQ	58.36		Use hour?	no
										GRADE dB	0.00
		CNEL	**65.00**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **5th Street**
Segment: **East of Interstate 210 NB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	22490.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	185.00
INPUT PARAMETERS											
Vehicles per hour	1302.55	26.99	44.98	967.07	4.50	7.50	239.89	37.48	62.47	% A	92
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	5
ADJUSTMENTS											
Flow	24.82	7.99	10.20	23.53	0.20	2.42	17.47	9.41	11.63		
Distance	-5.75	-5.75	-5.75	-5.75	-5.75	-5.75	-5.75	-5.75	-5.75	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	70.01
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	64.42
LEQ	61.43	53.55	60.61	60.14	45.76	52.83	54.08	54.97	62.04	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	64.42		EVENING LEQ	61.01		NIGHT LEQ	63.36		Use hour?	no
										GRADE dB	0.00
		CNEL	**70.01**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **3rd Street**
Segment: **West of Interstate 215 SB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	3270.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	80.00
INPUT PARAMETERS											
Vehicles per hour	200.55	2.45	0.95	148.21	0.44	0.44	37.12	3.27	1.27	% A	97.4
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	1.84
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	0.74
ADJUSTMENTS											
Flow	17.28	-1.85	-5.95	15.96	-9.36	-9.35	9.95	-0.60	-4.70		
Distance	-2.11	-2.11	-2.11	-2.11	-2.11	-2.11	-2.11	-2.11	-2.11	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	60.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	56.29
LEQ	55.27	45.87	46.98	53.96	38.36	43.59	47.95	47.12	48.23	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	56.29		EVENING LEQ	54.45		NIGHT LEQ	52.56		Use hour?	no
										GRADE dB	0.00
		CNEL	**60.00**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **3rd Street**
Segment: **West of Interstate 215 SB Ramps**

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	3270.00
										SPEED	35.00
										DISTANCE	25.00
INPUT PARAMETERS											
Vehicles per hour	200.55	2.45	0.95	148.21	0.44	0.44	37.12	3.27	1.27	% A	97.4
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	1.84
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	0.74
ADJUSTMENTS											
Flow	17.28	-1.85	-5.95	15.96	-9.36	-9.35	9.95	-0.60	-4.70		
Distance	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	65.05
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	61.34
LEQ	60.33	50.92	52.03	59.01	43.41	48.64	53.00	52.17	53.28	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	61.34		EVENING LEQ	59.50		NIGHT LEQ	57.61		Use hour?	no
										GRADE dB	0.00
		CNEL	**65.05**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **3rd Street**
Segment: **West of Interstate 215 SB Ramps**

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	3270.00
										SPEED	35.00
										DISTANCE	8.00
INPUT PARAMETERS											
Vehicles per hour	200.55	2.45	0.95	148.21	0.44	0.44	37.12	3.27	1.27	% A	97.4
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	1.84
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	0.74
ADJUSTMENTS											
Flow	17.28	-1.85	-5.95	15.96	-9.36	-9.35	9.95	-0.60	-4.70		
Distance	7.89	7.89	7.89	7.89	7.89	7.89	7.89	7.89	7.89	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	70.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	66.29
LEQ	65.27	55.87	56.98	63.96	48.36	53.59	57.95	57.12	58.23	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	66.29		EVENING LEQ	64.45		NIGHT LEQ	62.56		Use hour?	no
										GRADE dB	0.00
		CNEL	**70.00**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**

Road: **3rd Street**

Segment: **Interstate 215 SB Ramps to Interstate 215 NB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	4960.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	121.00
INPUT PARAMETERS											
Vehicles per hour	304.19	3.72	1.45	224.80	0.66	0.66	56.31	4.96	1.93	% A	97.4
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	1.84
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	0.74
ADJUSTMENTS											
Flow	19.08	-0.04	-4.14	17.77	-7.55	-7.54	11.76	1.21	-2.89		
Distance	-3.91	-3.91	-3.91	-3.91	-3.91	-3.91	-3.91	-3.91	-3.91	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	60.01
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	56.30
LEQ	55.29	45.88	47.00	53.97	38.37	43.60	47.96	47.13	48.24	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	56.30		EVENING LEQ	54.46		NIGHT LEQ	52.57		Use hour?	no
										GRADE dB	0.00
		CNEL	**60.01**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**

Road: **3rd Street**

Segment: **Interstate 215 SB Ramps to Interstate 215 NB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	4960.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	38.00
INPUT PARAMETERS											
Vehicles per hour	304.19	3.72	1.45	224.80	0.66	0.66	56.31	4.96	1.93	% A	97.4
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	1.84
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	0.74
ADJUSTMENTS											
Flow	19.08	-0.04	-4.14	17.77	-7.55	-7.54	11.76	1.21	-2.89		
Distance	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	65.04
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	61.33
LEQ	60.32	50.91	52.03	59.00	43.40	48.63	52.99	52.16	53.27	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	61.33		EVENING LEQ	59.49		NIGHT LEQ	57.60		Use hour?	no
										GRADE dB	0.00
		CNEL	**65.04**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**

Road: **3rd Street**

Segment: **Interstate 215 SB Ramps to Interstate 215 NB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	4960.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	12.00
INPUT PARAMETERS											
Vehicles per hour	304.19	3.72	1.45	224.80	0.66	0.66	56.31	4.96	1.93	% A	97.4
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	1.84
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	0.74
ADJUSTMENTS											
Flow	19.08	-0.04	-4.14	17.77	-7.55	-7.54	11.76	1.21	-2.89		
Distance	6.13	6.13	6.13	6.13	6.13	6.13	6.13	6.13	6.13	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	70.05
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	66.34
LEQ	65.32	55.91	57.03	64.01	48.41	53.64	58.00	57.16	58.28	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	66.34		EVENING LEQ	64.50		NIGHT LEQ	62.61		Use hour?	no
										GRADE dB	0.00
		CNEL	**70.05**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **3rd Street**
Segment: **East of Interstate 215 NB Ramps**

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	7220.00
										SPEED	35.00
										DISTANCE	176.00
INPUT PARAMETERS											
Vehicles per hour	442.80	5.41	2.11	327.24	0.96	0.96	81.97	7.22	2.81	% A	97.4
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	1.84
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	0.74
ADJUSTMENTS											
Flow	20.72	1.59	-2.51	19.40	-5.92	-5.91	13.39	2.84	-1.26		
Distance	-5.54	-5.54	-5.54	-5.54	-5.54	-5.54	-5.54	-5.54	-5.54	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	60.01
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	56.30
LEQ	55.29	45.88	47.00	53.98	38.37	43.60	47.96	47.13	48.25	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	56.30		EVENING LEQ	54.47		NIGHT LEQ	52.58		Use hour?	no
										GRADE dB	0.00
		CNEL	**60.01**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **3rd Street**
Segment: **East of Interstate 215 NB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	7220.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	56.00
INPUT PARAMETERS											
Vehicles per hour	442.80	5.41	2.11	327.24	0.96	0.96	81.97	7.22	2.81	% A	97.4
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	1.84
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	0.74
ADJUSTMENTS											
Flow	20.72	1.59	-2.51	19.40	-5.92	-5.91	13.39	2.84	-1.26		
Distance	-0.56	-0.56	-0.56	-0.56	-0.56	-0.56	-0.56	-0.56	-0.56	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	64.99
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	61.28
LEQ	60.26	50.86	51.97	58.95	43.35	48.58	52.94	52.10	53.22	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	61.28		EVENING LEQ	59.44		NIGHT LEQ	57.55		Use hour?	no
										GRADE dB	0.00
		CNEL	**64.99**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **3rd Street**
Segment: **East of Interstate 215 NB Ramps**

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	7220.00
										SPEED	35.00
										DISTANCE	18.00
INPUT PARAMETERS											
Vehicles per hour	442.80	5.41	2.11	327.24	0.96	0.96	81.97	7.22	2.81	% A	97.4
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	1.84
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	0.74
ADJUSTMENTS											
Flow	20.72	1.59	-2.51	19.40	-5.92	-5.91	13.39	2.84	-1.26		
Distance	4.37	4.37	4.37	4.37	4.37	4.37	4.37	4.37	4.37	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	69.91
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	66.21
LEQ	65.19	55.78	56.90	63.88	48.28	53.50	57.87	57.03	58.15	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	66.21		EVENING LEQ	64.37		NIGHT LEQ	62.48		Use hour?	no
										GRADE dB	0.00
		CNEL	**69.91**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **2nd Street**
Segment: **West of Interstate 215 SB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	10960.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	752.00
INPUT PARAMETERS											
Vehicles per hour	634.77	13.15	21.92	471.28	2.19	3.65	116.91	18.27	30.44	% A	92
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	5
ADJUSTMENTS											
Flow	22.28	5.44	7.66	20.99	-2.34	-0.12	14.93	6.87	9.09		
Distance	-11.84	-11.84	-11.84	-11.84	-11.84	-11.84	-11.84	-11.84	-11.84	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	60.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	54.11
LEQ	50.55	43.43	50.87	49.25	35.65	43.08	43.20	44.86	52.29	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	54.11		EVENING LEQ	50.34		NIGHT LEQ	53.44		Use hour?	no
										GRADE dB	0.00
		CNEL	**60.00**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **2nd Street**
Segment: **West of Interstate 215 SB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	10960.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	238.00
INPUT PARAMETERS											
Vehicles per hour	634.77	13.15	21.92	471.28	2.19	3.65	116.91	18.27	30.44	% A	92
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	5
ADJUSTMENTS											
Flow	22.28	5.44	7.66	20.99	-2.34	-0.12	14.93	6.87	9.09		
Distance	-6.85	-6.85	-6.85	-6.85	-6.85	-6.85	-6.85	-6.85	-6.85	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	65.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	59.10
LEQ	55.54	48.43	55.86	54.25	40.64	48.08	48.20	49.85	57.29	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	59.10		EVENING LEQ	55.34		NIGHT LEQ	58.44		Use hour?	no
										GRADE dB	0.00
		CNEL	**65.00**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**
Road: **2nd Street**
Segment: **West of Interstate 215 SB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	10960.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	75.00
INPUT PARAMETERS											
Vehicles per hour	634.77	13.15	21.92	471.28	2.19	3.65	116.91	18.27	30.44	% A	92
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	5
ADJUSTMENTS											
Flow	22.28	5.44	7.66	20.99	-2.34	-0.12	14.93	6.87	9.09		
Distance	-1.83	-1.83	-1.83	-1.83	-1.83	-1.83	-1.83	-1.83	-1.83	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	70.01
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	64.12
LEQ	60.56	53.44	60.88	59.27	45.66	53.10	53.21	54.87	62.30	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	64.12		EVENING LEQ	60.35		NIGHT LEQ	63.46		Use hour?	no
										GRADE dB	0.00
		CNEL	**70.01**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**

Road: **2nd Street**

Segment: **Interstate 215 SB Ramps to Interstate 215 NB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	17560.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	1204.00
INPUT PARAMETERS											
Vehicles per hour	1017.02	21.07	35.12	755.08	3.51	5.85	187.31	29.27	48.78	% A	92
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	5
ADJUSTMENTS											
Flow	24.33	7.49	9.71	23.03	-0.29	1.93	16.98	8.92	11.14		
Distance	-13.89	-13.89	-13.89	-13.89	-13.89	-13.89	-13.89	-13.89	-13.89	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	60.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	54.11
LEQ	50.55	43.43	50.87	49.26	35.65	43.09	43.20	44.86	52.30	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	54.11		EVENING LEQ	50.35		NIGHT LEQ	53.45		Use hour?	no
										GRADE dB	0.00
		CNEL	**60.00**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**

Road: **2nd Street**

Segment: **Interstate 215 SB Ramps to Interstate 215 NB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	17560.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	381.00
INPUT PARAMETERS											
Vehicles per hour	1017.02	21.07	35.12	755.08	3.51	5.85	187.31	29.27	48.78	% A	92
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	5
ADJUSTMENTS											
Flow	24.33	7.49	9.71	23.03	-0.29	1.93	16.98	8.92	11.14		
Distance	-8.89	-8.89	-8.89	-8.89	-8.89	-8.89	-8.89	-8.89	-8.89	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	65.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	59.11
LEQ	55.55	48.43	55.87	54.25	40.65	48.08	48.20	49.86	57.29	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	59.11		EVENING LEQ	55.34		NIGHT LEQ	58.44		Use hour?	no
										GRADE dB	0.00
		CNEL	**65.00**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**

Road: **2nd Street**

Segment: **Interstate 215 SB Ramps to Interstate 215 NB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	17560.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	120.00
INPUT PARAMETERS											
Vehicles per hour	1017.02	21.07	35.12	755.08	3.51	5.85	187.31	29.27	48.78	% A	92
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	5
ADJUSTMENTS											
Flow	24.33	7.49	9.71	23.03	-0.29	1.93	16.98	8.92	11.14		
Distance	-3.87	-3.87	-3.87	-3.87	-3.87	-3.87	-3.87	-3.87	-3.87	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	70.02
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	64.13
LEQ	60.56	53.45	60.88	59.27	45.67	53.10	53.22	54.87	62.31	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	64.13		EVENING LEQ	60.36		NIGHT LEQ	63.46		Use hour?	no
										GRADE dB	0.00
		CNEL	**70.02**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**

Road: **2nd Street**

Segment: **Interstate 215 NB Ramps to Waterman Avenue**

	DAYTIME			EVENING			NIGHTTIME			ADT	14055.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	965.00
INPUT PARAMETERS											
Vehicles per hour	814.02	16.87	28.11	604.37	2.81	4.69	149.92	23.43	39.04	% A	92
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	5
ADJUSTMENTS											
Flow	23.36	6.52	8.74	22.07	-1.26	0.96	16.01	7.95	10.17		
Distance	-12.93	-12.93	-12.93	-12.93	-12.93	-12.93	-12.93	-12.93	-12.93	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	60.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	54.10
LEQ	50.54	43.43	50.86	49.25	35.64	43.08	43.20	44.85	52.29	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	54.10		EVENING LEQ	50.34		NIGHT LEQ	53.44		Use hour?	no
										GRADE dB	0.00
		CNEL	**60.00**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**

Road: **2nd Street**

Segment: **Interstate 215 NB Ramps to Waterman Avenue**

	DAYTIME			EVENING			NIGHTTIME			ADT	14055.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	305.00
INPUT PARAMETERS											
Vehicles per hour	814.02	16.87	28.11	604.37	2.81	4.69	149.92	23.43	39.04	% A	92
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	5
ADJUSTMENTS											
Flow	23.36	6.52	8.74	22.07	-1.26	0.96	16.01	7.95	10.17		
Distance	-7.92	-7.92	-7.92	-7.92	-7.92	-7.92	-7.92	-7.92	-7.92	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	65.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	59.11
LEQ	55.55	48.43	55.86	54.25	40.65	48.08	48.20	49.86	57.29	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	59.11		EVENING LEQ	55.34		NIGHT LEQ	58.44		Use hour?	no
										GRADE dB	0.00
		CNEL	**65.00**								

FHWA Sound32 Spreadsheet

Existing Traffic Noise

Project: **6499 Waterman Gardens**

Road: **2nd Street**

Segment: **Interstate 215 NB Ramps to Waterman Avenue**

	DAYTIME			EVENING			NIGHTTIME			ADT	14055.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	96.00
INPUT PARAMETERS											
Vehicles per hour	814.02	16.87	28.11	604.37	2.81	4.69	149.92	23.43	39.04	% A	92
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	5
ADJUSTMENTS											
Flow	23.36	6.52	8.74	22.07	-1.26	0.96	16.01	7.95	10.17		
Distance	-2.90	-2.90	-2.90	-2.90	-2.90	-2.90	-2.90	-2.90	-2.90	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	70.02
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	64.13
LEQ	60.57	53.45	60.89	59.27	45.67	53.10	53.22	54.88	62.31	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	64.13		EVENING LEQ	60.36		NIGHT LEQ	63.46		Use hour?	no
										GRADE dB	0.00
		CNEL	**70.02**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **North of 30th Street**

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	16340.08
										SPEED	35.00
										DISTANCE	1140.00
INPUT PARAMETERS											
Vehicles per hour	944.96	19.80	33.38	701.59	3.30	5.56	174.04	27.50	46.36	% A	91.86
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3.03
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	5.11
ADJUSTMENTS											
Flow	24.01	7.22	9.49	22.71	-0.56	1.71	16.66	8.65	10.91		
Distance	-13.65	-13.65	-13.65	-13.65	-13.65	-13.65	-13.65	-13.65	-13.65	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	60.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	54.08
LEQ	50.47	43.40	50.88	49.17	35.62	43.10	43.12	44.83	52.31	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	54.08		EVENING LEQ	50.28		NIGHT LEQ	53.45		Use hour?	no
										GRADE dB	0.00
		CNEL	**60.00**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **North of 30th Street**

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	16340.08
										SPEED	35.00
										DISTANCE	360.00
INPUT PARAMETERS											
Vehicles per hour	944.96	19.80	33.38	701.59	3.30	5.56	174.04	27.50	46.36	% A	91.86
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3.03
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	5.11
ADJUSTMENTS											
Flow	24.01	7.22	9.49	22.71	-0.56	1.71	16.66	8.65	10.91		
Distance	-8.64	-8.64	-8.64	-8.64	-8.64	-8.64	-8.64	-8.64	-8.64	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	65.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	59.09
LEQ	55.47	48.40	55.89	54.18	40.62	48.11	48.13	49.83	57.32	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	59.09		EVENING LEQ	55.29		NIGHT LEQ	58.45		Use hour?	no
										GRADE dB	0.00
		CNEL	**65.00**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **North of 30th Street**

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	16340.08
										SPEED	35.00
										DISTANCE	114.00
INPUT PARAMETERS											
Vehicles per hour	944.96	19.80	33.38	701.59	3.30	5.56	174.04	27.50	46.36	% A	91.86
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3.03
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	5.11
ADJUSTMENTS											
Flow	24.01	7.22	9.49	22.71	-0.56	1.71	16.66	8.65	10.91		
Distance	-3.65	-3.65	-3.65	-3.65	-3.65	-3.65	-3.65	-3.65	-3.65	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	70.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	64.08
LEQ	60.47	53.40	60.88	59.17	45.62	53.10	53.12	54.83	62.31	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	64.08		EVENING LEQ	60.28		NIGHT LEQ	63.45		Use hour?	no
										GRADE dB	0.00
		CNEL	**70.00**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **30th Street to State Route 210 EB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	20244.73
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	1330.00
INPUT PARAMETERS											
Vehicles per hour	1177.08	23.67	38.21	873.92	3.95	6.37	216.79	32.88	53.06	% A	92.36
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.92
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	4.72
ADJUSTMENTS											
Flow	24.96	8.00	10.07	23.67	0.21	2.29	17.61	9.42	11.50		
Distance	-14.32	-14.32	-14.32	-14.32	-14.32	-14.32	-14.32	-14.32	-14.32	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	60.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	54.18
LEQ	50.75	43.51	50.80	49.46	35.72	43.02	43.40	44.93	52.23	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	54.18		EVENING LEQ	50.50		NIGHT LEQ	53.43		Use hour?	no
										GRADE dB	0.00
		CNEL	**60.00**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **30th Street to State Route 210 EB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	20244.73
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	421.00
INPUT PARAMETERS											
Vehicles per hour	1177.08	23.67	38.21	873.92	3.95	6.37	216.79	32.88	53.06	% A	92.36
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.92
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	4.72
ADJUSTMENTS											
Flow	24.96	8.00	10.07	23.67	0.21	2.29	17.61	9.42	11.50		
Distance	-9.32	-9.32	-9.32	-9.32	-9.32	-9.32	-9.32	-9.32	-9.32	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	65.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	59.17
LEQ	55.75	48.50	55.80	54.45	40.72	48.02	48.40	49.93	57.22	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	59.17		EVENING LEQ	55.49		NIGHT LEQ	58.42		Use hour?	no
										GRADE dB	0.00
		CNEL	**65.00**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **30th Street to State Route 210 EB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	20244.73
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	133.00
INPUT PARAMETERS											
Vehicles per hour	1177.08	23.67	38.21	873.92	3.95	6.37	216.79	32.88	53.06	% A	92.36
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.92
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	4.72
ADJUSTMENTS											
Flow	24.96	8.00	10.07	23.67	0.21	2.29	17.61	9.42	11.50		
Distance	-4.32	-4.32	-4.32	-4.32	-4.32	-4.32	-4.32	-4.32	-4.32	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	70.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	64.18
LEQ	60.75	53.51	60.80	59.46	45.72	53.02	53.40	54.93	62.23	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	64.18		EVENING LEQ	60.50		NIGHT LEQ	63.43		Use hour?	no
										GRADE dB	0.00
		CNEL	**70.00**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **State Route 210 EB Ramps to Highland Avenue**

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	18264.41
										SPEED	35.00
										DISTANCE	1124.00
INPUT PARAMETERS											
Vehicles per hour	1067.81	20.56	31.54	792.79	3.43	5.26	196.66	28.55	43.80	% A	92.87
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.81
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	4.32
ADJUSTMENTS											
Flow	24.54	7.38	9.24	23.25	-0.40	1.46	17.19	8.81	10.67		
Distance	-13.59	-13.59	-13.59	-13.59	-13.59	-13.59	-13.59	-13.59	-13.59	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	60.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	54.28
LEQ	51.06	43.62	50.70	49.77	35.84	42.92	43.71	45.05	52.13	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	54.28		EVENING LEQ	50.73		NIGHT LEQ	53.40		Use hour?	no
										GRADE dB	0.00
		CNEL	**60.00**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **State Route 210 EB Ramps to Highland Avenue**

	DAYTIME			EVENING			NIGHTTIME			ADT	18264.41
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	356.00
INPUT PARAMETERS											
Vehicles per hour	1067.81	20.56	31.54	792.79	3.43	5.26	196.66	28.55	43.80	% A	92.87
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.81
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	4.32
ADJUSTMENTS											
Flow	24.54	7.38	9.24	23.25	-0.40	1.46	17.19	8.81	10.67		
Distance	-8.59	-8.59	-8.59	-8.59	-8.59	-8.59	-8.59	-8.59	-8.59	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	65.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	59.28
LEQ	56.05	48.62	55.69	54.76	40.84	47.91	48.71	50.04	57.12	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	59.28		EVENING LEQ	55.72		NIGHT LEQ	58.39		Use hour?	no
										GRADE dB	0.00
		CNEL	**65.00**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **State Route 210 EB Ramps to Highland Avenue**

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	18264.41
										SPEED	35.00
										DISTANCE	112.00
INPUT PARAMETERS											
Vehicles per hour	1067.81	20.56	31.54	792.79	3.43	5.26	196.66	28.55	43.80	% A	92.87
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.81
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	4.32
ADJUSTMENTS											
Flow	24.54	7.38	9.24	23.25	-0.40	1.46	17.19	8.81	10.67		
Distance	-3.57	-3.57	-3.57	-3.57	-3.57	-3.57	-3.57	-3.57	-3.57	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	70.02
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	64.30
LEQ	61.08	53.64	60.72	59.78	45.86	52.93	53.73	55.07	62.14	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	64.30		EVENING LEQ	60.74		NIGHT LEQ	63.41		Use hour?	no
										GRADE dB	0.00
		CNEL	**70.02**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **Highland Avenue to Baseline Street**

	DAYTIME			EVENING			NIGHTTIME			ADT	18189.26
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	1088.00
INPUT PARAMETERS											
Vehicles per hour	1066.01	20.12	30.11	791.46	3.35	5.02	196.33	27.95	41.82	% A	93.10
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.77
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	4.14
ADJUSTMENTS											
Flow	24.53	7.29	9.04	23.24	-0.49	1.26	17.18	8.72	10.47		
Distance	-13.45	-13.45	-13.45	-13.45	-13.45	-13.45	-13.45	-13.45	-13.45	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	60.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	54.33
LEQ	51.19	43.67	50.64	49.90	35.89	42.86	43.85	45.10	52.07	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	54.33		EVENING LEQ	50.83		NIGHT LEQ	53.38		Use hour?	no
										GRADE dB	0.00
		CNEL	**60.00**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **Highland Avenue to Baseline Street**

	DAYTIME			EVENING			NIGHTTIME			ADT	18189.26
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	344.00
INPUT PARAMETERS											
Vehicles per hour	1066.01	20.12	30.11	791.46	3.35	5.02	196.33	27.95	41.82	% A	93.10
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.77
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	4.14
ADJUSTMENTS											
Flow	24.53	7.29	9.04	23.24	-0.49	1.26	17.18	8.72	10.47		
Distance	-8.45	-8.45	-8.45	-8.45	-8.45	-8.45	-8.45	-8.45	-8.45	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	65.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	59.33
LEQ	56.20	48.67	55.64	54.90	40.89	47.86	48.85	50.10	57.07	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	59.33		EVENING LEQ	55.83		NIGHT LEQ	58.38		Use hour?	no
										GRADE dB	0.00
		CNEL	**65.00**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **Highland Avenue to Baseline Street**

	DAYTIME			EVENING			NIGHTTIME			ADT	18189.26
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	109.00
INPUT PARAMETERS											
Vehicles per hour	1066.01	20.12	30.11	791.46	3.35	5.02	196.33	27.95	41.82	% A	93.10
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.77
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	4.14
ADJUSTMENTS											
Flow	24.53	7.29	9.04	23.24	-0.49	1.26	17.18	8.72	10.47		
Distance	-3.45	-3.45	-3.45	-3.45	-3.45	-3.45	-3.45	-3.45	-3.45	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	69.99
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	64.32
LEQ	61.19	53.66	60.63	59.89	45.88	52.85	53.84	55.09	62.06	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	64.32		EVENING LEQ	60.82		NIGHT LEQ	63.37		Use hour?	no
										GRADE dB	0.00
		CNEL	**69.99**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **Baseline Street to 9th Street**

	DAYTIME			EVENING			NIGHTTIME			ADT	23943.41
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	1294.00
INPUT PARAMETERS											
Vehicles per hour	1413.84	25.05	34.34	1049.70	4.17	5.72	260.39	34.79	47.70	% A	93.80
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.62
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	3.59
ADJUSTMENTS											
Flow	25.76	8.24	9.61	24.46	0.46	1.83	18.41	9.67	11.04		
Distance	-14.20	-14.20	-14.20	-14.20	-14.20	-14.20	-14.20	-14.20	-14.20	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	60.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	54.51
LEQ	51.67	43.87	50.46	50.37	36.09	42.68	44.32	45.30	51.88	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	54.51		EVENING LEQ	51.19		NIGHT LEQ	53.33		Use hour?	no
										GRADE dB	0.00
		CNEL	**60.00**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **Baseline Street to 9th Street**

	DAYTIME			EVENING			NIGHTTIME			ADT	23943.41
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	409.00
INPUT PARAMETERS											
Vehicles per hour	1413.84	25.05	34.34	1049.70	4.17	5.72	260.39	34.79	47.70	% A	93.80
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.62
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	3.59
ADJUSTMENTS											
Flow	25.76	8.24	9.61	24.46	0.46	1.83	18.41	9.67	11.04		
Distance	-9.20	-9.20	-9.20	-9.20	-9.20	-9.20	-9.20	-9.20	-9.20	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	65.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	59.51
LEQ	56.67	48.87	55.46	55.38	41.09	47.68	49.32	50.30	56.89	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	59.51		EVENING LEQ	56.19		NIGHT LEQ	58.33		Use hour?	no
										GRADE dB	0.00
		CNEL	**65.00**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **Baseline Street to 9th Street**

	DAYTIME			EVENING			NIGHTTIME			ADT	23943.41
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	129.00
INPUT PARAMETERS											
Vehicles per hour	1413.84	25.05	34.34	1049.70	4.17	5.72	260.39	34.79	47.70	% A	93.80
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.62
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	3.59
ADJUSTMENTS											
Flow	25.76	8.24	9.61	24.46	0.46	1.83	18.41	9.67	11.04		
Distance	-4.19	-4.19	-4.19	-4.19	-4.19	-4.19	-4.19	-4.19	-4.19	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	70.01
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	64.52
LEQ	61.68	53.88	60.47	60.39	46.10	52.69	54.33	55.31	61.90	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	64.52		EVENING LEQ	61.21		NIGHT LEQ	63.34		Use hour?	no
										GRADE dB	0.00
		CNEL	**70.01**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **9th Street to 5th Street**

	DAYTIME			EVENING			NIGHTTIME			ADT	26218.19
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	1403.00
INPUT PARAMETERS											
Vehicles per hour	1549.34	27.26	37.02	1150.30	4.54	6.17	285.35	37.87	51.42	% A	93.87
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.60
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	3.53
ADJUSTMENTS											
Flow	26.15	8.61	9.94	24.86	0.83	2.16	18.81	10.04	11.36		
Distance	-14.55	-14.55	-14.55	-14.55	-14.55	-14.55	-14.55	-14.55	-14.55	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	60.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	54.52
LEQ	51.71	43.89	50.43	50.42	36.11	42.65	44.37	45.31	51.86	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	54.52		EVENING LEQ	51.23		NIGHT LEQ	53.32		Use hour?	no
										GRADE dB	0.00
		CNEL	**60.00**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **9th Street to 5th Street**

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	26218.19
										SPEED	35.00
										DISTANCE	443.00
INPUT PARAMETERS											
Vehicles per hour	1549.34	27.26	37.02	1150.30	4.54	6.17	285.35	37.87	51.42	% A	93.87
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.60
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	3.53
ADJUSTMENTS											
Flow	26.15	8.61	9.94	24.86	0.83	2.16	18.81	10.04	11.36		
Distance	-9.54	-9.54	-9.54	-9.54	-9.54	-9.54	-9.54	-9.54	-9.54	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	65.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	59.53
LEQ	56.72	48.89	55.44	55.43	41.11	47.66	49.37	50.32	56.87	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	59.53		EVENING LEQ	56.23		NIGHT LEQ	58.33		Use hour?	no
										GRADE dB	0.00
		CNEL	**65.00**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **9th Street to 5th Street**

	DAYTIME			EVENING			NIGHTTIME			ADT	26218.19
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	140.00
INPUT PARAMETERS											
Vehicles per hour	1549.34	27.26	37.02	1150.30	4.54	6.17	285.35	37.87	51.42	% A	93.87
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.60
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	3.53
ADJUSTMENTS											
Flow	26.15	8.61	9.94	24.86	0.83	2.16	18.81	10.04	11.36		
Distance	-4.54	-4.54	-4.54	-4.54	-4.54	-4.54	-4.54	-4.54	-4.54	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	70.01
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	64.53
LEQ	61.72	53.90	60.44	60.43	46.11	52.66	54.38	55.32	61.87	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	64.53		EVENING LEQ	61.24		NIGHT LEQ	63.33		Use hour?	no
										GRADE dB	0.00
		CNEL	**70.01**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **5th Street to 2nd Street**

	DAYTIME			EVENING			NIGHTTIME			ADT	21144.21
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	1278.00
INPUT PARAMETERS											
Vehicles per hour	1238.16	23.53	35.52	919.27	3.92	5.92	228.04	32.68	49.33	% A	93.02
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.78
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	4.20
ADJUSTMENTS											
Flow	25.18	7.97	9.76	23.89	0.19	1.98	17.83	9.40	11.18		
Distance	-14.15	-14.15	-14.15	-14.15	-14.15	-14.15	-14.15	-14.15	-14.15	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	60.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	54.31
LEQ	51.15	43.65	50.66	49.85	35.87	42.88	43.80	45.08	52.08	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	54.31		EVENING LEQ	50.79		NIGHT LEQ	53.38		Use hour?	no
										GRADE dB	0.00
		CNEL	**60.00**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **5th Street to 2nd Street**

	DAYTIME			EVENING			NIGHTTIME			ADT	21144.21
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	404.00
INPUT PARAMETERS											
Vehicles per hour	1238.16	23.53	35.52	919.27	3.92	5.92	228.04	32.68	49.33	% A	93.02
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.78
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	4.20
ADJUSTMENTS											
Flow	25.18	7.97	9.76	23.89	0.19	1.98	17.83	9.40	11.18		
Distance	-9.14	-9.14	-9.14	-9.14	-9.14	-9.14	-9.14	-9.14	-9.14	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	65.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	59.31
LEQ	56.15	48.65	55.66	54.85	40.87	47.88	48.80	50.08	57.09	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	59.31		EVENING LEQ	55.79		NIGHT LEQ	58.38		Use hour?	no
										GRADE dB	0.00
		CNEL	**65.00**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **5th Street to 2nd Street**

	DAYTIME			EVENING			NIGHTTIME			ADT	21144.21
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	127.00
INPUT PARAMETERS											
Vehicles per hour	1238.16	23.53	35.52	919.27	3.92	5.92	228.04	32.68	49.33	% A	93.02
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.78
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	4.20
ADJUSTMENTS											
Flow	25.18	7.97	9.76	23.89	0.19	1.98	17.83	9.40	11.18		
Distance	-4.12	-4.12	-4.12	-4.12	-4.12	-4.12	-4.12	-4.12	-4.12	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	70.02
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	64.34
LEQ	61.17	53.68	60.69	59.88	45.90	52.90	53.82	55.11	62.11	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	64.34		EVENING LEQ	60.82		NIGHT LEQ	63.41		Use hour?	no
										GRADE dB	0.00
		CNEL	**70.02**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **South of 2nd Street**

	DAYTIME			EVENING			NIGHTTIME			ADT	5839.95
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	390.00
INPUT PARAMETERS											
Vehicles per hour	339.05	6.90	11.27	251.73	1.15	1.88	62.44	9.58	15.65	% A	92.22
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.95
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	4.82
ADJUSTMENTS											
Flow	19.56	2.64	4.77	18.26	-5.14	-3.01	12.21	4.07	6.20		
Distance	-8.99	-8.99	-8.99	-8.99	-8.99	-8.99	-8.99	-8.99	-8.99	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	60.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	54.15
LEQ	50.67	43.48	50.83	49.38	35.70	43.05	43.33	44.90	52.25	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	54.15		EVENING LEQ	50.44		NIGHT LEQ	53.43		Use hour?	no
										GRADE dB	0.00
		CNEL	**60.00**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **South of 2nd Street**

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	5839.95
										SPEED	35.00
										DISTANCE	123.00
INPUT PARAMETERS											
Vehicles per hour	339.05	6.90	11.27	251.73	1.15	1.88	62.44	9.58	15.65	% A	92.22
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.95
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	4.82
ADJUSTMENTS											
Flow	19.56	2.64	4.77	18.26	-5.14	-3.01	12.21	4.07	6.20		
Distance	-3.98	-3.98	-3.98	-3.98	-3.98	-3.98	-3.98	-3.98	-3.98	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	65.01
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	59.16
LEQ	55.69	48.49	55.84	54.39	40.71	48.06	48.34	49.92	57.27	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	59.16		EVENING LEQ	55.45		NIGHT LEQ	58.45		Use hour?	no
										GRADE dB	0.00
		CNEL	**65.01**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **South of 2nd Street**

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	5839.95
										SPEED	35.00
										DISTANCE	39.00
INPUT PARAMETERS											
Vehicles per hour	339.05	6.90	11.27	251.73	1.15	1.88	62.44	9.58	15.65	% A	92.22
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.95
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	4.82
ADJUSTMENTS											
Flow	19.56	2.64	4.77	18.26	-5.14	-3.01	12.21	4.07	6.20		
Distance	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	70.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	64.15
LEQ	60.67	53.48	60.83	59.38	45.70	53.05	53.33	54.90	62.25	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	64.15		EVENING LEQ	60.44		NIGHT LEQ	63.43		Use hour?	no
										GRADE dB	0.00
		CNEL	**70.00**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **North of Interstate 10 WB On-Ramp**

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	35559.50
										SPEED	50.00
										DISTANCE	3920.00
INPUT PARAMETERS											
Vehicles per hour	2067.95	41.52	66.89	1535.34	6.92	11.15	380.86	57.67	92.91	% A	92.38
Speed in MPH	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.92
NOISE CALCULATIONS											
Reference levels	71.12	78.79	83.02	71.12	78.79	83.02	71.12	78.79	83.02	% HT	4.70
ADJUSTMENTS											
Flow	25.86	8.89	10.96	24.57	1.11	3.18	18.51	10.31	12.39		
Distance	-19.01	-19.01	-19.01	-19.01	-19.01	-19.01	-19.01	-19.01	-19.01	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	60.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	55.06
LEQ	52.97	43.67	49.97	51.67	35.89	42.18	45.62	45.09	51.39	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	55.06		EVENING LEQ	52.24		NIGHT LEQ	53.15		Use hour?	no
										GRADE dB	0.00
		CNEL	**60.00**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **North of Interstate 10 WB On-Ramp**

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	35559.50
										SPEED	50.00
										DISTANCE	1241.00
INPUT PARAMETERS											
Vehicles per hour	2067.95	41.52	66.89	1535.34	6.92	11.15	380.86	57.67	92.91	% A	92.38
Speed in MPH	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.92
NOISE CALCULATIONS											
Reference levels	71.12	78.79	83.02	71.12	78.79	83.02	71.12	78.79	83.02	% HT	4.70
ADJUSTMENTS											
Flow	25.86	8.89	10.96	24.57	1.11	3.18	18.51	10.31	12.39		
Distance	-14.02	-14.02	-14.02	-14.02	-14.02	-14.02	-14.02	-14.02	-14.02	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	65.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	60.05
LEQ	57.96	48.66	54.96	56.67	40.88	47.18	50.61	50.09	56.39	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	60.05		EVENING LEQ	57.23		NIGHT LEQ	58.15		Use hour?	no
										GRADE dB	0.00
		CNEL	**65.00**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **North of Interstate 10 WB On-Ramp**

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	35559.50
										SPEED	50.00
										DISTANCE	392.00
INPUT PARAMETERS											
Vehicles per hour	2067.95	41.52	66.89	1535.34	6.92	11.15	380.86	57.67	92.91	% A	92.38
Speed in MPH	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.92
NOISE CALCULATIONS											
Reference levels	71.12	78.79	83.02	71.12	78.79	83.02	71.12	78.79	83.02	% HT	4.70
ADJUSTMENTS											
Flow	25.86	8.89	10.96	24.57	1.11	3.18	18.51	10.31	12.39		
Distance	-9.01	-9.01	-9.01	-9.01	-9.01	-9.01	-9.01	-9.01	-9.01	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	70.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	65.06
LEQ	62.97	53.67	59.97	61.67	45.89	52.18	55.62	55.09	61.39	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	65.06		EVENING LEQ	62.24		NIGHT LEQ	63.15		Use hour?	no
										GRADE dB	0.00
		CNEL	**70.00**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **South of Interstate 10 WB On-Ramp**

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	34949.63
										SPEED	50.00
										DISTANCE	3894.00
INPUT PARAMETERS											
Vehicles per hour	2030.54	41.07	66.71	1507.57	6.85	11.12	373.97	57.04	92.66	% A	92.29
Speed in MPH	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.94
NOISE CALCULATIONS											
Reference levels	71.12	78.79	83.02	71.12	78.79	83.02	71.12	78.79	83.02	% HT	4.77
ADJUSTMENTS											
Flow	25.78	8.84	10.95	24.49	1.06	3.17	18.43	10.27	12.37		
Distance	-18.98	-18.98	-18.98	-18.98	-18.98	-18.98	-18.98	-18.98	-18.98	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	60.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	55.03
LEQ	52.92	43.65	49.98	51.62	35.87	42.20	45.57	45.08	51.41	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	55.03		EVENING LEQ	52.20		NIGHT LEQ	53.15		Use hour?	no
										GRADE dB	0.00
		CNEL	**60.00**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **South of Interstate 10 WB On-Ramp**

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	34949.63
										SPEED	50.00
										DISTANCE	1230.00
INPUT PARAMETERS											
Vehicles per hour	2030.54	41.07	66.71	1507.57	6.85	11.12	373.97	57.04	92.66	% A	92.29
Speed in MPH	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.94
NOISE CALCULATIONS											
Reference levels	71.12	78.79	83.02	71.12	78.79	83.02	71.12	78.79	83.02	% HT	4.77
ADJUSTMENTS											
Flow	25.78	8.84	10.95	24.49	1.06	3.17	18.43	10.27	12.37		
Distance	-13.98	-13.98	-13.98	-13.98	-13.98	-13.98	-13.98	-13.98	-13.98	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	65.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	60.04
LEQ	57.92	48.65	54.99	56.63	40.87	47.21	50.57	50.08	56.41	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	60.04		EVENING LEQ	57.20		NIGHT LEQ	58.16		Use hour?	no
										GRADE dB	0.00
		CNEL	**65.00**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Waterman Avenue**
Segment: **South of Interstate 10 WB On-Ramp**

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	34949.63
										SPEED	50.00
										DISTANCE	389.00
INPUT PARAMETERS											
Vehicles per hour	2030.54	41.07	66.71	1507.57	6.85	11.12	373.97	57.04	92.66	% A	92.29
Speed in MPH	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.94
NOISE CALCULATIONS											
Reference levels	71.12	78.79	83.02	71.12	78.79	83.02	71.12	78.79	83.02	% HT	4.77
ADJUSTMENTS											
Flow	25.78	8.84	10.95	24.49	1.06	3.17	18.43	10.27	12.37		
Distance	-8.98	-8.98	-8.98	-8.98	-8.98	-8.98	-8.98	-8.98	-8.98	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	70.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	65.04
LEQ	62.92	53.65	59.99	61.63	45.87	52.21	55.57	55.08	61.41	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	65.04		EVENING LEQ	62.20		NIGHT LEQ	63.15		Use hour?	no
										GRADE dB	0.00
		CNEL	**70.00**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Baseline Street**
Segment: **Interstate 215 SB Ramps to Interstate 215 NB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	22424.58
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	1745.00
INPUT PARAMETERS											
Vehicles per hour	1305.86	25.94	41.29	969.53	4.32	6.88	240.50	36.03	57.34	% A	92.50
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.89
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	4.60
ADJUSTMENTS											
Flow	24.83	7.81	9.83	23.54	0.03	2.05	17.48	9.24	11.26		
Distance	-15.50	-15.50	-15.50	-15.50	-15.50	-15.50	-15.50	-15.50	-15.50	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	60.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	54.51
LEQ	51.69	43.63	50.49	50.40	35.85	42.71	44.35	45.05	51.92	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	54.51		EVENING LEQ	51.21		NIGHT LEQ	53.32		Use hour?	no
										GRADE dB	0.00
		CNEL	**60.00**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Baseline Street**
Segment: **Interstate 215 SB Ramps to Interstate 215 NB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	22424.58
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	551.00
INPUT PARAMETERS											
Vehicles per hour	1305.86	25.94	41.29	969.53	4.32	6.88	240.50	36.03	57.34	% A	92.50
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.89
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	4.60
ADJUSTMENTS											
Flow	24.83	7.81	9.83	23.54	0.03	2.05	17.48	9.24	11.26		
Distance	-10.49	-10.49	-10.49	-10.49	-10.49	-10.49	-10.49	-10.49	-10.49	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	65.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	59.52
LEQ	56.70	48.63	55.50	55.41	40.85	47.72	49.35	50.06	56.93	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	59.52		EVENING LEQ	56.22		NIGHT LEQ	58.33		Use hour?	no
										GRADE dB	0.00
		CNEL	**65.00**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Baseline Street**
Segment: **Interstate 215 SB Ramps to Interstate 215 NB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	22424.58
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	174.00
INPUT PARAMETERS											
Vehicles per hour	1305.86	25.94	41.29	969.53	4.32	6.88	240.50	36.03	57.34	% A	92.50
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.89
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	4.60
ADJUSTMENTS											
Flow	24.83	7.81	9.83	23.54	0.03	2.05	17.48	9.24	11.26		
Distance	-5.49	-5.49	-5.49	-5.49	-5.49	-5.49	-5.49	-5.49	-5.49	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	70.01
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	64.53
LEQ	61.71	53.64	60.51	60.41	45.86	52.72	54.36	55.07	61.93	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	64.53		EVENING LEQ	61.22		NIGHT LEQ	63.33		Use hour?	no
										GRADE dB	0.00
		CNEL	**70.01**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Baseline Street**
Segment: **Interstate 215 NB Ramps to E Street**

	DAYTIME			EVENING			NIGHTTIME			ADT	26379.18
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	1970.00
INPUT PARAMETERS											
Vehicles per hour	1541.73	29.75	45.77	1144.65	4.96	7.63	283.94	41.32	63.57	% A	92.84
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.82
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	4.34
ADJUSTMENTS											
Flow	25.55	8.41	10.28	24.26	0.63	2.50	18.21	9.84	11.71		
Distance	-16.03	-16.03	-16.03	-16.03	-16.03	-16.03	-16.03	-16.03	-16.03	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	60.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	54.59
LEQ	51.89	43.70	50.41	50.60	35.92	42.63	44.54	45.12	51.84	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	54.59		EVENING LEQ	51.36		NIGHT LEQ	53.30		Use hour?	no
										GRADE dB	0.00
		CNEL	**60.00**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Baseline Street**
Segment: **Interstate 215 NB Ramps to E Street**

	DAYTIME			EVENING			NIGHTTIME			ADT	26379.18
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	623.00
INPUT PARAMETERS											
Vehicles per hour	1541.73	29.75	45.77	1144.65	4.96	7.63	283.94	41.32	63.57	% A	92.84
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.82
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	4.34
ADJUSTMENTS											
Flow	25.55	8.41	10.28	24.26	0.63	2.50	18.21	9.84	11.71		
Distance	-11.03	-11.03	-11.03	-11.03	-11.03	-11.03	-11.03	-11.03	-11.03	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	65.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	59.59
LEQ	56.89	48.70	55.41	55.59	40.91	47.63	49.54	50.12	56.84	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	59.59		EVENING LEQ	56.36		NIGHT LEQ	58.30		Use hour?	no
										GRADE dB	0.00
		CNEL	**65.00**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Baseline Street**
Segment: **Interstate 215 NB Ramps to E Street**

	DAYTIME			EVENING			NIGHTTIME			ADT	26379.18
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	197.00
INPUT PARAMETERS											
Vehicles per hour	1541.73	29.75	45.77	1144.65	4.96	7.63	283.94	41.32	63.57	% A	92.84
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.82
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	4.34
ADJUSTMENTS											
Flow	25.55	8.41	10.28	24.26	0.63	2.50	18.21	9.84	11.71		
Distance	-6.03	-6.03	-6.03	-6.03	-6.03	-6.03	-6.03	-6.03	-6.03	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	70.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	64.59
LEQ	61.89	53.70	60.41	60.60	45.92	52.63	54.54	55.12	61.84	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	64.59		EVENING LEQ	61.36		NIGHT LEQ	63.30		Use hour?	no
										GRADE dB	0.00
		CNEL	**70.00**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Baseline Street**
Segment: **E Street to Sierra Way**

	DAYTIME			EVENING			NIGHTTIME			ADT	22934.18
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	1686.00
INPUT PARAMETERS											
Vehicles per hour	1342.19	25.62	38.89	996.50	4.27	6.48	247.19	35.58	54.01	% A	92.96
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.79
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	4.24
ADJUSTMENTS											
Flow	24.95	7.76	9.57	23.66	-0.02	1.79	17.60	9.19	11.00		
Distance	-15.35	-15.35	-15.35	-15.35	-15.35	-15.35	-15.35	-15.35	-15.35	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	60.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	54.62
LEQ	51.96	43.72	50.38	50.67	35.94	42.60	44.61	45.15	51.81	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	54.62		EVENING LEQ	51.42		NIGHT LEQ	53.29		Use hour?	no
										GRADE dB	0.00
		CNEL	**60.00**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Baseline Street**
Segment: **E Street to Sierra Way**

	DAYTIME			EVENING			NIGHTTIME			ADT	22934.18
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	533.00
INPUT PARAMETERS											
Vehicles per hour	1342.19	25.62	38.89	996.50	4.27	6.48	247.19	35.58	54.01	% A	92.96
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.79
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	4.24
ADJUSTMENTS											
Flow	24.95	7.76	9.57	23.66	-0.02	1.79	17.60	9.19	11.00		
Distance	-10.35	-10.35	-10.35	-10.35	-10.35	-10.35	-10.35	-10.35	-10.35	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	65.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	59.62
LEQ	56.96	48.72	55.38	55.67	40.94	47.60	49.62	50.15	56.81	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	59.62		EVENING LEQ	56.42		NIGHT LEQ	58.29		Use hour?	no
										GRADE dB	0.00
		CNEL	**65.00**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Baseline Street**
Segment: **E Street to Sierra Way**

	DAYTIME			EVENING			NIGHTTIME			ADT	22934.18
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	169.00
INPUT PARAMETERS											
Vehicles per hour	1342.19	25.62	38.89	996.50	4.27	6.48	247.19	35.58	54.01	% A	92.96
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.79
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	4.24
ADJUSTMENTS											
Flow	24.95	7.76	9.57	23.66	-0.02	1.79	17.60	9.19	11.00		
Distance	-5.36	-5.36	-5.36	-5.36	-5.36	-5.36	-5.36	-5.36	-5.36	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	69.99
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	64.61
LEQ	61.95	53.71	60.37	60.66	45.93	52.59	54.60	55.14	61.80	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	64.61		EVENING LEQ	61.41		NIGHT LEQ	63.28		Use hour?	no
										GRADE dB	0.00
		CNEL	**69.99**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Baseline Street**
Segment: **Sierra Way to Waterman Avenue**

	DAYTIME			EVENING			NIGHTTIME			ADT	19979.22
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	1452.00
INPUT PARAMETERS											
Vehicles per hour	1170.47	22.15	33.27	869.01	3.69	5.55	215.57	30.77	46.21	% A	93.06
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.77
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	4.16
ADJUSTMENTS											
Flow	24.36	7.13	8.89	23.06	-0.65	1.11	17.01	8.55	10.32		
Distance	-14.70	-14.70	-14.70	-14.70	-14.70	-14.70	-14.70	-14.70	-14.70	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	60.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	54.64
LEQ	52.02	43.74	50.35	50.72	35.96	42.57	44.67	45.17	51.78	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	54.64		EVENING LEQ	51.47		NIGHT LEQ	53.28		Use hour?	no
										GRADE dB	0.00
		CNEL	**60.00**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Baseline Street**
Segment: **Sierra Way to Waterman Avenue**

	DAYTIME			EVENING			NIGHTTIME			ADT	19979.22
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	459.00
INPUT PARAMETERS											
Vehicles per hour	1170.47	22.15	33.27	869.01	3.69	5.55	215.57	30.77	46.21	% A	93.06
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.77
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	4.16
ADJUSTMENTS											
Flow	24.36	7.13	8.89	23.06	-0.65	1.11	17.01	8.55	10.32		
Distance	-9.70	-9.70	-9.70	-9.70	-9.70	-9.70	-9.70	-9.70	-9.70	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	65.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	59.64
LEQ	57.02	48.74	55.36	55.73	40.96	47.57	49.67	50.17	56.78	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	59.64		EVENING LEQ	56.47		NIGHT LEQ	58.28		Use hour?	no
										GRADE dB	0.00
		CNEL	**65.00**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Baseline Street**
Segment: **Sierra Way to Waterman Avenue**

	DAYTIME			EVENING			NIGHTTIME			ADT	19979.22
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	145.00
INPUT PARAMETERS											
Vehicles per hour	1170.47	22.15	33.27	869.01	3.69	5.55	215.57	30.77	46.21	% A	93.06
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.77
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	4.16
ADJUSTMENTS											
Flow	24.36	7.13	8.89	23.06	-0.65	1.11	17.01	8.55	10.32		
Distance	-4.69	-4.69	-4.69	-4.69	-4.69	-4.69	-4.69	-4.69	-4.69	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	70.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	64.65
LEQ	62.02	53.75	60.36	60.73	45.97	52.58	54.68	55.17	61.79	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	64.65		EVENING LEQ	61.47		NIGHT LEQ	63.29		Use hour?	no
										GRADE dB	0.00
		CNEL	**70.00**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Baseline Street**
Segment: **Waterman Avenue to Tippecanoe Avenue**

	DAYTIME			EVENING			NIGHTTIME			ADT	18029.18
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	1282.00
INPUT PARAMETERS											
Vehicles per hour	1058.13	19.73	29.07	785.60	3.29	4.85	194.88	27.41	40.38	% A	93.23
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.74
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	4.03
ADJUSTMENTS											
Flow	23.92	6.63	8.31	22.63	-1.16	0.53	16.57	8.05	9.74		
Distance	-14.16	-14.16	-14.16	-14.16	-14.16	-14.16	-14.16	-14.16	-14.16	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	60.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	54.69
LEQ	52.12	43.78	50.31	50.83	36.00	42.53	44.77	45.21	51.74	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	54.69		EVENING LEQ	51.55		NIGHT LEQ	53.27		Use hour?	no
										GRADE dB	0.00
		CNEL	**60.00**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Baseline Street**
Segment: **Waterman Avenue to Tippecanoe Avenue**

	DAYTIME			EVENING			NIGHTTIME			ADT	18029.18
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	405.00
INPUT PARAMETERS											
Vehicles per hour	1058.13	19.73	29.07	785.60	3.29	4.85	194.88	27.41	40.38	% A	93.23
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.74
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	4.03
ADJUSTMENTS											
Flow	23.92	6.63	8.31	22.63	-1.16	0.53	16.57	8.05	9.74		
Distance	-9.15	-9.15	-9.15	-9.15	-9.15	-9.15	-9.15	-9.15	-9.15	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	65.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	59.69
LEQ	57.12	48.78	55.31	55.83	41.00	47.53	49.78	50.21	56.74	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	59.69		EVENING LEQ	56.55		NIGHT LEQ	58.27		Use hour?	no
										GRADE dB	0.00
		CNEL	**65.00**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **Baseline Street**
Segment: **Waterman Avenue to Tippecanoe Avenue**

	DAYTIME			EVENING			NIGHTTIME			ADT	18029.18
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	128.00
INPUT PARAMETERS											
Vehicles per hour	1058.13	19.73	29.07	785.60	3.29	4.85	194.88	27.41	40.38	% A	93.23
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.74
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	4.03
ADJUSTMENTS											
Flow	23.92	6.63	8.31	22.63	-1.16	0.53	16.57	8.05	9.74		
Distance	-4.15	-4.15	-4.15	-4.15	-4.15	-4.15	-4.15	-4.15	-4.15	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	70.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	64.69
LEQ	62.13	53.79	60.32	60.83	46.00	52.53	54.78	55.21	61.74	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	64.69		EVENING LEQ	61.55		NIGHT LEQ	63.28		Use hour?	no
										GRADE dB	0.00
		CNEL	**70.00**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **5th Street**
Segment: **Interstate 215 SB Ramps to Interstate 215 NB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	21339.56
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	1647.00
INPUT PARAMETERS											
Vehicles per hour	1243.43	24.58	38.91	923.18	4.10	6.49	229.01	34.14	54.05	% A	92.56
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.88
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	4.56
ADJUSTMENTS											
Flow	24.62	7.58	9.57	23.33	-0.20	1.79	17.27	9.01	11.00		
Distance	-15.25	-15.25	-15.25	-15.25	-15.25	-15.25	-15.25	-15.25	-15.25	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	60.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	54.53
LEQ	51.73	43.65	50.49	50.44	35.86	42.71	44.38	45.07	51.91	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	54.53		EVENING LEQ	51.24		NIGHT LEQ	53.32		Use hour?	no
										GRADE dB	0.00
		CNEL	**60.00**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **5th Street**
Segment: **Interstate 215 SB Ramps to Interstate 215 NB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	21339.56
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	521.00
INPUT PARAMETERS											
Vehicles per hour	1243.43	24.58	38.91	923.18	4.10	6.49	229.01	34.14	54.05	% A	92.56
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.88
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	4.56
ADJUSTMENTS											
Flow	24.62	7.58	9.57	23.33	-0.20	1.79	17.27	9.01	11.00		
Distance	-10.25	-10.25	-10.25	-10.25	-10.25	-10.25	-10.25	-10.25	-10.25	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	65.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	59.53
LEQ	56.73	48.64	55.49	55.44	40.86	47.70	49.38	50.07	56.91	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	59.53		EVENING LEQ	56.24		NIGHT LEQ	58.32		Use hour?	no
										GRADE dB	0.00
		CNEL	**65.00**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **5th Street**
Segment: **Interstate 215 SB Ramps to Interstate 215 NB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	21339.56
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	165.00
INPUT PARAMETERS											
Vehicles per hour	1243.43	24.58	38.91	923.18	4.10	6.49	229.01	34.14	54.05	% A	92.56
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.88
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	4.56
ADJUSTMENTS											
Flow	24.62	7.58	9.57	23.33	-0.20	1.79	17.27	9.01	11.00		
Distance	-5.26	-5.26	-5.26	-5.26	-5.26	-5.26	-5.26	-5.26	-5.26	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	70.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	64.53
LEQ	61.72	53.64	60.48	60.43	45.86	52.70	54.38	55.06	61.91	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	64.53		EVENING LEQ	61.24		NIGHT LEQ	63.32		Use hour?	no
										GRADE dB	0.00
		CNEL	**70.00**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **5th Street**
Segment: **Interstate 215 NB Ramps to Sierra Way**

	DAYTIME			EVENING			NIGHTTIME			ADT	22234.06
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	1599.00
INPUT PARAMETERS											
Vehicles per hour	1303.70	24.50	36.46	967.93	4.08	6.08	240.11	34.03	50.64	% A	93.14
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.75
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	4.10
ADJUSTMENTS											
Flow	24.83	7.57	9.29	23.53	-0.22	1.51	17.48	8.99	10.72		
Distance	-15.12	-15.12	-15.12	-15.12	-15.12	-15.12	-15.12	-15.12	-15.12	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	60.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	54.66
LEQ	52.07	43.76	50.33	50.77	35.98	42.55	44.72	45.19	51.76	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	54.66		EVENING LEQ	51.51		NIGHT LEQ	53.28		Use hour?	no
										GRADE dB	0.00
		CNEL	**60.00**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **5th Street**
Segment: **Interstate 215 NB Ramps to Sierra Way**

	DAYTIME			EVENING			NIGHTTIME			ADT	22234.06
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	505.00
INPUT PARAMETERS											
Vehicles per hour	1303.70	24.50	36.46	967.93	4.08	6.08	240.11	34.03	50.64	% A	93.14
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.75
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	4.10
ADJUSTMENTS											
Flow	24.83	7.57	9.29	23.53	-0.22	1.51	17.48	8.99	10.72		
Distance	-10.11	-10.11	-10.11	-10.11	-10.11	-10.11	-10.11	-10.11	-10.11	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	65.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	59.67
LEQ	57.07	48.76	55.34	55.78	40.98	47.56	49.72	50.19	56.76	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	59.67		EVENING LEQ	56.51		NIGHT LEQ	58.28		Use hour?	no
										GRADE dB	0.00
		CNEL	**65.00**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **5th Street**
Segment: **Interstate 215 NB Ramps to Sierra Way**

	DAYTIME			EVENING			NIGHTTIME			ADT	22234.06
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	159.00
INPUT PARAMETERS											
Vehicles per hour	1303.70	24.50	36.46	967.93	4.08	6.08	240.11	34.03	50.64	% A	93.14
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.75
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	4.10
ADJUSTMENTS											
Flow	24.83	7.57	9.29	23.53	-0.22	1.51	17.48	8.99	10.72		
Distance	-5.09	-5.09	-5.09	-5.09	-5.09	-5.09	-5.09	-5.09	-5.09	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	70.02
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	64.69
LEQ	62.09	53.78	60.36	60.80	46.00	52.58	54.74	55.21	61.78	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	64.69		EVENING LEQ	61.53		NIGHT LEQ	63.30		Use hour?	no
										GRADE dB	0.00
		CNEL	**70.02**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **5th Street**
Segment: **Sierra Way to Waterman Avenue**

	DAYTIME			EVENING			NIGHTTIME			ADT	14448.99
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	938.00
INPUT PARAMETERS											
Vehicles per hour	854.05	14.99	20.27	634.09	2.50	3.38	157.29	20.82	28.15	% A	93.89
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.59
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	3.51
ADJUSTMENTS											
Flow	22.99	5.43	6.74	21.70	-2.35	-1.04	15.64	6.86	8.17		
Distance	-12.80	-12.80	-12.80	-12.80	-12.80	-12.80	-12.80	-12.80	-12.80	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	60.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	54.87
LEQ	52.55	43.94	50.10	51.25	36.16	42.32	45.20	45.37	51.53	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	54.87		EVENING LEQ	51.89		NIGHT LEQ	53.21		Use hour?	no
										GRADE dB	0.00
		CNEL	**60.00**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **5th Street**
Segment: **Sierra Way to Waterman Avenue**

	DAYTIME			EVENING			NIGHTTIME			ADT	14448.99
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	297.00
INPUT PARAMETERS											
Vehicles per hour	854.05	14.99	20.27	634.09	2.50	3.38	157.29	20.82	28.15	% A	93.89
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.59
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	3.51
ADJUSTMENTS											
Flow	22.99	5.43	6.74	21.70	-2.35	-1.04	15.64	6.86	8.17		
Distance	-7.81	-7.81	-7.81	-7.81	-7.81	-7.81	-7.81	-7.81	-7.81	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	65.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	59.86
LEQ	57.54	48.94	55.09	56.25	41.15	47.31	50.19	50.36	56.52	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	59.86		EVENING LEQ	56.89		NIGHT LEQ	58.21		Use hour?	no
										GRADE dB	0.00
		CNEL	**65.00**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **5th Street**
Segment: **Sierra Way to Waterman Avenue**

	DAYTIME			EVENING			NIGHTTIME			ADT	14448.99
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	93.00
INPUT PARAMETERS											
Vehicles per hour	854.05	14.99	20.27	634.09	2.50	3.38	157.29	20.82	28.15	% A	93.89
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.59
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	3.51
ADJUSTMENTS											
Flow	22.99	5.43	6.74	21.70	-2.35	-1.04	15.64	6.86	8.17		
Distance	-2.77	-2.77	-2.77	-2.77	-2.77	-2.77	-2.77	-2.77	-2.77	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	70.04
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	64.91
LEQ	62.58	53.98	60.14	61.29	46.20	52.35	55.24	55.41	61.56	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	64.91		EVENING LEQ	61.93		NIGHT LEQ	63.25		Use hour?	no
										GRADE dB	0.00
		CNEL	**70.04**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **5th Street**
Segment: **Waterman Avenue to Tippecanoe Avenue**

	DAYTIME			EVENING			NIGHTTIME			ADT	10254.26
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	661.00
INPUT PARAMETERS											
Vehicles per hour	606.47	10.59	14.20	450.27	1.76	2.37	111.70	14.71	19.73	% A	93.95
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.58
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	3.46
ADJUSTMENTS											
Flow	21.50	3.92	5.20	20.21	-3.86	-2.58	14.15	5.35	6.62		
Distance	-11.28	-11.28	-11.28	-11.28	-11.28	-11.28	-11.28	-11.28	-11.28	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	60.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	54.88
LEQ	52.58	43.95	50.07	51.29	36.17	42.29	45.23	45.38	51.50	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	54.88		EVENING LEQ	51.92		NIGHT LEQ	53.20		Use hour?	no
										GRADE dB	0.00
		CNEL	**60.00**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **5th Street**
Segment: **Waterman Avenue to Tippecanoe Avenue**

	DAYTIME			EVENING			NIGHTTIME			ADT	10254.26
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	209.00
INPUT PARAMETERS											
Vehicles per hour	606.47	10.59	14.20	450.27	1.76	2.37	111.70	14.71	19.73	% A	93.95
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.58
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	3.46
ADJUSTMENTS											
Flow	21.50	3.92	5.20	20.21	-3.86	-2.58	14.15	5.35	6.62		
Distance	-6.28	-6.28	-6.28	-6.28	-6.28	-6.28	-6.28	-6.28	-6.28	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	65.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	59.88
LEQ	57.58	48.95	55.08	56.29	41.17	47.29	50.23	50.38	56.50	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	59.88		EVENING LEQ	56.92		NIGHT LEQ	58.21		Use hour?	no
										GRADE dB	0.00
		CNEL	**65.00**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **5th Street**
Segment: **Waterman Avenue to Tippecanoe Avenue**

	DAYTIME			EVENING			NIGHTTIME			ADT	10254.26
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	66.00
INPUT PARAMETERS											
Vehicles per hour	606.47	10.59	14.20	450.27	1.76	2.37	111.70	14.71	19.73	% A	93.95
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.58
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	3.46
ADJUSTMENTS											
Flow	21.50	3.92	5.20	20.21	-3.86	-2.58	14.15	5.35	6.62		
Distance	-1.28	-1.28	-1.28	-1.28	-1.28	-1.28	-1.28	-1.28	-1.28	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	70.01
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	64.89
LEQ	62.59	53.96	60.08	61.29	46.18	52.30	55.24	55.39	61.51	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	64.89		EVENING LEQ	61.93		NIGHT LEQ	63.21		Use hour?	no
										GRADE dB	0.00
		CNEL	**70.01**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **5th Street**
Segment: **East of Tippecanoe Avenue**

	DAYTIME			EVENING			NIGHTTIME			ADT	10259.11
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	624.00
INPUT PARAMETERS											
Vehicles per hour	609.27	10.25	12.95	452.35	1.71	2.16	112.21	14.24	17.99	% A	94.34
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.50
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	3.16
ADJUSTMENTS											
Flow	21.52	3.78	4.80	20.23	-4.00	-2.98	14.17	5.21	6.22		
Distance	-11.03	-11.03	-11.03	-11.03	-11.03	-11.03	-11.03	-11.03	-11.03	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	60.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	55.00
LEQ	52.85	44.06	49.92	51.56	36.28	42.14	45.50	45.49	51.35	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	55.00		EVENING LEQ	52.14		NIGHT LEQ	53.17		Use hour?	no
										GRADE dB	0.00
		CNEL	**60.00**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **5th Street**
Segment: **East of Tippecanoe Avenue**

	DAYTIME			EVENING			NIGHTTIME			ADT	10259.11
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	197.00
INPUT PARAMETERS											
Vehicles per hour	609.27	10.25	12.95	452.35	1.71	2.16	112.21	14.24	17.99	% A	94.34
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.50
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	3.16
ADJUSTMENTS											
Flow	21.52	3.78	4.80	20.23	-4.00	-2.98	14.17	5.21	6.22		
Distance	-6.03	-6.03	-6.03	-6.03	-6.03	-6.03	-6.03	-6.03	-6.03	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	65.01
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	60.01
LEQ	57.86	49.07	54.93	56.56	41.29	47.15	50.51	50.50	56.36	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	60.01		EVENING LEQ	57.15		NIGHT LEQ	58.17		Use hour?	no
										GRADE dB	0.00
		CNEL	**65.01**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **5th Street**
Segment: **East of Tippecanoe Avenue**

	DAYTIME			EVENING			NIGHTTIME			ADT	10259.11
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	62.00
INPUT PARAMETERS											
Vehicles per hour	609.27	10.25	12.95	452.35	1.71	2.16	112.21	14.24	17.99	% A	94.34
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.50
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	3.16
ADJUSTMENTS											
Flow	21.52	3.78	4.80	20.23	-4.00	-2.98	14.17	5.21	6.22		
Distance	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	70.03
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	65.03
LEQ	62.88	54.09	59.95	61.58	46.31	52.17	55.53	55.52	61.38	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	65.03		EVENING LEQ	62.17		NIGHT LEQ	63.20		Use hour?	no
										GRADE dB	0.00
		CNEL	**70.03**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **5th Street**
Segment: **West of Interstate 210 SB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	21119.11
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	1520.00
INPUT PARAMETERS											
Vehicles per hour	1238.24	23.28	34.67	919.33	3.88	5.78	228.05	32.34	48.16	% A	93.14
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.76
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	4.10
ADJUSTMENTS											
Flow	24.60	7.34	9.07	23.31	-0.44	1.29	17.25	8.77	10.50		
Distance	-14.90	-14.90	-14.90	-14.90	-14.90	-14.90	-14.90	-14.90	-14.90	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	60.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	54.66
LEQ	52.06	43.76	50.33	50.77	35.98	42.55	44.72	45.18	51.76	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	54.66		EVENING LEQ	51.50		NIGHT LEQ	53.28		Use hour?	no
										GRADE dB	0.00
		CNEL	**60.00**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **5th Street**
Segment: **West of Interstate 210 SB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	21119.11
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	480.00
INPUT PARAMETERS											
Vehicles per hour	1238.24	23.28	34.67	919.33	3.88	5.78	228.05	32.34	48.16	% A	93.14
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.76
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	4.10
ADJUSTMENTS											
Flow	24.60	7.34	9.07	23.31	-0.44	1.29	17.25	8.77	10.50		
Distance	-9.89	-9.89	-9.89	-9.89	-9.89	-9.89	-9.89	-9.89	-9.89	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	65.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	59.67
LEQ	57.07	48.76	55.34	55.78	40.98	47.56	49.72	50.19	56.77	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	59.67		EVENING LEQ	56.51		NIGHT LEQ	58.28		Use hour?	no
										GRADE dB	0.00
		CNEL	**65.00**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **5th Street**
Segment: **West of Interstate 210 SB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	21119.11
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	152.00
INPUT PARAMETERS											
Vehicles per hour	1238.24	23.28	34.67	919.33	3.88	5.78	228.05	32.34	48.16	% A	93.14
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.76
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	4.10
ADJUSTMENTS											
Flow	24.60	7.34	9.07	23.31	-0.44	1.29	17.25	8.77	10.50		
Distance	-4.90	-4.90	-4.90	-4.90	-4.90	-4.90	-4.90	-4.90	-4.90	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	70.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	64.66
LEQ	62.06	53.76	60.33	60.77	45.98	52.55	54.72	55.18	61.76	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	64.66		EVENING LEQ	61.50		NIGHT LEQ	63.28		Use hour?	no
										GRADE dB	0.00
		CNEL	**70.00**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **5th Street**
Segment: **Interstate 210 SB Ramps to Interstate 210 NB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	20404.50
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	1556.00
INPUT PARAMETERS											
Vehicles per hour	1190.26	23.33	36.55	883.70	3.89	6.09	219.21	32.40	50.76	% A	92.66
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.86
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	4.48
ADJUSTMENTS											
Flow	24.43	7.35	9.30	23.14	-0.43	1.52	17.08	8.78	10.73		
Distance	-15.00	-15.00	-15.00	-15.00	-15.00	-15.00	-15.00	-15.00	-15.00	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	60.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	54.56
LEQ	51.79	43.66	50.46	50.50	35.88	42.68	44.44	45.09	51.89	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	54.56		EVENING LEQ	51.29		NIGHT LEQ	53.32		Use hour?	no
										GRADE dB	0.00
		CNEL	**60.00**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **5th Street**
Segment: **Interstate 210 SB Ramps to Interstate 210 NB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	20404.50
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	492.00
INPUT PARAMETERS											
Vehicles per hour	1190.26	23.33	36.55	883.70	3.89	6.09	219.21	32.40	50.76	% A	92.66
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.86
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	4.48
ADJUSTMENTS											
Flow	24.43	7.35	9.30	23.14	-0.43	1.52	17.08	8.78	10.73		
Distance	-10.00	-10.00	-10.00	-10.00	-10.00	-10.00	-10.00	-10.00	-10.00	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	65.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	59.56
LEQ	56.79	48.66	55.46	55.50	40.88	47.68	49.44	50.09	56.89	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	59.56		EVENING LEQ	56.29		NIGHT LEQ	58.32		Use hour?	no
										GRADE dB	0.00
		CNEL	**65.00**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **5th Street**
Segment: **Interstate 210 SB Ramps to Interstate 210 NB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	20404.50
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	156.00
INPUT PARAMETERS											
Vehicles per hour	1190.26	23.33	36.55	883.70	3.89	6.09	219.21	32.40	50.76	% A	92.66
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.86
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	4.48
ADJUSTMENTS											
Flow	24.43	7.35	9.30	23.14	-0.43	1.52	17.08	8.78	10.73		
Distance	-5.01	-5.01	-5.01	-5.01	-5.01	-5.01	-5.01	-5.01	-5.01	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	69.99
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	64.54
LEQ	61.78	53.65	60.45	60.48	45.87	52.67	54.43	55.08	61.88	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	64.54		EVENING LEQ	61.28		NIGHT LEQ	63.30		Use hour?	no
										GRADE dB	0.00
		CNEL	**69.99**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **5th Street**
Segment: **East of Interstate 210 NB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	23049.89
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	1870.00
INPUT PARAMETERS											
Vehicles per hour	1336.88	27.40	45.15	992.56	4.57	7.52	246.22	38.06	62.70	% A	92.13
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.97
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	4.90
ADJUSTMENTS											
Flow	24.93	8.05	10.22	23.64	0.27	2.44	17.59	9.48	11.65		
Distance	-15.80	-15.80	-15.80	-15.80	-15.80	-15.80	-15.80	-15.80	-15.80	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	60.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	54.44
LEQ	51.50	43.57	50.58	50.20	35.78	42.80	44.15	44.99	52.01	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	54.44		EVENING LEQ	51.06		NIGHT LEQ	53.35		Use hour?	no
										GRADE dB	0.00
		CNEL	**60.00**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **5th Street**
Segment: **East of Interstate 210 NB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	23049.89
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	592.00
INPUT PARAMETERS											
Vehicles per hour	1336.88	27.40	45.15	992.56	4.57	7.52	246.22	38.06	62.70	% A	92.13
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.97
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	4.90
ADJUSTMENTS											
Flow	24.93	8.05	10.22	23.64	0.27	2.44	17.59	9.48	11.65		
Distance	-10.80	-10.80	-10.80	-10.80	-10.80	-10.80	-10.80	-10.80	-10.80	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	65.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	59.44
LEQ	56.49	48.56	55.58	55.20	40.78	47.79	49.14	49.99	57.00	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	59.44		EVENING LEQ	56.05		NIGHT LEQ	58.35		Use hour?	no
										GRADE dB	0.00
		CNEL	**65.00**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **5th Street**
Segment: **East of Interstate 210 NB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	23049.89
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
										DISTANCE	187.00
INPUT PARAMETERS											
Vehicles per hour	1336.88	27.40	45.15	992.56	4.57	7.52	246.22	38.06	62.70	% A	92.13
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.97
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	4.90
ADJUSTMENTS											
Flow	24.93	8.05	10.22	23.64	0.27	2.44	17.59	9.48	11.65		
Distance	-5.80	-5.80	-5.80	-5.80	-5.80	-5.80	-5.80	-5.80	-5.80	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	70.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	64.44
LEQ	61.50	53.57	60.58	60.20	45.78	52.80	54.15	54.99	62.01	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	64.44		EVENING LEQ	61.06		NIGHT LEQ	63.35		Use hour?	no
										GRADE dB	0.00
		CNEL	**70.00**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **3rd Street**
Segment: **West of Interstate 215 SB Ramps**

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	3270.00
										SPEED	35.00
										DISTANCE	80.00
INPUT PARAMETERS											
Vehicles per hour	200.55	2.45	0.95	148.21	0.44	0.44	37.12	3.27	1.27	% A	97.40
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	1.84
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	0.74
ADJUSTMENTS											
Flow	17.28	-1.85	-5.95	15.96	-9.36	-9.35	9.95	-0.60	-4.70		
Distance	-2.11	-2.11	-2.11	-2.11	-2.11	-2.11	-2.11	-2.11	-2.11	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	60.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	56.29
LEQ	55.27	45.87	46.98	53.96	38.36	43.59	47.95	47.12	48.23	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	56.29		EVENING LEQ	54.45		NIGHT LEQ	52.56		Use hour?	no
										GRADE dB	0.00
		CNEL	**60.00**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **3rd Street**
Segment: **West of Interstate 215 SB Ramps**

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	3270.00
										SPEED	35.00
										DISTANCE	25.00
INPUT PARAMETERS											
Vehicles per hour	200.55	2.45	0.95	148.21	0.44	0.44	37.12	3.27	1.27	% A	97.40
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	1.84
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	0.74
ADJUSTMENTS											
Flow	17.28	-1.85	-5.95	15.96	-9.36	-9.35	9.95	-0.60	-4.70		
Distance	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	65.05
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	61.34
LEQ	60.33	50.92	52.03	59.01	43.41	48.64	53.00	52.17	53.28	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	61.34		EVENING LEQ	59.50		NIGHT LEQ	57.61		Use hour?	no
										GRADE dB	0.00
		CNEL	**65.05**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **3rd Street**
Segment: **West of Interstate 215 SB Ramps**

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	3270.00
										SPEED	35.00
										DISTANCE	8.00
INPUT PARAMETERS											
Vehicles per hour	200.55	2.45	0.95	148.21	0.44	0.44	37.12	3.27	1.27	% A	97.40
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	1.84
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	0.74
ADJUSTMENTS											
Flow	17.28	-1.85	-5.95	15.96	-9.36	-9.35	9.95	-0.60	-4.70		
Distance	7.89	7.89	7.89	7.89	7.89	7.89	7.89	7.89	7.89	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	70.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	66.29
LEQ	65.27	55.87	56.98	63.96	48.36	53.59	57.95	57.12	58.23	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	66.29		EVENING LEQ	64.45		NIGHT LEQ	62.56		Use hour?	no
										GRADE dB	0.00
		CNEL	**70.00**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **3rd Street**
Segment: **Interstate 215 SB Ramps to Interstate 215 NB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	5319.93
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	130.00
INPUT PARAMETERS											
Vehicles per hour	326.27	3.99	1.55	241.12	0.71	0.71	60.40	5.32	2.07	% A	97.40
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	1.84
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	0.74
ADJUSTMENTS											
Flow	19.39	0.26	-3.84	18.08	-7.25	-7.23	12.06	1.51	-2.59		
Distance	-4.22	-4.22	-4.22	-4.22	-4.22	-4.22	-4.22	-4.22	-4.22	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	60.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	56.29
LEQ	55.28	45.87	46.99	53.97	38.36	43.59	47.95	47.12	48.24	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	56.29		EVENING LEQ	54.46		NIGHT LEQ	52.57		Use hour?	no
										GRADE dB	0.00
		CNEL	**60.00**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **3rd Street**
Segment: **Interstate 215 SB Ramps to Interstate 215 NB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	5319.93
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	41.00
INPUT PARAMETERS											
Vehicles per hour	326.27	3.99	1.55	241.12	0.71	0.71	60.40	5.32	2.07	% A	97.40
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	1.84
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	0.74
ADJUSTMENTS											
Flow	19.39	0.26	-3.84	18.08	-7.25	-7.23	12.06	1.51	-2.59		
Distance	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	65.01
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	61.30
LEQ	60.29	50.88	52.00	58.98	43.37	48.60	52.97	52.13	53.25	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	61.30		EVENING LEQ	59.47		NIGHT LEQ	57.58		Use hour?	no
										GRADE dB	0.00
		CNEL	**65.01**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **3rd Street**
Segment: **East of Interstate 215 NB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	7919.86
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	19.00
INPUT PARAMETERS											
Vehicles per hour	485.73	5.94	2.31	358.96	1.05	1.06	89.91	7.92	3.08	% A	97.40
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	1.84
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	0.74
ADJUSTMENTS											
Flow	21.12	1.99	-2.11	19.80	-5.52	-5.51	13.79	3.24	-0.86		
Distance	4.13	4.13	4.13	4.13	4.13	4.13	4.13	4.13	4.13	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	70.08
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	66.37
LEQ	65.36	55.95	57.07	64.05	48.44	53.67	58.03	57.20	58.32	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	66.37		EVENING LEQ	64.54		NIGHT LEQ	62.65		Use hour?	no
										GRADE dB	0.00
		CNEL	**70.08**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **3rd Street**
Segment: **East of Interstate 215 NB Ramps**

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	7919.86
										SPEED	35.00
										DISTANCE	193.00
INPUT PARAMETERS											
Vehicles per hour	485.73	5.94	2.31	358.96	1.05	1.06	89.91	7.92	3.08	% A	97.40
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	1.84
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	0.74
ADJUSTMENTS											
Flow	21.12	1.99	-2.11	19.80	-5.52	-5.51	13.79	3.24	-0.86		
Distance	-5.94	-5.94	-5.94	-5.94	-5.94	-5.94	-5.94	-5.94	-5.94	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	60.01
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	56.30
LEQ	55.29	45.88	47.00	53.98	38.37	43.60	47.97	47.13	48.25	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	56.30		EVENING LEQ	54.47		NIGHT LEQ	52.58		Use hour?	no
										GRADE dB	0.00
		CNEL	**60.01**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **3rd Street**
Segment: **East of Interstate 215 NB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	7919.86
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	61.00
INPUT PARAMETERS											
Vehicles per hour	485.73	5.94	2.31	358.96	1.05	1.06	89.91	7.92	3.08	% A	97.40
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	1.84
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	0.74
ADJUSTMENTS											
Flow	21.12	1.99	-2.11	19.80	-5.52	-5.51	13.79	3.24	-0.86		
Distance	-0.93	-0.93	-0.93	-0.93	-0.93	-0.93	-0.93	-0.93	-0.93	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	65.02
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	61.31
LEQ	60.29	50.89	52.00	58.98	43.38	48.61	52.97	52.13	53.25	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	61.31		EVENING LEQ	59.47		NIGHT LEQ	57.58		Use hour?	no
										GRADE dB	0.00
		CNEL	**65.02**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **3rd Street**
Segment: **East of Interstate 215 NB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	7919.86
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	19.00
INPUT PARAMETERS											
Vehicles per hour	485.73	5.94	2.31	358.96	1.05	1.06	89.91	7.92	3.08	% A	97.40
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	1.84
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	0.74
ADJUSTMENTS											
Flow	21.12	1.99	-2.11	19.80	-5.52	-5.51	13.79	3.24	-0.86		
Distance	4.13	4.13	4.13	4.13	4.13	4.13	4.13	4.13	4.13	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	70.08
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	66.37
LEQ	65.36	55.95	57.07	64.05	48.44	53.67	58.03	57.20	58.32	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	66.37		EVENING LEQ	64.54		NIGHT LEQ	62.65		Use hour?	no
										GRADE dB	0.00
		CNEL	**70.08**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **2nd Street**
Segment: **West of Interstate 215 SB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	10960.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	752.00
INPUT PARAMETERS											
Vehicles per hour	634.77	13.15	21.92	471.28	2.19	3.65	116.91	18.27	30.44	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	5.00
ADJUSTMENTS											
Flow	22.28	5.44	7.66	20.99	-2.34	-0.12	14.93	6.87	9.09		
Distance	-11.84	-11.84	-11.84	-11.84	-11.84	-11.84	-11.84	-11.84	-11.84	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	60.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	54.11
LEQ	50.55	43.43	50.87	49.25	35.65	43.08	43.20	44.86	52.29	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	54.11		EVENING LEQ	50.34		NIGHT LEQ	53.44		Use hour?	no
										GRADE dB	0.00
		CNEL	**60.00**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **2nd Street**
Segment: **West of Interstate 215 SB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	10960.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	238.00
INPUT PARAMETERS											
Vehicles per hour	634.77	13.15	21.92	471.28	2.19	3.65	116.91	18.27	30.44	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	5.00
ADJUSTMENTS											
Flow	22.28	5.44	7.66	20.99	-2.34	-0.12	14.93	6.87	9.09		
Distance	-6.85	-6.85	-6.85	-6.85	-6.85	-6.85	-6.85	-6.85	-6.85	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	65.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	59.10
LEQ	55.54	48.43	55.86	54.25	40.64	48.08	48.20	49.85	57.29	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	59.10		EVENING LEQ	55.34		NIGHT LEQ	58.44		Use hour?	no
										GRADE dB	0.00
		CNEL	**65.00**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **2nd Street**
Segment: **West of Interstate 215 SB Ramps**

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	10960.00
										SPEED	35.00
										DISTANCE	75.00
INPUT PARAMETERS											
Vehicles per hour	634.77	13.15	21.92	471.28	2.19	3.65	116.91	18.27	30.44	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	5.00
ADJUSTMENTS											
Flow	22.28	5.44	7.66	20.99	-2.34	-0.12	14.93	6.87	9.09		
Distance	-1.83	-1.83	-1.83	-1.83	-1.83	-1.83	-1.83	-1.83	-1.83	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	70.01
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	64.12
LEQ	60.56	53.44	60.88	59.27	45.66	53.10	53.21	54.87	62.30	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	64.12		EVENING LEQ	60.35		NIGHT LEQ	63.46		Use hour?	no
										GRADE dB	0.00
		CNEL	**70.01**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **2nd Street**
Segment: **Interstate 215 SB Ramps to Interstate 215 NB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	17649.98
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	1206.00
INPUT PARAMETERS											
Vehicles per hour	1022.53	21.14	35.15	759.18	3.52	5.86	188.32	29.36	48.81	% A	92.03
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.99
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	4.98
ADJUSTMENTS											
Flow	24.35	7.50	9.71	23.06	-0.28	1.93	17.00	8.93	11.14		
Distance	-13.89	-13.89	-13.89	-13.89	-13.89	-13.89	-13.89	-13.89	-13.89	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	60.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	54.12
LEQ	50.57	43.44	50.86	49.27	35.66	43.08	43.22	44.87	52.29	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	54.12		EVENING LEQ	50.36		NIGHT LEQ	53.45		Use hour?	no
										GRADE dB	0.00
		CNEL	**60.00**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **2nd Street**
Segment: **Interstate 215 SB Ramps to Interstate 215 NB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	17649.98
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	382.00
INPUT PARAMETERS											
Vehicles per hour	1022.53	21.14	35.15	759.18	3.52	5.86	188.32	29.36	48.81	% A	92.03
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.99
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	4.98
ADJUSTMENTS											
Flow	24.35	7.50	9.71	23.06	-0.28	1.93	17.00	8.93	11.14		
Distance	-8.90	-8.90	-8.90	-8.90	-8.90	-8.90	-8.90	-8.90	-8.90	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	65.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	59.11
LEQ	55.56	48.43	55.86	54.27	40.65	48.08	48.21	49.86	57.28	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	59.11		EVENING LEQ	55.35		NIGHT LEQ	58.44		Use hour?	no
										GRADE dB	0.00
		CNEL	**65.00**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **2nd Street**
Segment: **Interstate 215 SB Ramps to Interstate 215 NB Ramps**

	DAYTIME			EVENING			NIGHTTIME			ADT	17649.98
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	121.00
INPUT PARAMETERS											
Vehicles per hour	1022.53	21.14	35.15	759.18	3.52	5.86	188.32	29.36	48.81	% A	92.03
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.99
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	4.98
ADJUSTMENTS											
Flow	24.35	7.50	9.71	23.06	-0.28	1.93	17.00	8.93	11.14		
Distance	-3.91	-3.91	-3.91	-3.91	-3.91	-3.91	-3.91	-3.91	-3.91	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	69.99
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	64.10
LEQ	60.55	53.42	60.85	59.26	45.64	53.07	53.20	54.85	62.28	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	64.10		EVENING LEQ	60.34		NIGHT LEQ	63.43		Use hour?	no
										GRADE dB	0.00
		CNEL	**69.99**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **2nd Street**
Segment: **Interstate 215 NB Ramps to Waterman Avenue**

	DAYTIME			EVENING			NIGHTTIME			ADT	14289.95
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	970.00
INPUT PARAMETERS											
Vehicles per hour	828.43	17.04	28.18	615.06	2.84	4.70	152.57	23.67	39.14	% A	92.09
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.98
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	4.93
ADJUSTMENTS											
Flow	23.44	6.57	8.75	22.14	-1.21	0.97	16.09	7.99	10.18		
Distance	-12.95	-12.95	-12.95	-12.95	-12.95	-12.95	-12.95	-12.95	-12.95	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	60.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	54.12
LEQ	50.60	43.45	50.85	49.30	35.67	43.07	43.25	44.87	52.28	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	54.12		EVENING LEQ	50.38		NIGHT LEQ	53.44		Use hour?	no
										GRADE dB	0.00
		CNEL	**60.00**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **2nd Street**
Segment: **Interstate 215 NB Ramps to Waterman Avenue**

	DAYTIME			EVENING			NIGHTTIME			ADT	14289.95
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	307.00
INPUT PARAMETERS											
Vehicles per hour	828.43	17.04	28.18	615.06	2.84	4.70	152.57	23.67	39.14	% A	92.09
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.98
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	4.93
ADJUSTMENTS											
Flow	23.44	6.57	8.75	22.14	-1.21	0.97	16.09	7.99	10.18		
Distance	-7.95	-7.95	-7.95	-7.95	-7.95	-7.95	-7.95	-7.95	-7.95	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	65.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	59.12
LEQ	55.59	48.44	55.85	54.30	40.66	48.07	48.25	49.87	57.27	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	59.12		EVENING LEQ	55.38		NIGHT LEQ	58.44		Use hour?	no
										GRADE dB	0.00
		CNEL	**65.00**								

FHWA Sound32 Spreadsheet

Existing Plus Project Traffic Noise

Project: **6499 Waterman Gardens**
Road: **2nd Street**
Segment: **Interstate 215 NB Ramps to Waterman Avenue**

	DAYTIME			EVENING			NIGHTTIME			ADT	14289.95
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
										DISTANCE	97.00
INPUT PARAMETERS											
Vehicles per hour	828.43	17.04	28.18	615.06	2.84	4.70	152.57	23.67	39.14	% A	92.09
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.98
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	4.93
ADJUSTMENTS											
Flow	23.44	6.57	8.75	22.14	-1.21	0.97	16.09	7.99	10.18		
Distance	-2.95	-2.95	-2.95	-2.95	-2.95	-2.95	-2.95	-2.95	-2.95	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	70.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	64.12
LEQ	60.60	53.45	60.85	59.30	45.67	53.07	53.25	54.87	62.28	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	64.12		EVENING LEQ	60.38		NIGHT LEQ	63.44		Use hour?	no
										GRADE dB	0.00
		CNEL	**70.00**								

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - Waterman Avenue
North of 30th Street

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	18840.00
										SPEED	35.00
										DISTANCE	1294.00
INPUT PARAMETERS											
Vehicles per hour	1091.10	22.61	37.68	810.02	3.77	6.28	200.87	31.40	52.33	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	60.00
ADJUSTMENTS										DAY LEQ	54.10
Flow	24.63	7.80	10.01	23.34	0.01	2.23	17.28	9.22	11.44		
Distance	-14.20	-14.20	-14.20	-14.20	-14.20	-14.20	-14.20	-14.20	-14.20	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	50.54	43.42	50.86	49.25	35.64	43.08	43.19	44.85	52.29	GRADE dB	0.00

DAY LEQ	54.10		EVENING LE(	50.34		NIGHT LEQ	53.44
CNEL		**60.00**					

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - Waterman Avenue
North of 30th Street

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	18840.00
										SPEED	35.00
										DISTANCE	409.00
INPUT PARAMETERS											
Vehicles per hour	1091.10	22.61	37.68	810.02	3.77	6.28	200.87	31.40	52.33	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	65.00
ADJUSTMENTS										DAY LEQ	59.11
Flow	24.63	7.80	10.01	23.34	0.01	2.23	17.28	9.22	11.44		
Distance	-9.20	-9.20	-9.20	-9.20	-9.20	-9.20	-9.20	-9.20	-9.20	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	55.54	48.43	55.86	54.25	40.65	48.08	48.19	49.85	57.29	GRADE dB	0.00

DAY LEQ	59.11		EVENING LE(	55.34		NIGHT LEQ	58.44
CNEL		**65.00**					

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - Waterman Avenue
North of 30th Street

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	18840.00
										SPEED	35.00
										DISTANCE	129.00
INPUT PARAMETERS											
Vehicles per hour	1091.10	22.61	37.68	810.02	3.77	6.28	200.87	31.40	52.33	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	70.01
ADJUSTMENTS										DAY LEQ	64.12
Flow	24.63	7.80	10.01	23.34	0.01	2.23	17.28	9.22	11.44		
Distance	-4.19	-4.19	-4.19	-4.19	-4.19	-4.19	-4.19	-4.19	-4.19	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	60.56	53.44	60.87	59.26	45.66	53.09	53.21	54.86	62.30	GRADE dB	0.00

DAY LEQ	64.12		EVENING LE(	60.35		NIGHT LEQ	63.45
CNEL		**70.01**					

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - Waterman Avenue
30th Street to SR-210 EB Ramps

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	22275.00
										SPEED	35.00
										DISTANCE	1530.00
INPUT PARAMETERS											
Vehicles per hour	1290.03	26.73	44.55	957.71	4.46	7.43	237.49	37.13	61.88	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	60.00
ADJUSTMENTS										DAY LEQ	54.10
Flow	25.36	8.52	10.74	24.07	0.74	2.96	18.01	9.95	12.17		
Distance	-14.93	-14.93	-14.93	-14.93	-14.93	-14.93	-14.93	-14.93	-14.93	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	50.54	43.42	50.86	49.25	35.64	43.08	43.19	44.85	52.29	GRADE dB	0.00

DAY LEQ	54.10		EVENING LE(	50.34		NIGHT LEQ	53.44
CNEL		**60.00**					

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - Waterman Avenue
30th Street to SR-210 EB Ramps

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	22275.00
										SPEED	35.00
										DISTANCE	483.00
INPUT PARAMETERS											
Vehicles per hour	1290.03	26.73	44.55	957.71	4.46	7.43	237.49	37.13	61.88	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	65.00
ADJUSTMENTS										DAY LEQ	59.11
Flow	25.36	8.52	10.74	24.07	0.74	2.96	18.01	9.95	12.17		
Distance	-9.92	-9.92	-9.92	-9.92	-9.92	-9.92	-9.92	-9.92	-9.92	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	55.55	48.43	55.87	54.26	40.65	48.09	48.20	49.86	57.29	GRADE dB	0.00

DAY LEQ	59.11		EVENING LE(	55.35		NIGHT LEQ	58.45
CNEL		**65.00**					

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - Waterman Avenue
30th Street to SR-210 EB Ramps

	DAYTIME			EVENING			NIGHTTIME		
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS
INPUT PARAMETERS									
Vehicles per hour	1290.03	26.73	44.55	957.71	4.46	7.43	237.49	37.13	61.88
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05
ADJUSTMENTS									
Flow	25.36	8.52	10.74	24.07	0.74	2.96	18.01	9.95	12.17
Distance	-4.93	-4.93	-4.93	-4.93	-4.93	-4.93	-4.93	-4.93	-4.93
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	60.54	53.42	60.86	59.25	45.64	53.08	53.19	54.85	62.29

ADT	22275.00
SPEED	35.00
DISTANCE	153.00
% A	92.00
% MT	3.00
% HT	5.00
LEFT	-90.00
RIGHT	90.00
CNEL	70.00
DAY LEQ	64.10
Day hour	89.00
Absorbtive?	no
Use hour?	no
GRADE dB	0.00

DAY LEQ 64.10 EVENING LEQ 60.34 NIGHT LEQ 63.44

CNEL 70.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - Waterman Avenue
SR-210 EB Ramps to Highland Avenue

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	18910.00
										SPEED	35.00
										DISTANCE	1299.00
INPUT PARAMETERS											
Vehicles per hour	1095.15	22.69	37.82	813.03	3.78	6.30	201.61	31.52	52.53	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	60.00
ADJUSTMENTS										DAY LEQ	54.10
Flow	24.65	7.81	10.03	23.35	0.03	2.25	17.30	9.24	11.46		
Distance	-14.22	-14.22	-14.22	-14.22	-14.22	-14.22	-14.22	-14.22	-14.22	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	50.54	43.42	50.86	49.25	35.64	43.08	43.19	44.85	52.29	GRADE dB	0.00

DAY LEQ	54.10	EVENING l	50.34	NIGHT LEQ	53.44

CNEL **60.00**

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - Waterman Avenue
SR-210 EB Ramps to Highland Avenue

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	18910.00
										SPEED	35.00
										DISTANCE	410.00
INPUT PARAMETERS											
Vehicles per hour	1095.15	22.69	37.82	813.03	3.78	6.30	201.61	31.52	52.53	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	65.00
ADJUSTMENTS										DAY LEQ	59.11
Flow	24.65	7.81	10.03	23.35	0.03	2.25	17.30	9.24	11.46		
Distance	-9.21	-9.21	-9.21	-9.21	-9.21	-9.21	-9.21	-9.21	-9.21	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	55.55	48.43	55.87	54.26	40.65	48.09	48.20	49.86	57.30	GRADE dB	0.00

DAY LEQ	59.11	EVENING l	55.35	NIGHT LEQ	58.45

CNEL **65.00**

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - Waterman Avenue
SR-210 EB Ramps to Highland Avenue

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	18910.00
										SPEED	35.00
										DISTANCE	129.00
INPUT PARAMETERS											
Vehicles per hour	1095.15	22.69	37.82	813.03	3.78	6.30	201.61	31.52	52.53	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	70.03
ADJUSTMENTS										DAY LEQ	64.13
Flow	24.65	7.81	10.03	23.35	0.03	2.25	17.30	9.24	11.46		
Distance	-4.19	-4.19	-4.19	-4.19	-4.19	-4.19	-4.19	-4.19	-4.19	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	60.57	53.45	60.89	59.28	45.67	53.11	53.22	54.88	62.32	GRADE dB	0.00

DAY LEQ	64.13	EVENING l	60.37	NIGHT LEQ	63.47
CNEL	**70.03**				

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - Waterman Avenue
Highland Avenue to Baseline Street

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	15985.00
										SPEED	35.00
										DISTANCE	1098.00
INPUT PARAMETERS											
Vehicles per hour	925.76	19.18	31.97	687.27	3.20	5.33	170.43	26.64	44.40	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	60.00
ADJUSTMENTS										DAY LEQ	54.10
Flow	23.92	7.08	9.30	22.62	-0.70	1.52	16.57	8.51	10.73		
Distance	-13.49	-13.49	-13.49	-13.49	-13.49	-13.49	-13.49	-13.49	-13.49	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	50.54	43.42	50.86	49.25	35.64	43.08	43.19	44.85	52.29	GRADE dB	0.00

DAY LEQ	54.10	EVENING l	50.34	NIGHT LEQ	53.44

CNEL **60.00**

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - Waterman Avenue
Highland Avenue to Baseline Street

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	15985.00
										SPEED	35.00
										DISTANCE	347.00
INPUT PARAMETERS											
Vehicles per hour	925.76	19.18	31.97	687.27	3.20	5.33	170.43	26.64	44.40	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	65.00
ADJUSTMENTS										DAY LEQ	59.11
Flow	23.92	7.08	9.30	22.62	-0.70	1.52	16.57	8.51	10.73		
Distance	-8.48	-8.48	-8.48	-8.48	-8.48	-8.48	-8.48	-8.48	-8.48	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	55.54	48.43	55.86	54.25	40.65	48.08	48.20	49.85	57.29	GRADE dB	0.00

DAY LEQ 59.11 EVENING l 55.34 NIGHT LEQ 58.44

CNEL 65.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - Waterman Avenue
Highland Avenue to Baseline Street

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	15985.00
										SPEED	35.00
										DISTANCE	110.00
INPUT PARAMETERS											
Vehicles per hour	925.76	19.18	31.97	687.27	3.20	5.33	170.43	26.64	44.40	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	69.99
ADJUSTMENTS										DAY LEQ	64.09
Flow	23.92	7.08	9.30	22.62	-0.70	1.52	16.57	8.51	10.73		
Distance	-3.49	-3.49	-3.49	-3.49	-3.49	-3.49	-3.49	-3.49	-3.49	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	60.53	53.42	60.85	59.24	45.63	53.07	53.18	54.84	62.28	GRADE dB	0.00

DAY LEQ 64.09 EVENING l 60.33 NIGHT LEQ 63.43

CNEL 69.99

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - Waterman Avenue
Baseline Street to 9th Street

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	19615.00
										SPEED	35.00
										DISTANCE	1345.00
INPUT PARAMETERS											
Vehicles per hour	1135.98	23.54	39.23	843.34	3.92	6.54	209.13	32.69	54.49	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	60.00
ADJUSTMENTS										DAY LEQ	54.11
Flow	24.81	7.97	10.19	23.51	0.19	2.41	17.46	9.40	11.62		
Distance	-14.37	-14.37	-14.37	-14.37	-14.37	-14.37	-14.37	-14.37	-14.37	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	50.55	43.43	50.87	49.26	35.65	43.09	43.20	44.86	52.29	GRADE dB	0.00

DAY LEQ 54.11 EVENING l 50.35 NIGHT LEQ 53.45

CNEL 60.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - Waterman Avenue
Baseline Street to 9th Street

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	19615.00
										SPEED	35.00
										DISTANCE	426.00
INPUT PARAMETERS											
Vehicles per hour	1135.98	23.54	39.23	843.34	3.92	6.54	209.13	32.69	54.49	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	65.00
ADJUSTMENTS										DAY LEQ	59.10
Flow	24.81	7.97	10.19	23.51	0.19	2.41	17.46	9.40	11.62		
Distance	-9.37	-9.37	-9.37	-9.37	-9.37	-9.37	-9.37	-9.37	-9.37	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	55.54	48.42	55.86	54.25	40.64	48.08	48.19	49.85	57.29	GRADE dB	0.00

DAY LEQ 59.10 EVENING l 55.34 NIGHT LEQ 58.44

CNEL 65.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - Waterman Avenue
Baseline Street to 9th Street

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	19615.00
										SPEED	35.00
										DISTANCE	134.00
INPUT PARAMETERS											
Vehicles per hour	1135.98	23.54	39.23	843.34	3.92	6.54	209.13	32.69	54.49	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	70.02
ADJUSTMENTS										DAY LEQ	64.13
Flow	24.81	7.97	10.19	23.51	0.19	2.41	17.46	9.40	11.62		
Distance	-4.35	-4.35	-4.35	-4.35	-4.35	-4.35	-4.35	-4.35	-4.35	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	60.57	53.45	60.88	59.27	45.67	53.10	53.22	54.87	62.31	GRADE dB	0.00

DAY LEQ 64.13 EVENING l 60.36 NIGHT LEQ 63.46

CNEL 70.02

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - Waterman Avenue
9th Street to 5th Street

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	19820.00
										SPEED	35.00
										DISTANCE	1360.00
INPUT PARAMETERS											
Vehicles per hour	1147.86	23.78	39.64	852.15	3.96	6.61	211.32	33.03	55.06	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	60.00
ADJUSTMENTS										DAY LEQ	54.11
Flow	24.85	8.02	10.23	23.56	0.23	2.45	17.50	9.44	11.66		
Distance	-14.42	-14.42	-14.42	-14.42	-14.42	-14.42	-14.42	-14.42	-14.42	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	50.55	43.43	50.87	49.25	35.65	43.08	43.20	44.86	52.29	GRADE dB	0.00

DAY LEQ	54.11	EVENING l	50.34	NIGHT LEQ	53.44

CNEL **60.00**

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - Waterman Avenue
9th Street to 5th Street

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	19820.00
										SPEED	35.00
										DISTANCE	430.00
INPUT PARAMETERS											
Vehicles per hour	1147.86	23.78	39.64	852.15	3.96	6.61	211.32	33.03	55.06	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	65.00
ADJUSTMENTS										DAY LEQ	59.11
Flow	24.85	8.02	10.23	23.56	0.23	2.45	17.50	9.44	11.66		
Distance	-9.42	-9.42	-9.42	-9.42	-9.42	-9.42	-9.42	-9.42	-9.42	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	55.55	48.43	55.87	54.25	40.65	48.08	48.20	49.86	57.29	GRADE dB	0.00

DAY LEQ	59.11	EVENING l	55.34	NIGHT LEQ	58.44

CNEL **65.00**

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - Waterman Avenue
9th Street to 5th Street

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	19820.00
										SPEED	35.00
										DISTANCE	136.00
INPUT PARAMETERS											
Vehicles per hour	1147.86	23.78	39.64	852.15	3.96	6.61	211.32	33.03	55.06	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	70.00
ADJUSTMENTS										DAY LEQ	64.11
Flow	24.85	8.02	10.23	23.56	0.23	2.45	17.50	9.44	11.66		
Distance	-4.42	-4.42	-4.42	-4.42	-4.42	-4.42	-4.42	-4.42	-4.42	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	60.55	53.43	60.87	59.25	45.65	53.08	53.20	54.86	62.29	GRADE dB	0.00

DAY LEQ 64.11 EVENING l 60.34 NIGHT LEQ 63.44

CNEL 70.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - Waterman Avenue
5th Street to 2nd Street

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	21030.00
										SPEED	35.00
										DISTANCE	1442.00
INPUT PARAMETERS											
Vehicles per hour	1217.93	25.24	42.06	904.18	4.21	7.01	224.22	35.05	58.42	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	60.00
ADJUSTMENTS										DAY LEQ	54.11
Flow	25.11	8.27	10.49	23.82	0.49	2.71	17.76	9.70	11.92		
Distance	-14.67	-14.67	-14.67	-14.67	-14.67	-14.67	-14.67	-14.67	-14.67	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	50.55	43.43	50.87	49.26	35.65	43.09	43.20	44.86	52.29	GRADE dB	0.00

DAY LEQ 54.11 EVENING l 50.35 NIGHT LEQ 53.45

CNEL 60.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - Waterman Avenue
5th Street to 2nd Street

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	21030.00
										SPEED	35.00
										DISTANCE	456.00
INPUT PARAMETERS											
Vehicles per hour	1217.93	25.24	42.06	904.18	4.21	7.01	224.22	35.05	58.42	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	65.00
ADJUSTMENTS										DAY LEQ	59.11
Flow	25.11	8.27	10.49	23.82	0.49	2.71	17.76	9.70	11.92		
Distance	-9.67	-9.67	-9.67	-9.67	-9.67	-9.67	-9.67	-9.67	-9.67	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	55.55	48.43	55.87	54.26	40.65	48.09	48.20	49.86	57.29	GRADE dB	0.00

DAY LEQ	59.11	EVENING l	55.35	NIGHT LEQ	58.45

CNEL **65.00**

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - Waterman Avenue
5th Street to 2nd Street

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	21030.00
										SPEED	35.00
										DISTANCE	144.00
INPUT PARAMETERS											
Vehicles per hour	1217.93	25.24	42.06	904.18	4.21	7.01	224.22	35.05	58.42	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	70.01
ADJUSTMENTS										DAY LEQ	64.12
Flow	25.11	8.27	10.49	23.82	0.49	2.71	17.76	9.70	11.92		
Distance	-4.66	-4.66	-4.66	-4.66	-4.66	-4.66	-4.66	-4.66	-4.66	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	60.56	53.44	60.87	59.26	45.66	53.09	53.21	54.86	62.30	GRADE dB	0.00

DAY LEQ 64.12 EVENING l 60.35 NIGHT LEQ 63.45

CNEL **70.01**

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - Waterman Avenue
South of 2nd Street

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	8890.00
										SPEED	35.00
										DISTANCE	610.00
INPUT PARAMETERS											
Vehicles per hour	514.86	10.67	17.78	382.22	1.78	2.96	94.78	14.82	24.69	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	60.00
ADJUSTMENTS										DAY LEQ	54.11
Flow	21.37	4.53	6.75	20.08	-3.25	-1.03	14.02	5.96	8.18		
Distance	-10.93	-10.93	-10.93	-10.93	-10.93	-10.93	-10.93	-10.93	-10.93	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	50.55	43.43	50.87	49.25	35.65	43.08	43.20	44.86	52.29	GRADE dB	0.00

DAY LEQ 54.11 EVENING l 50.34 NIGHT LEQ 53.44

CNEL 60.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - Waterman Avenue
South of 2nd Street

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	8890.00
										SPEED	35.00
										DISTANCE	193.00
INPUT PARAMETERS											
Vehicles per hour	514.86	10.67	17.78	382.22	1.78	2.96	94.78	14.82	24.69	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	65.00
ADJUSTMENTS										DAY LEQ	59.11
Flow	21.37	4.53	6.75	20.08	-3.25	-1.03	14.02	5.96	8.18		
Distance	-5.94	-5.94	-5.94	-5.94	-5.94	-5.94	-5.94	-5.94	-5.94	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	55.54	48.43	55.86	54.25	40.65	48.08	48.19	49.85	57.29	GRADE dB	0.00

DAY LEQ 59.11 EVENING l 55.34 NIGHT LEQ 58.44

CNEL 65.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - Waterman Avenue
South of 2nd Street

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	8890.00
										SPEED	35.00
										DISTANCE	61.00
INPUT PARAMETERS											
Vehicles per hour	514.86	10.67	17.78	382.22	1.78	2.96	94.78	14.82	24.69	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	70.00
ADJUSTMENTS										DAY LEQ	64.11
Flow	21.37	4.53	6.75	20.08	-3.25	-1.03	14.02	5.96	8.18		
Distance	-0.93	-0.93	-0.93	-0.93	-0.93	-0.93	-0.93	-0.93	-0.93	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	60.55	53.43	60.87	59.25	45.65	53.08	53.20	54.86	62.29	GRADE dB	0.00

DAY LEQ 64.11 EVENING l 60.34 NIGHT LEQ 63.44

CNEL 70.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - Waterman Avenue
North of I-10 WB On-Ramp

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	37700.00
										SPEED	50.00
										DISTANCE	4318.00
INPUT PARAMETERS											
Vehicles per hour	2183.36	45.24	75.40	1620.90	7.54	12.57	401.95	62.83	104.72	% A	92.00
Speed in MPH	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	71.12	78.79	83.02	71.12	78.79	83.02	71.12	78.79	83.02	CNEL	60.00
ADJUSTMENTS										DAY LEQ	54.97
Flow	26.10	9.26	11.48	24.80	1.48	3.70	18.75	10.69	12.90		
Distance	-19.43	-19.43	-19.43	-19.43	-19.43	-19.43	-19.43	-19.43	-19.43	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	52.78	43.62	50.07	51.49	35.84	42.28	45.43	45.05	51.49	GRADE dB	0.00

DAY LEQ 54.97 EVENING l 52.09 NIGHT LEQ 53.18

CNEL 60.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - Waterman Avenue
North of I-10 WB On-Ramp

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	37700.00
										SPEED	50.00
										DISTANCE	1367.00
INPUT PARAMETERS											
Vehicles per hour	2183.36	45.24	75.40	1620.90	7.54	12.57	401.95	62.83	104.72	% A	92.00
Speed in MPH	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	71.12	78.79	83.02	71.12	78.79	83.02	71.12	78.79	83.02	CNEL	65.00
ADJUSTMENTS										DAY LEQ	59.97
Flow	26.10	9.26	11.48	24.80	1.48	3.70	18.75	10.69	12.90		
Distance	-14.44	-14.44	-14.44	-14.44	-14.44	-14.44	-14.44	-14.44	-14.44	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	57.78	48.62	55.06	56.48	40.83	47.28	50.43	50.04	56.49	GRADE dB	0.00

DAY LEQ 59.97 EVENING l 57.08 NIGHT LEQ 58.17

CNEL 65.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - Waterman Avenue
North of I-10 WB On-Ramp

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	37700.00
										SPEED	50.00
										DISTANCE	432.00
INPUT PARAMETERS											
Vehicles per hour	2183.36	45.24	75.40	1620.90	7.54	12.57	401.95	62.83	104.72	% A	92.00
Speed in MPH	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	71.12	78.79	83.02	71.12	78.79	83.02	71.12	78.79	83.02	CNEL	70.00
ADJUSTMENTS										DAY LEQ	64.97
Flow	26.10	9.26	11.48	24.80	1.48	3.70	18.75	10.69	12.90		
Distance	-9.44	-9.44	-9.44	-9.44	-9.44	-9.44	-9.44	-9.44	-9.44	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	62.78	53.62	60.06	61.49	45.84	52.28	55.43	55.04	61.49	GRADE dB	0.00

DAY LEQ 64.97 EVENING l 62.08 NIGHT LEQ 63.18

CNEL **70.00**

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - Waterman Avenue
South of I-10 WB On-Ramp

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	34670.00
										SPEED	50.00
										DISTANCE	3976.00
INPUT PARAMETERS											
Vehicles per hour	2007.88	41.60	69.34	1490.63	6.93	11.56	369.64	57.78	96.31	% A	92.00
Speed in MPH	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	71.12	78.79	83.02	71.12	78.79	83.02	71.12	78.79	83.02	CNEL	60.00
ADJUSTMENTS										DAY LEQ	54.97
Flow	25.73	8.90	11.11	24.44	1.11	3.33	18.38	10.32	12.54		
Distance	-19.07	-19.07	-19.07	-19.07	-19.07	-19.07	-19.07	-19.07	-19.07	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	52.78	43.61	50.06	51.48	35.83	42.28	45.43	45.04	51.49	GRADE dB	0.00

DAY LEQ	54.97	EVENING l	52.08	NIGHT LEQ	53.17
CNEL	**60.00**				

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - Waterman Avenue
South of I-10 WB On-Ramp

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	34670.00
										SPEED	50.00
										DISTANCE	1257.00
INPUT PARAMETERS											
Vehicles per hour	2007.88	41.60	69.34	1490.63	6.93	11.56	369.64	57.78	96.31	% A	92.00
Speed in MPH	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	71.12	78.79	83.02	71.12	78.79	83.02	71.12	78.79	83.02	CNEL	65.00
ADJUSTMENTS										DAY LEQ	59.97
Flow	25.73	8.90	11.11	24.44	1.11	3.33	18.38	10.32	12.54		
Distance	-14.07	-14.07	-14.07	-14.07	-14.07	-14.07	-14.07	-14.07	-14.07	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	57.78	48.62	55.06	56.48	40.83	47.28	50.43	50.04	56.49	GRADE dB	0.00

DAY LEQ	59.97	EVENING l	57.08	NIGHT LEQ	58.17

CNEL **65.00**

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - Waterman Avenue
South of I-10 WB On-Ramp

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	34670.00
										SPEED	50.00
										DISTANCE	397.00
INPUT PARAMETERS											
Vehicles per hour	2007.88	41.60	69.34	1490.63	6.93	11.56	369.64	57.78	96.31	% A	92.00
Speed in MPH	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	71.12	78.79	83.02	71.12	78.79	83.02	71.12	78.79	83.02	CNEL	70.00
ADJUSTMENTS										DAY LEQ	64.97
Flow	25.73	8.90	11.11	24.44	1.11	3.33	18.38	10.32	12.54		
Distance	-9.07	-9.07	-9.07	-9.07	-9.07	-9.07	-9.07	-9.07	-9.07	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	62.78	53.62	60.07	61.49	45.84	52.28	55.43	55.05	61.49	GRADE dB	0.00

DAY LEQ 64.97 EVENING l 62.09 NIGHT LEQ 63.18

CNEL 70.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - Baseline Street
I-215 SB Ramps to I-215 NB Ramps

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	20590.00
										SPEED	40.00
										DISTANCE	1698.00
INPUT PARAMETERS											
Vehicles per hour	1192.45	24.71	41.18	885.26	4.12	6.86	219.53	34.32	57.19	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	60.00
ADJUSTMENTS										DAY LEQ	54.41
Flow	24.44	7.60	9.82	23.14	-0.18	2.04	17.09	9.03	11.25		
Distance	-15.38	-15.38	-15.38	-15.38	-15.38	-15.38	-15.38	-15.38	-15.38	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	51.42	43.53	50.60	50.12	35.75	42.82	44.07	44.96	52.03	GRADE dB	0.00

DAY LEQ 54.41 EVENING l 51.00 NIGHT LEQ 53.35

CNEL 60.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - Baseline Street
I-215 SB Ramps to I-215 NB Ramps

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	20590.00
										SPEED	40.00
										DISTANCE	537.00
INPUT PARAMETERS											
Vehicles per hour	1192.45	24.71	41.18	885.26	4.12	6.86	219.53	34.32	57.19	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	65.00
ADJUSTMENTS										DAY LEQ	59.41
Flow	24.44	7.60	9.82	23.14	-0.18	2.04	17.09	9.03	11.25		
Distance	-10.38	-10.38	-10.38	-10.38	-10.38	-10.38	-10.38	-10.38	-10.38	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	56.42	48.53	55.60	55.12	40.75	47.82	49.07	49.96	57.03	GRADE dB	0.00

DAY LEQ 59.41 EVENING l 56.00 NIGHT LEQ 58.35

CNEL 65.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - Baseline Street
I-215 SB Ramps to I-215 NB Ramps

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	20590.00
										SPEED	40.00
										DISTANCE	169.00
INPUT PARAMETERS											
Vehicles per hour	1192.45	24.71	41.18	885.26	4.12	6.86	219.53	34.32	57.19	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	70.02
ADJUSTMENTS										DAY LEQ	64.43
Flow	24.44	7.60	9.82	23.14	-0.18	2.04	17.09	9.03	11.25		
Distance	-5.36	-5.36	-5.36	-5.36	-5.36	-5.36	-5.36	-5.36	-5.36	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	61.44	53.56	60.62	60.14	45.77	52.84	54.09	54.98	62.05	GRADE dB	0.00

DAY LEQ 64.43 EVENING l 61.02 NIGHT LEQ 63.37

CNEL 70.02

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - Baseline Street
I-215 NB Ramps to E Street

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	20645.00
										SPEED	40.00
										DISTANCE	1700.00
INPUT PARAMETERS											
Vehicles per hour	1195.63	24.77	41.29	887.62	4.13	6.88	220.11	34.41	57.35	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	60.00
ADJUSTMENTS										DAY LEQ	54.42
Flow	24.45	7.61	9.83	23.16	-0.17	2.05	17.10	9.04	11.26		
Distance	-15.38	-15.38	-15.38	-15.38	-15.38	-15.38	-15.38	-15.38	-15.38	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	51.42	43.54	50.61	50.13	35.76	42.83	44.08	44.97	52.03	GRADE dB	0.00

DAY LEQ 54.42 EVENING l 51.00 NIGHT LEQ 53.36

CNEL 60.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - Baseline Street
I-215 NB Ramps to E Street

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	20645.00
										SPEED	40.00
										DISTANCE	538.00
INPUT PARAMETERS											
Vehicles per hour	1195.63	24.77	41.29	887.62	4.13	6.88	220.11	34.41	57.35	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	65.00
ADJUSTMENTS										DAY LEQ	59.41
Flow	24.45	7.61	9.83	23.16	-0.17	2.05	17.10	9.04	11.26		
Distance	-10.39	-10.39	-10.39	-10.39	-10.39	-10.39	-10.39	-10.39	-10.39	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	56.42	48.54	55.60	55.13	40.76	47.82	49.07	49.96	57.03	GRADE dB	0.00

DAY LEQ 59.41 EVENING l 56.00 NIGHT LEQ 58.35

CNEL 65.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - Baseline Street
I-215 NB Ramps to E Street

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	20645.00
										SPEED	40.00
										DISTANCE	170.00
INPUT PARAMETERS											
Vehicles per hour	1195.63	24.77	41.29	887.62	4.13	6.88	220.11	34.41	57.35	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	70.00
ADJUSTMENTS										DAY LEQ	64.42
Flow	24.45	7.61	9.83	23.16	-0.17	2.05	17.10	9.04	11.26		
Distance	-5.38	-5.38	-5.38	-5.38	-5.38	-5.38	-5.38	-5.38	-5.38	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	61.42	53.54	60.61	60.13	45.76	52.83	54.08	54.97	62.03	GRADE dB	0.00

DAY LEQ 64.42 EVENING l 61.00 NIGHT LEQ 63.36

CNEL 70.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - Baseline Street
E Street to Sierra Way

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	17755.00
										SPEED	40.00
										DISTANCE	1462.00
INPUT PARAMETERS											
Vehicles per hour	1028.26	21.31	35.51	763.37	3.55	5.92	189.30	29.59	49.32	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	60.00
ADJUSTMENTS										DAY LEQ	54.42
Flow	23.79	6.96	9.18	22.50	-0.82	1.40	16.45	8.39	10.60		
Distance	-14.73	-14.73	-14.73	-14.73	-14.73	-14.73	-14.73	-14.73	-14.73	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	51.42	43.54	50.61	50.13	35.76	42.83	44.08	44.97	52.03	GRADE dB	0.00

DAY LEQ 54.42 EVENING l 51.00 NIGHT LEQ 53.36

CNEL **60.00**

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - Baseline Street
E Street to Sierra Way

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	17755.00
										SPEED	40.00
										DISTANCE	463.00
INPUT PARAMETERS											
Vehicles per hour	1028.26	21.31	35.51	763.37	3.55	5.92	189.30	29.59	49.32	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	65.00
ADJUSTMENTS										DAY LEQ	59.41
Flow	23.79	6.96	9.18	22.50	-0.82	1.40	16.45	8.39	10.60		
Distance	-9.74	-9.74	-9.74	-9.74	-9.74	-9.74	-9.74	-9.74	-9.74	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	56.42	48.54	55.60	55.12	40.75	47.82	49.07	49.96	57.03	GRADE dB	0.00

DAY LEQ 59.41 EVENING l 56.00 NIGHT LEQ 58.35

CNEL 65.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - Baseline Street
E Street to Sierra Way

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	17755.00
										SPEED	40.00
										DISTANCE	146.00
INPUT PARAMETERS											
Vehicles per hour	1028.26	21.31	35.51	763.37	3.55	5.92	189.30	29.59	49.32	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	70.01
ADJUSTMENTS										DAY LEQ	64.42
Flow	23.79	6.96	9.18	22.50	-0.82	1.40	16.45	8.39	10.60		
Distance	-4.72	-4.72	-4.72	-4.72	-4.72	-4.72	-4.72	-4.72	-4.72	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	61.43	53.55	60.61	60.14	45.77	52.83	54.08	54.97	62.04	GRADE dB	0.00

DAY LEQ 64.42 EVENING l 61.01 NIGHT LEQ 63.36

CNEL 70.01

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - Baseline Street
Sierra Way to Waterman Avenue

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	17545.00
										SPEED	40.00
										DISTANCE	1446.00
INPUT PARAMETERS											
Vehicles per hour	1016.10	21.05	35.09	754.34	3.51	5.85	187.06	29.24	48.74	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	60.00
ADJUSTMENTS										DAY LEQ	54.41
Flow	23.74	6.91	9.13	22.45	-0.87	1.34	16.39	8.33	10.55		
Distance	-14.68	-14.68	-14.68	-14.68	-14.68	-14.68	-14.68	-14.68	-14.68	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	51.42	43.54	50.60	50.13	35.76	42.82	44.07	44.96	52.03	GRADE dB	0.00

DAY LEQ 54.41 EVENING l 51.00 NIGHT LEQ 53.35

CNEL 60.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - Baseline Street
Sierra Way to Waterman Avenue

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	17545.00
										SPEED	40.00
										DISTANCE	457.00
INPUT PARAMETERS											
Vehicles per hour	1016.10	21.05	35.09	754.34	3.51	5.85	187.06	29.24	48.74	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	65.00
ADJUSTMENTS										DAY LEQ	59.41
Flow	23.74	6.91	9.13	22.45	-0.87	1.34	16.39	8.33	10.55		
Distance	-9.68	-9.68	-9.68	-9.68	-9.68	-9.68	-9.68	-9.68	-9.68	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	56.42	48.54	55.61	55.13	40.76	47.82	49.07	49.97	57.03	GRADE dB	0.00

DAY LEQ 59.41 EVENING l 56.00 NIGHT LEQ 58.36

CNEL 65.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - Baseline Street
Sierra Way to Waterman Avenue

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	17545.00
										SPEED	40.00
										DISTANCE	144.00
INPUT PARAMETERS											
Vehicles per hour	1016.10	21.05	35.09	754.34	3.51	5.85	187.06	29.24	48.74	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	70.02
ADJUSTMENTS										DAY LEQ	64.43
Flow	23.74	6.91	9.13	22.45	-0.87	1.34	16.39	8.33	10.55		
Distance	-4.66	-4.66	-4.66	-4.66	-4.66	-4.66	-4.66	-4.66	-4.66	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	61.44	53.56	60.62	60.15	45.77	52.84	54.09	54.98	62.05	GRADE dB	0.00

DAY LEQ 64.43 EVENING l 61.02 NIGHT LEQ 63.37

CNEL 70.02

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - Baseline Street
Waterman Avenue to Tippecanoe Avenue

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	16290.00
										SPEED	40.00
										DISTANCE	1343.00
INPUT PARAMETERS											
Vehicles per hour	943.42	19.55	32.58	700.38	3.26	5.43	173.68	27.15	45.25	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	60.00
ADJUSTMENTS										DAY LEQ	54.41
Flow	23.42	6.58	8.80	22.13	-1.20	1.02	16.07	8.01	10.23		
Distance	-14.36	-14.36	-14.36	-14.36	-14.36	-14.36	-14.36	-14.36	-14.36	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	51.42	43.54	50.60	50.13	35.75	42.82	44.07	44.96	52.03	GRADE dB	0.00

DAY LEQ 54.41 EVENING l 51.00 NIGHT LEQ 53.35

CNEL 60.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - Baseline Street
Waterman Avenue to Tippecanoe Avenue

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	16290.00
										SPEED	40.00
										DISTANCE	424.00
INPUT PARAMETERS											
Vehicles per hour	943.42	19.55	32.58	700.38	3.26	5.43	173.68	27.15	45.25	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	65.00
ADJUSTMENTS										DAY LEQ	59.42
Flow	23.42	6.58	8.80	22.13	-1.20	1.02	16.07	8.01	10.23		
Distance	-9.35	-9.35	-9.35	-9.35	-9.35	-9.35	-9.35	-9.35	-9.35	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	56.43	48.54	55.61	55.13	40.76	47.83	49.08	49.97	57.04	GRADE dB	0.00

DAY LEQ 59.42 EVENING l 56.01 NIGHT LEQ 58.36

CNEL 65.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - Baseline Street
Waterman Avenue to Tippecanoe Avenue

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	16290.00
										SPEED	40.00
										DISTANCE	134.00
INPUT PARAMETERS											
Vehicles per hour	943.42	19.55	32.58	700.38	3.26	5.43	173.68	27.15	45.25	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	70.01
ADJUSTMENTS										DAY LEQ	64.42
Flow	23.42	6.58	8.80	22.13	-1.20	1.02	16.07	8.01	10.23		
Distance	-4.35	-4.35	-4.35	-4.35	-4.35	-4.35	-4.35	-4.35	-4.35	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	61.43	53.55	60.61	60.14	45.76	52.83	54.08	54.97	62.04	GRADE dB	0.00

DAY LEQ 64.42 EVENING l 61.01 NIGHT LEQ 63.36

CNEL 70.01

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - 5th Street
I-215 SB Ramps to I-215 NB Ramps

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	17290.00
										SPEED	40.00
										DISTANCE	1424.00
INPUT PARAMETERS											
Vehicles per hour	1001.33	20.75	34.58	743.38	3.46	5.76	184.34	28.82	48.03	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	60.00
ADJUSTMENTS										DAY LEQ	54.41
Flow	23.68	6.84	9.06	22.39	-0.94	1.28	16.33	8.27	10.49		
Distance	-14.62	-14.62	-14.62	-14.62	-14.62	-14.62	-14.62	-14.62	-14.62	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	51.42	43.54	50.61	50.13	35.76	42.82	44.07	44.97	52.03	GRADE dB	0.00

DAY LEQ 54.41 EVENING l 51.00 NIGHT LEQ 53.36

CNEL 60.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - 5th Street
I-215 SB Ramps to I-215 NB Ramps

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	17290.00
										SPEED	40.00
										DISTANCE	450.00
INPUT PARAMETERS											
Vehicles per hour	1001.33	20.75	34.58	743.38	3.46	5.76	184.34	28.82	48.03	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	65.00
ADJUSTMENTS										DAY LEQ	59.42
Flow	23.68	6.84	9.06	22.39	-0.94	1.28	16.33	8.27	10.49		
Distance	-9.61	-9.61	-9.61	-9.61	-9.61	-9.61	-9.61	-9.61	-9.61	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	56.43	48.54	55.61	55.13	40.76	47.83	49.08	49.97	57.04	GRADE dB	0.00

DAY LEQ 59.42 EVENING l 56.01 NIGHT LEQ 58.36

CNEL 65.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - 5th Street
I-215 SB Ramps to I-215 NB Ramps

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	17290.00
										SPEED	40.00
										DISTANCE	142.00
INPUT PARAMETERS											
Vehicles per hour	1001.33	20.75	34.58	743.38	3.46	5.76	184.34	28.82	48.03	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	70.01
ADJUSTMENTS										DAY LEQ	64.43
Flow	23.68	6.84	9.06	22.39	-0.94	1.28	16.33	8.27	10.49		
Distance	-4.60	-4.60	-4.60	-4.60	-4.60	-4.60	-4.60	-4.60	-4.60	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	61.44	53.55	60.62	60.14	45.77	52.84	54.09	54.98	62.04	GRADE dB	0.00

DAY LEQ 64.43 EVENING l 61.01 NIGHT LEQ 63.37

CNEL 70.01

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - 5th Street
I-215 NB Ramps to Sierra Way

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	16680.00
										SPEED	40.00
										DISTANCE	1373.00
INPUT PARAMETERS											
Vehicles per hour	966.01	20.02	33.36	717.15	3.34	5.56	177.84	27.80	46.33	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	60.00
ADJUSTMENTS										DAY LEQ	54.42
Flow	23.52	6.69	8.91	22.23	-1.09	1.12	16.17	8.11	10.33		
Distance	-14.46	-14.46	-14.46	-14.46	-14.46	-14.46	-14.46	-14.46	-14.46	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	51.43	43.54	50.61	50.13	35.76	42.83	44.08	44.97	52.03	GRADE dB	0.00

DAY LEQ 54.42 EVENING l 51.01 NIGHT LEQ 53.36

CNEL **60.00**

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - 5th Street
I-215 NB Ramps to Sierra Way

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	16680.00
										SPEED	40.00
										DISTANCE	435.00
INPUT PARAMETERS											
Vehicles per hour	966.01	20.02	33.36	717.15	3.34	5.56	177.84	27.80	46.33	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	65.00
ADJUSTMENTS										DAY LEQ	59.41
Flow	23.52	6.69	8.91	22.23	-1.09	1.12	16.17	8.11	10.33		
Distance	-9.47	-9.47	-9.47	-9.47	-9.47	-9.47	-9.47	-9.47	-9.47	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	56.42	48.53	55.60	55.12	40.75	47.82	49.07	49.96	57.03	GRADE dB	0.00

DAY LEQ 59.41 EVENING l 56.00 NIGHT LEQ 58.35

CNEL 65.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - 5th Street
I-215 NB Ramps to Sierra Way

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	16680.00
										SPEED	40.00
										DISTANCE	137.00
INPUT PARAMETERS											
Vehicles per hour	966.01	20.02	33.36	717.15	3.34	5.56	177.84	27.80	46.33	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	70.01
ADJUSTMENTS										DAY LEQ	64.43
Flow	23.52	6.69	8.91	22.23	-1.09	1.12	16.17	8.11	10.33		
Distance	-4.45	-4.45	-4.45	-4.45	-4.45	-4.45	-4.45	-4.45	-4.45	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	61.44	53.55	60.62	60.14	45.77	52.84	54.09	54.98	62.04	GRADE dB	0.00

DAY LEQ 64.43 EVENING l 61.01 NIGHT LEQ 63.37

CNEL 70.01

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - 5th Street
Sierra Way to Waterman Avenue

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	13115.00
										SPEED	40.00
										DISTANCE	1080.00
INPUT PARAMETERS											
Vehicles per hour	759.54	15.74	26.23	563.88	2.62	4.37	139.83	21.86	36.43	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	60.00
ADJUSTMENTS										DAY LEQ	54.42
Flow	22.48	5.64	7.86	21.19	-2.14	0.08	15.13	7.07	9.29		
Distance	-13.41	-13.41	-13.41	-13.41	-13.41	-13.41	-13.41	-13.41	-13.41	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	51.42	43.54	50.61	50.13	35.76	42.82	44.07	44.97	52.03	GRADE dB	0.00

DAY LEQ 54.42 EVENING l 51.00 NIGHT LEQ 53.36

CNEL **60.00**

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - 5th Street
Sierra Way to Waterman Avenue

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	13115.00
										SPEED	40.00
										DISTANCE	342.00
INPUT PARAMETERS											
Vehicles per hour	759.54	15.74	26.23	563.88	2.62	4.37	139.83	21.86	36.43	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	65.00
ADJUSTMENTS										DAY LEQ	59.41
Flow	22.48	5.64	7.86	21.19	-2.14	0.08	15.13	7.07	9.29		
Distance	-8.42	-8.42	-8.42	-8.42	-8.42	-8.42	-8.42	-8.42	-8.42	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	56.42	48.54	55.60	55.12	40.75	47.82	49.07	49.96	57.03	GRADE dB	0.00

DAY LEQ 59.41 EVENING l 56.00 NIGHT LEQ 58.35

CNEL 65.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - 5th Street
Sierra Way to Waterman Avenue

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	13115.00
										SPEED	40.00
										DISTANCE	108.00
INPUT PARAMETERS											
Vehicles per hour	759.54	15.74	26.23	563.88	2.62	4.37	139.83	21.86	36.43	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	70.00
ADJUSTMENTS										DAY LEQ	64.42
Flow	22.48	5.64	7.86	21.19	-2.14	0.08	15.13	7.07	9.29		
Distance	-3.41	-3.41	-3.41	-3.41	-3.41	-3.41	-3.41	-3.41	-3.41	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	61.42	53.54	60.61	60.13	45.76	52.82	54.07	54.97	62.03	GRADE dB	0.00

DAY LEQ 64.42 EVENING l 61.00 NIGHT LEQ 63.36

CNEL 70.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - 5th Street
Waterman Avenue to Tippecanoe Avenue

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	11170.00
										SPEED	40.00
										DISTANCE	920.00
INPUT PARAMETERS											
Vehicles per hour	646.90	13.40	22.34	480.25	2.23	3.72	119.09	18.62	31.03	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	60.00
ADJUSTMENTS										DAY LEQ	54.41
Flow	21.78	4.95	7.16	20.49	-2.84	-0.62	14.43	6.37	8.59		
Distance	-12.72	-12.72	-12.72	-12.72	-12.72	-12.72	-12.72	-12.72	-12.72	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	51.42	43.54	50.61	50.13	35.76	42.82	44.07	44.97	52.03	GRADE dB	0.00

DAY LEQ 54.41 EVENING l 51.00 NIGHT LEQ 53.36

CNEL 60.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - 5th Street
Waterman Avenue to Tippecanoe Avenue

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	11170.00
										SPEED	40.00
										DISTANCE	291.00
INPUT PARAMETERS											
Vehicles per hour	646.90	13.40	22.34	480.25	2.23	3.72	119.09	18.62	31.03	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	65.00
ADJUSTMENTS										DAY LEQ	59.41
Flow	21.78	4.95	7.16	20.49	-2.84	-0.62	14.43	6.37	8.59		
Distance	-7.72	-7.72	-7.72	-7.72	-7.72	-7.72	-7.72	-7.72	-7.72	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	56.42	48.54	55.60	55.13	40.76	47.82	49.07	49.97	57.03	GRADE dB	0.00

DAY LEQ 59.41 EVENING l 56.00 NIGHT LEQ 58.36

CNEL 65.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - 5th Street
Waterman Avenue to Tippecanoe Avenue

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	11170.00
										SPEED	40.00
										DISTANCE	92.00
INPUT PARAMETERS											
Vehicles per hour	646.90	13.40	22.34	480.25	2.23	3.72	119.09	18.62	31.03	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	70.00
ADJUSTMENTS										DAY LEQ	64.41
Flow	21.78	4.95	7.16	20.49	-2.84	-0.62	14.43	6.37	8.59		
Distance	-2.72	-2.72	-2.72	-2.72	-2.72	-2.72	-2.72	-2.72	-2.72	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	61.42	53.54	60.61	60.13	45.76	52.82	54.07	54.97	62.03	GRADE dB	0.00

DAY LEQ 64.41 EVENING l 61.00 NIGHT LEQ 63.36

CNEL 70.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - 5th Street
East of Tippecanoe Avenue

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	9450.00
										SPEED	40.00
										DISTANCE	779.00
INPUT PARAMETERS											
Vehicles per hour	547.29	11.34	18.90	406.30	1.89	3.15	100.75	15.75	26.25	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	60.00
ADJUSTMENTS										DAY LEQ	54.41
Flow	21.06	4.22	6.44	19.76	-3.56	-1.34	13.71	5.65	7.86		
Distance	-12.00	-12.00	-12.00	-12.00	-12.00	-12.00	-12.00	-12.00	-12.00	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	51.42	43.54	50.60	50.13	35.76	42.82	44.07	44.96	52.03	GRADE dB	0.00

DAY LEQ 54.41 EVENING l 51.00 NIGHT LEQ 53.35

CNEL 60.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - 5th Street
East of Tippecanoe Avenue

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	9450.00
										SPEED	40.00
										DISTANCE	246.00
INPUT PARAMETERS											
Vehicles per hour	547.29	11.34	18.90	406.30	1.89	3.15	100.75	15.75	26.25	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	65.00
ADJUSTMENTS										DAY LEQ	59.42
Flow	21.06	4.22	6.44	19.76	-3.56	-1.34	13.71	5.65	7.86		
Distance	-6.99	-6.99	-6.99	-6.99	-6.99	-6.99	-6.99	-6.99	-6.99	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	56.43	48.54	55.61	55.13	40.76	47.83	49.08	49.97	57.03	GRADE dB	0.00

DAY LEQ 59.42 EVENING l 56.00 NIGHT LEQ 58.36

CNEL 65.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - 5th Street
East of Tippecanoe Avenue

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	9450.00
										SPEED	40.00
										DISTANCE	78.00
INPUT PARAMETERS											
Vehicles per hour	547.29	11.34	18.90	406.30	1.89	3.15	100.75	15.75	26.25	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	69.99
ADJUSTMENTS										DAY LEQ	64.41
Flow	21.06	4.22	6.44	19.76	-3.56	-1.34	13.71	5.65	7.86		
Distance	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	61.41	53.53	60.60	60.12	45.75	52.81	54.06	54.96	62.02	GRADE dB	0.00

DAY LEQ 64.41 EVENING l 60.99 NIGHT LEQ 63.35

CNEL **69.99**

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - 5th Street
West of Interstate 210 SB Ramps

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	18250.00
										SPEED	40.00
										DISTANCE	1505.00
INPUT PARAMETERS											
Vehicles per hour	1056.93	21.90	36.50	784.65	3.65	6.08	194.58	30.42	50.69	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	60.00
ADJUSTMENTS										DAY LEQ	54.41
Flow	23.91	7.08	9.30	22.62	-0.70	1.51	16.56	8.50	10.72		
Distance	-14.86	-14.86	-14.86	-14.86	-14.86	-14.86	-14.86	-14.86	-14.86	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	51.42	43.54	50.60	50.12	35.75	42.82	44.07	44.96	52.03	GRADE dB	0.00

DAY LEQ 54.41 EVENING l 51.00 NIGHT LEQ 53.35

CNEL 60.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - 5th Street
West of Interstate 210 SB Ramps

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	18250.00
										SPEED	40.00
										DISTANCE	475.00
INPUT PARAMETERS											
Vehicles per hour	1056.93	21.90	36.50	784.65	3.65	6.08	194.58	30.42	50.69	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	65.00
ADJUSTMENTS										DAY LEQ	59.42
Flow	23.91	7.08	9.30	22.62	-0.70	1.51	16.56	8.50	10.72		
Distance	-9.85	-9.85	-9.85	-9.85	-9.85	-9.85	-9.85	-9.85	-9.85	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	56.43	48.54	55.61	55.13	40.76	47.83	49.08	49.97	57.04	GRADE dB	0.00

DAY LEQ 59.42 EVENING l 56.01 NIGHT LEQ 58.36

CNEL **65.00**

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - 5th Street
West of Interstate 210 SB Ramps

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	18250.00
										SPEED	40.00
										DISTANCE	150.00
INPUT PARAMETERS											
Vehicles per hour	1056.93	21.90	36.50	784.65	3.65	6.08	194.58	30.42	50.69	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	70.01
ADJUSTMENTS										DAY LEQ	64.42
Flow	23.91	7.08	9.30	22.62	-0.70	1.51	16.56	8.50	10.72		
Distance	-4.84	-4.84	-4.84	-4.84	-4.84	-4.84	-4.84	-4.84	-4.84	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	61.43	53.55	60.61	60.14	45.77	52.83	54.08	54.98	62.04	GRADE dB	0.00

DAY LEQ 64.42 EVENING l 61.01 NIGHT LEQ 63.37

CNEL 70.01

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - 5th Street
Interstate 210 SB Ramps to Interstate 210 NB Ramps

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	19610.00
										SPEED	40.00
										DISTANCE	1614.00
INPUT PARAMETERS											
Vehicles per hour	1135.69	23.53	39.22	843.13	3.92	6.54	209.08	32.68	54.47	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	60.00
ADJUSTMENTS										DAY LEQ	54.42
Flow	24.23	7.39	9.61	22.93	-0.39	1.83	16.88	8.82	11.04		
Distance	-15.16	-15.16	-15.16	-15.16	-15.16	-15.16	-15.16	-15.16	-15.16	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	51.43	43.54	50.61	50.13	35.76	42.83	44.08	44.97	52.04	GRADE dB	0.00

DAY LEQ 54.42 EVENING l 51.01 NIGHT LEQ 53.36

CNEL 60.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - 5th Street
Interstate 210 SB Ramps to Interstate 210 NB Ramps

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	19610.00
										SPEED	40.00
										DISTANCE	511.00
INPUT PARAMETERS											
Vehicles per hour	1135.69	23.53	39.22	843.13	3.92	6.54	209.08	32.68	54.47	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	65.00
ADJUSTMENTS										DAY LEQ	59.41
Flow	24.23	7.39	9.61	22.93	-0.39	1.83	16.88	8.82	11.04		
Distance	-10.16	-10.16	-10.16	-10.16	-10.16	-10.16	-10.16	-10.16	-10.16	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	56.42	48.54	55.60	55.13	40.76	47.82	49.07	49.97	57.03	GRADE dB	0.00

DAY LEQ 59.41 EVENING l 56.00 NIGHT LEQ 58.35

CNEL 65.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - 5th Street
Interstate 210 SB Ramps to Interstate 210 NB Ramps

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	19610.00
										SPEED	40.00
										DISTANCE	161.00
INPUT PARAMETERS											
Vehicles per hour	1135.69	23.53	39.22	843.13	3.92	6.54	209.08	32.68	54.47	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	70.01
ADJUSTMENTS										DAY LEQ	64.43
Flow	24.23	7.39	9.61	22.93	-0.39	1.83	16.88	8.82	11.04		
Distance	-5.15	-5.15	-5.15	-5.15	-5.15	-5.15	-5.15	-5.15	-5.15	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	61.44	53.55	60.62	60.14	45.77	52.84	54.09	54.98	62.05	GRADE dB	0.00

DAY LEQ 64.43 EVENING l 61.02 NIGHT LEQ 63.37

CNEL 70.01

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - 5th Street
East of Interstate 210 NB Ramps

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	28100.00
										SPEED	40.00
										DISTANCE	2315.00
INPUT PARAMETERS											
Vehicles per hour	1627.38	33.72	56.20	1208.15	5.62	9.37	299.60	46.83	78.06	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	60.00
ADJUSTMENTS										DAY LEQ	54.41
Flow	25.79	8.95	11.17	24.49	1.17	3.39	18.44	10.38	12.60		
Distance	-16.73	-16.73	-16.73	-16.73	-16.73	-16.73	-16.73	-16.73	-16.73	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	51.42	43.54	50.60	50.13	35.76	42.82	44.07	44.97	52.03	GRADE dB	0.00

DAY LEQ	54.41	EVENING l	51.00	NIGHT LEQ	53.36

CNEL **60.00**

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - 5th Street
East of Interstate 210 NB Ramps

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	28100.00
										SPEED	40.00
										DISTANCE	732.00
INPUT PARAMETERS											
Vehicles per hour	1627.38	33.72	56.20	1208.15	5.62	9.37	299.60	46.83	78.06	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	65.00
ADJUSTMENTS										DAY LEQ	59.41
Flow	25.79	8.95	11.17	24.49	1.17	3.39	18.44	10.38	12.60		
Distance	-11.73	-11.73	-11.73	-11.73	-11.73	-11.73	-11.73	-11.73	-11.73	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	56.42	48.54	55.61	55.13	40.76	47.82	49.07	49.97	57.03	GRADE dB	0.00

DAY LEQ 59.41 EVENING l 56.00 NIGHT LEQ 58.36

CNEL 65.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - 5th Street
East of Interstate 210 NB Ramps

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	28100.00
										SPEED	40.00
										DISTANCE	231.00
INPUT PARAMETERS											
Vehicles per hour	1627.38	33.72	56.20	1208.15	5.62	9.37	299.60	46.83	78.06	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	70.01
ADJUSTMENTS										DAY LEQ	64.42
Flow	25.79	8.95	11.17	24.49	1.17	3.39	18.44	10.38	12.60		
Distance	-6.72	-6.72	-6.72	-6.72	-6.72	-6.72	-6.72	-6.72	-6.72	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	61.43	53.55	60.61	60.14	45.77	52.83	54.08	54.98	62.04	GRADE dB	0.00

DAY LEQ 64.42 EVENING l 61.01 NIGHT LEQ 63.37

CNEL 70.01

FHWA Sound32 Spreadsheet
Riverside County Published Mix
For Secondary and Smaller

Waterman Gardens
Future Traffic Noise - 3rd Street
West of Interstate 215 SB Ramps

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	4520.00
										SPEED	35.00
										DISTANCE	110.00
INPUT PARAMETERS											
Vehicles per hour	277.21	3.36	1.32	204.86	0.60	0.60	51.31	4.44	1.76	% A	97.40
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	1.84
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	0.74
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	60.00
ADJUSTMENTS										DAY LEQ	56.31
Flow	18.68	-0.48	-4.55	17.37	-7.95	-7.94	11.36	0.72	-3.30		
Distance	-3.49	-3.49	-3.49	-3.49	-3.49	-3.49	-3.49	-3.49	-3.49	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	55.30	45.85	47.01	53.98	38.38	43.61	47.97	47.06	48.26	GRADE dB	0.00

DAY LEQ	56.31		EVENING LE(	54.47		NIGHT LEQ	52.56
CNEL		**60.00**					

FHWA Sound32 Spreadsheet
Riverside County Published Mix
For Secondary and Smaller

Waterman Gardens
Future Traffic Noise - 3rd Street
West of Interstate 215 SB Ramps

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	4520.00
										SPEED	35.00
										DISTANCE	35.00
INPUT PARAMETERS											
Vehicles per hour	277.21	3.36	1.32	204.86	0.60	0.60	51.31	4.44	1.76	% A	97.40
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	1.84
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	0.74
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	64.98
ADJUSTMENTS										DAY LEQ	61.28
Flow	18.68	-0.48	-4.55	17.37	-7.95	-7.94	11.36	0.72	-3.30		
Distance	1.48	1.48	1.48	1.48	1.48	1.48	1.48	1.48	1.48	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	60.27	50.82	51.98	58.96	43.35	48.58	52.94	52.03	53.23	GRADE dB	0.00

DAY LEQ	61.28		EVENING LE(	59.45		NIGHT LEQ	57.54
CNEL		**64.98**					

FHWA Sound32 Spreadsheet
Riverside County Published Mix
For Secondary and Smaller

Waterman Gardens
Future Traffic Noise - 3rd Street
West of Interstate 215 SB Ramps

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	4520.00
										SPEED	35.00
										DISTANCE	11.00
INPUT PARAMETERS											
Vehicles per hour	277.21	3.36	1.32	204.86	0.60	0.60	51.31	4.44	1.76	% A	97.40
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	1.84
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	0.74
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	70.00
ADJUSTMENTS										DAY LEQ	66.31
Flow	18.68	-0.48	-4.55	17.37	-7.95	-7.94	11.36	0.72	-3.30		
Distance	6.51	6.51	6.51	6.51	6.51	6.51	6.51	6.51	6.51	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	65.30	55.85	57.01	63.98	48.38	53.61	57.97	57.06	58.26	GRADE dB	0.00

DAY LEQ	66.31		EVENING LE(	64.47		NIGHT LEQ	62.56
CNEL		**70.00**					

FHWA Sound32 Spreadsheet
Riverside County Published Mix
For Secondary and Smaller

Waterman Gardens
Future Traffic Noise - 3rd Street
I-215 SB Ramps to I-215 NB Ramps

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	6635.00
										SPEED	35.00
										DISTANCE	161.00
INPUT PARAMETERS											
Vehicles per hour	406.92	4.93	1.94	300.72	0.88	0.89	75.32	6.51	2.58	% A	97.40
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	1.84
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	0.74
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	60.02
ADJUSTMENTS										DAY LEQ	56.32
Flow	20.35	1.18	-2.88	19.04	-6.29	-6.28	13.02	2.39	-1.63		
Distance	-5.15	-5.15	-5.15	-5.15	-5.15	-5.15	-5.15	-5.15	-5.15	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	55.31	45.86	47.02	54.00	38.39	43.62	47.98	47.07	48.27	GRADE dB	0.00

DAY LEQ	56.32	EVENING LE(	54.49	NIGHT LEQ	52.57

CNEL **60.02**

FHWA Sound32 Spreadsheet
Riverside County Published Mix
For Secondary and Smaller

Waterman Gardens
Future Traffic Noise - 3rd Street
I-215 SB Ramps to I-215 NB Ramps

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	6635.00
										SPEED	35.00
										DISTANCE	51.00
INPUT PARAMETERS											
Vehicles per hour	406.92	4.93	1.94	300.72	0.88	0.89	75.32	6.51	2.58	% A	97.40
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	1.84
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	0.74
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	65.01
ADJUSTMENTS										DAY LEQ	61.31
Flow	20.35	1.18	-2.88	19.04	-6.29	-6.28	13.02	2.39	-1.63		
Distance	-0.16	-0.16	-0.16	-0.16	-0.16	-0.16	-0.16	-0.16	-0.16	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	60.30	50.86	52.01	58.99	43.39	48.62	52.98	52.06	53.26	GRADE dB	0.00

DAY LEQ	61.31		EVENING LE(	59.48		NIGHT LEQ	57.57
CNEL		**65.01**					

FHWA Sound32 Spreadsheet
Riverside County Published Mix
For Secondary and Smaller

Waterman Gardens
Future Traffic Noise - 3rd Street
I-215 SB Ramps to I-215 NB Ramps

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	6635.00
										SPEED	35.00
										DISTANCE	16.00
INPUT PARAMETERS											
Vehicles per hour	406.92	4.93	1.94	300.72	0.88	0.89	75.32	6.51	2.58	% A	97.40
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	1.84
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	0.74
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	70.04
ADJUSTMENTS										DAY LEQ	66.35
Flow	20.35	1.18	-2.88	19.04	-6.29	-6.28	13.02	2.39	-1.63		
Distance	4.88	4.88	4.88	4.88	4.88	4.88	4.88	4.88	4.88	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	65.34	55.89	57.05	64.02	48.42	53.65	58.01	57.10	58.29	GRADE dB	0.00

DAY LEQ	66.35		EVENING LE(	64.51		NIGHT LEQ	62.60
CNEL		**70.04**					

FHWA Sound32 Spreadsheet
Riverside County Published Mix
For Secondary and Smaller

Waterman Gardens
Future Traffic Noise - 3rd Street
East of I-215 NB Ramps

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	9100.00
										SPEED	35.00
										DISTANCE	221.00
INPUT PARAMETERS											
Vehicles per hour	558.10	6.77	2.65	412.44	1.21	1.21	103.31	8.93	3.54	% A	97.40
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	1.84
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	0.74
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	60.01
ADJUSTMENTS										DAY LEQ	56.32
Flow	21.72	2.56	-1.51	20.41	-4.91	-4.90	14.39	3.76	-0.26		
Distance	-6.52	-6.52	-6.52	-6.52	-6.52	-6.52	-6.52	-6.52	-6.52	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	55.31	45.86	47.01	53.99	38.39	43.62	47.98	47.07	48.26	GRADE dB	0.00

DAY LEQ	56.32	EVENING LE(	54.48	NIGHT LEQ	52.57

CNEL **60.01**

FHWA Sound32 Spreadsheet
Riverside County Published Mix
For Secondary and Smaller

Waterman Gardens
Future Traffic Noise - 3rd Street
East of I-215 NB Ramps

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	9100.00
										SPEED	35.00
										DISTANCE	70.00
INPUT PARAMETERS											
Vehicles per hour	558.10	6.77	2.65	412.44	1.21	1.21	103.31	8.93	3.54	% A	97.40
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	1.84
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	0.74
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	65.01
ADJUSTMENTS										DAY LEQ	61.31
Flow	21.72	2.56	-1.51	20.41	-4.91	-4.90	14.39	3.76	-0.26		
Distance	-1.53	-1.53	-1.53	-1.53	-1.53	-1.53	-1.53	-1.53	-1.53	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	60.30	50.85	52.01	58.99	43.38	48.61	52.97	52.06	53.26	GRADE dB	0.00

DAY LEQ	61.31		EVENING LE(	59.47		NIGHT LEQ	57.56
CNEL		**65.01**					

FHWA Sound32 Spreadsheet
Riverside County Published Mix
For Secondary and Smaller

Waterman Gardens
Future Traffic Noise - 3rd Street
East of I-215 NB Ramps

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	9100.00
										SPEED	35.00
										DISTANCE	22.00
INPUT PARAMETERS											
Vehicles per hour	558.10	6.77	2.65	412.44	1.21	1.21	103.31	8.93	3.54	% A	97.40
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	1.84
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	0.74
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	70.03
ADJUSTMENTS										DAY LEQ	66.34
Flow	21.72	2.56	-1.51	20.41	-4.91	-4.90	14.39	3.76	-0.26		
Distance	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	65.33	55.88	57.03	64.01	48.41	53.64	58.00	57.09	58.28	GRADE dB	0.00

DAY LEQ	66.34		EVENING LE(	64.50		NIGHT LEQ	62.59
CNEL		**70.03**					

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - 2nd Street
West of Interstate 215 SB Ramps

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	13740.00
										SPEED	35.00
										DISTANCE	942.00
INPUT PARAMETERS											
Vehicles per hour	795.74	16.49	27.48	590.75	2.75	4.58	146.49	22.90	38.17	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	60.00
ADJUSTMENTS										DAY LEQ	54.11
Flow	23.26	6.43	8.64	21.97	-1.36	0.86	15.91	7.85	10.07		
Distance	-12.82	-12.82	-12.82	-12.82	-12.82	-12.82	-12.82	-12.82	-12.82	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	50.55	43.43	50.87	49.26	35.65	43.09	43.20	44.86	52.30	GRADE dB	0.00

DAY LEQ 54.11 EVENING l 50.35 NIGHT LEQ 53.45

CNEL **60.00**

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - 2nd Street
West of Interstate 215 SB Ramps

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	13740.00
										SPEED	35.00
										DISTANCE	298.00
INPUT PARAMETERS											
Vehicles per hour	795.74	16.49	27.48	590.75	2.75	4.58	146.49	22.90	38.17	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	65.00
ADJUSTMENTS										DAY LEQ	59.11
Flow	23.26	6.43	8.64	21.97	-1.36	0.86	15.91	7.85	10.07		
Distance	-7.82	-7.82	-7.82	-7.82	-7.82	-7.82	-7.82	-7.82	-7.82	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	55.55	48.43	55.87	54.25	40.65	48.09	48.20	49.86	57.29	GRADE dB	0.00

DAY LEQ 59.11 EVENING l 55.34 NIGHT LEQ 58.45

CNEL 65.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - 2nd Street
West of Interstate 215 SB Ramps

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	13740.00
										SPEED	35.00
										DISTANCE	94.00
INPUT PARAMETERS											
Vehicles per hour	795.74	16.49	27.48	590.75	2.75	4.58	146.49	22.90	38.17	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	70.01
ADJUSTMENTS										DAY LEQ	64.12
Flow	23.26	6.43	8.64	21.97	-1.36	0.86	15.91	7.85	10.07		
Distance	-2.81	-2.81	-2.81	-2.81	-2.81	-2.81	-2.81	-2.81	-2.81	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	60.56	53.44	60.88	59.27	45.66	53.10	53.21	54.87	62.30	GRADE dB	0.00

DAY LEQ	64.12	EVENING l	60.36	NIGHT LEQ	63.46

CNEL **70.01**

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - 2nd Street
I-215 SB Ramps to I-215 NB Ramps

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	21035.00
										SPEED	35.00
										DISTANCE	1445.00
INPUT PARAMETERS											
Vehicles per hour	1218.22	25.24	42.07	904.39	4.21	7.01	224.27	35.06	58.43	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	60.00
ADJUSTMENTS										DAY LEQ	54.10
Flow	25.11	8.27	10.49	23.82	0.49	2.71	17.76	9.70	11.92		
Distance	-14.68	-14.68	-14.68	-14.68	-14.68	-14.68	-14.68	-14.68	-14.68	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	50.54	43.42	50.86	49.25	35.64	43.08	43.19	44.85	52.29	GRADE dB	0.00

DAY LEQ	54.10	EVENING l	50.34	NIGHT LEQ	53.44

CNEL **60.00**

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - 2nd Street
I-215 SB Ramps to I-215 NB Ramps

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	21035.00
										SPEED	35.00
										DISTANCE	456.00
INPUT PARAMETERS											
Vehicles per hour	1218.22	25.24	42.07	904.39	4.21	7.01	224.27	35.06	58.43	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	65.00
ADJUSTMENTS										DAY LEQ	59.11
Flow	25.11	8.27	10.49	23.82	0.49	2.71	17.76	9.70	11.92		
Distance	-9.67	-9.67	-9.67	-9.67	-9.67	-9.67	-9.67	-9.67	-9.67	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	55.55	48.43	55.87	54.26	40.65	48.09	48.20	49.86	57.30	GRADE dB	0.00

DAY LEQ 59.11 EVENING l 55.35 NIGHT LEQ 58.45

CNEL 65.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - 2nd Street
I-215 SB Ramps to I-215 NB Ramps

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	21035.00
										SPEED	35.00
										DISTANCE	144.00
INPUT PARAMETERS											
Vehicles per hour	1218.22	25.24	42.07	904.39	4.21	7.01	224.27	35.06	58.43	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	70.01
ADJUSTMENTS										DAY LEQ	64.12
Flow	25.11	8.27	10.49	23.82	0.49	2.71	17.76	9.70	11.92		
Distance	-4.66	-4.66	-4.66	-4.66	-4.66	-4.66	-4.66	-4.66	-4.66	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	60.56	53.44	60.88	59.26	45.66	53.09	53.21	54.87	62.30	GRADE dB	0.00

DAY LEQ	64.12	EVENING l	60.35	NIGHT LEQ	63.45
CNEL	**70.01**				

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - 2nd Street
I-215 NB Ramps to Waterman Avenue

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	15735.00
										SPEED	35.00
										DISTANCE	1080.00
INPUT PARAMETERS											
Vehicles per hour	911.28	18.88	31.47	676.52	3.15	5.25	167.76	26.23	43.71	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	60.00
ADJUSTMENTS										DAY LEQ	54.11
Flow	23.85	7.01	9.23	22.56	-0.77	1.45	16.50	8.44	10.66		
Distance	-13.41	-13.41	-13.41	-13.41	-13.41	-13.41	-13.41	-13.41	-13.41	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	50.55	43.43	50.86	49.25	35.65	43.08	43.20	44.85	52.29	GRADE dB	0.00

DAY LEQ 54.11 EVENING l 50.34 NIGHT LEQ 53.44

CNEL 60.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - 2nd Street
I-215 NB Ramps to Waterman Avenue

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	15735.00
										SPEED	35.00
										DISTANCE	341.00
INPUT PARAMETERS											
Vehicles per hour	911.28	18.88	31.47	676.52	3.15	5.25	167.76	26.23	43.71	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	65.01
ADJUSTMENTS										DAY LEQ	59.11
Flow	23.85	7.01	9.23	22.56	-0.77	1.45	16.50	8.44	10.66		
Distance	-8.41	-8.41	-8.41	-8.41	-8.41	-8.41	-8.41	-8.41	-8.41	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	55.55	48.43	55.87	54.26	40.65	48.09	48.20	49.86	57.30	GRADE dB	0.00

DAY LEQ	59.11	EVENING l	55.35	NIGHT LEQ	58.45

CNEL **65.01**

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Traffic Noise - 2nd Street
I-215 NB Ramps to Waterman Avenue

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	15735.00
										SPEED	35.00
										DISTANCE	108.00
INPUT PARAMETERS											
Vehicles per hour	911.28	18.88	31.47	676.52	3.15	5.25	167.76	26.23	43.71	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	70.00
ADJUSTMENTS										DAY LEQ	64.11
Flow	23.85	7.01	9.23	22.56	-0.77	1.45	16.50	8.44	10.66		
Distance	-3.41	-3.41	-3.41	-3.41	-3.41	-3.41	-3.41	-3.41	-3.41	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	60.55	53.43	60.86	59.25	45.65	53.08	53.20	54.85	62.29	GRADE dB	0.00

DAY LEQ 64.11 EVENING l 60.34 NIGHT LEQ 63.44

CNEL 70.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise- Waterman Avenue
North of 30th Street

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	18840.00
										SPEED	35.00
										DISTANCE	1294.00
INPUT PARAMETERS											
Vehicles per hour	1091.10	22.61	37.68	810.02	3.77	6.28	200.87	31.40	52.33	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	60.00
ADJUSTMENTS										DAY LEQ	54.10
Flow	24.63	7.80	10.01	23.34	0.01	2.23	17.28	9.22	11.44		
Distance	-14.20	-14.20	-14.20	-14.20	-14.20	-14.20	-14.20	-14.20	-14.20	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	50.54	43.42	50.86	49.25	35.64	43.08	43.19	44.85	52.29	GRADE dB	0.00

DAY LEQ	54.10		EVENING LE(	50.34		NIGHT LEQ	53.44
CNEL		**60.00**					

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - Waterman Avenue
North of 30th Street

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	18430.00
										SPEED	35.00
										DISTANCE	400.00
INPUT PARAMETERS											
Vehicles per hour	1067.36	22.12	36.86	792.39	3.69	6.14	196.50	30.72	51.19	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	65.00
ADJUSTMENTS										DAY LEQ	59.11
Flow	24.54	7.70	9.92	23.24	-0.08	2.14	17.19	9.13	11.35		
Distance	-9.10	-9.10	-9.10	-9.10	-9.10	-9.10	-9.10	-9.10	-9.10	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	55.55	48.43	55.86	54.25	40.65	48.08	48.20	49.85	57.29	GRADE dB	0.00

DAY LEQ	59.11		EVENING LE(	55.34		NIGHT LEQ	58.44
CNEL		**65.00**					

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - Waterman Avenue
North of 30th Street

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	18430.00
										SPEED	35.00
										DISTANCE	126.00
INPUT PARAMETERS											
Vehicles per hour	1067.36	22.12	36.86	792.39	3.69	6.14	196.50	30.72	51.19	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	70.02
ADJUSTMENTS										DAY LEQ	64.12
Flow	24.54	7.70	9.92	23.24	-0.08	2.14	17.19	9.13	11.35		
Distance	-4.08	-4.08	-4.08	-4.08	-4.08	-4.08	-4.08	-4.08	-4.08	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	60.56	53.44	60.88	59.27	45.66	53.10	53.21	54.87	62.31	GRADE dB	0.00

DAY LEQ 64.12 EVENING LEQ 60.36 NIGHT LEQ 63.46

CNEL 70.02

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future Plus Project Traffic Noise - Waterman Avenue
30th Street to SR-210 EB Ramps

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	23615.00
										SPEED	35.00
										DISTANCE	1620.00
INPUT PARAMETERS											
Vehicles per hour	1367.64	28.34	47.23	1015.32	4.72	7.87	251.78	39.36	65.60	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	60.00
ADJUSTMENTS										DAY LEQ	54.11
Flow	25.61	8.78	11.00	24.32	1.00	3.21	18.26	10.20	12.42		
Distance	-15.18	-15.18	-15.18	-15.18	-15.18	-15.18	-15.18	-15.18	-15.18	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	50.55	43.43	50.87	49.25	35.65	43.08	43.20	44.86	52.29	GRADE dB	0.00

DAY LEQ	54.11		EVENING LE(	50.34		NIGHT LEQ	53.44
CNEL		**60.00**					

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - Waterman Avenue
30th Street to SR-210 EB Ramps

	DAYTIME			EVENING			NIGHTTIME		
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS
INPUT PARAMETERS									
Vehicles per hour	1367.64	28.34	47.23	1015.32	4.72	7.87	251.78	39.36	65.60
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05
ADJUSTMENTS									
Flow	25.61	8.78	11.00	24.32	1.00	3.21	18.26	10.20	12.42
Distance	-10.18	-10.18	-10.18	-10.18	-10.18	-10.18	-10.18	-10.18	-10.18
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	55.54	48.42	55.86	54.25	40.64	48.08	48.19	49.85	57.29

ADT	23615.00
SPEED	35.00
DISTANCE	513.00
% A	92.00
% MT	3.00
% HT	5.00
LEFT	-90.00
RIGHT	90.00
CNEL	65.00
DAY LEQ	59.10
Day hour	89.00
Absorbtive?	no
Use hour?	no
GRADE dB	0.00

DAY LEQ	59.10	EVENING LE(	55.34	NIGHT LEQ 58.44

CNEL **65.00**

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - Waterman Avenue
30th Street to SR-210 EB Ramps

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	23615.00
										SPEED	35.00
										DISTANCE	162.00
INPUT PARAMETERS											
Vehicles per hour	1367.64	28.34	47.23	1015.32	4.72	7.87	251.78	39.36	65.60	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	70.00
ADJUSTMENTS										DAY LEQ	64.11
Flow	25.61	8.78	11.00	24.32	1.00	3.21	18.26	10.20	12.42		
Distance	-5.18	-5.18	-5.18	-5.18	-5.18	-5.18	-5.18	-5.18	-5.18	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	60.55	53.43	60.87	59.25	45.65	53.08	53.20	54.86	62.29	GRADE dB	0.00

DAY LEQ	64.11		EVENING LE(	60.34		NIGHT LEQ	63.44
CNEL		**70.00**					

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - Waterman Avenue
R-210 EB Ramps to Highland Avenu

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	21840.00
										SPEED	35.00
										DISTANCE	1500.00
INPUT PARAMETERS											
Vehicles per hour	1264.84	26.21	43.68	939.00	4.37	7.28	232.85	36.40	60.67	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	60.00
ADJUSTMENTS										DAY LEQ	54.10
Flow	25.27	8.44	10.66	23.98	0.66	2.87	17.92	9.86	12.08		
Distance	-14.84	-14.84	-14.84	-14.84	-14.84	-14.84	-14.84	-14.84	-14.84	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	50.54	43.42	50.86	49.25	35.64	43.08	43.19	44.85	52.29	GRADE dB	0.00

DAY LEQ 54.10 EVENING I 50.34 NIGHT LEQ 53.44

CNEL 60.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - Waterman Avenue
R-210 EB Ramps to Highland Avenu

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	21840.00
										SPEED	35.00
										DISTANCE	474.00
INPUT PARAMETERS											
Vehicles per hour	1264.84	26.21	43.68	939.00	4.37	7.28	232.85	36.40	60.67	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	65.00
ADJUSTMENTS										DAY LEQ	59.11
Flow	25.27	8.44	10.66	23.98	0.66	2.87	17.92	9.86	12.08		
Distance	-9.84	-9.84	-9.84	-9.84	-9.84	-9.84	-9.84	-9.84	-9.84	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	55.55	48.43	55.86	54.25	40.65	48.08	48.20	49.85	57.29	GRADE dB	0.00

DAY LEQ 59.11 EVENING I 55.34 NIGHT LEQ 58.44

CNEL 65.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - Waterman Avenue
R-210 EB Ramps to Highland Avenu

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	21840.00
										SPEED	35.00
										DISTANCE	150.00
INPUT PARAMETERS											
Vehicles per hour	1264.84	26.21	43.68	939.00	4.37	7.28	232.85	36.40	60.67	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	70.00
ADJUSTMENTS										DAY LEQ	64.10
Flow	25.27	8.44	10.66	23.98	0.66	2.87	17.92	9.86	12.08		
Distance	-4.84	-4.84	-4.84	-4.84	-4.84	-4.84	-4.84	-4.84	-4.84	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	60.54	53.42	60.86	59.25	45.64	53.08	53.19	54.85	62.29	GRADE dB	0.00

DAY LEQ 64.10 EVENING I 60.34 NIGHT LEQ 63.44

CNEL 70.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - Waterman Avenue
Highland Avenue to Baseline Stree

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	19665.00
										SPEED	35.00
										DISTANCE	1350.00
INPUT PARAMETERS											
Vehicles per hour	1138.88	23.60	39.33	845.49	3.93	6.56	209.66	32.78	54.63	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	60.00
ADJUSTMENTS										DAY LEQ	54.11
Flow	24.82	7.98	10.20	23.52	0.20	2.42	17.47	9.41	11.63		
Distance	-14.38	-14.38	-14.38	-14.38	-14.38	-14.38	-14.38	-14.38	-14.38	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	50.54	43.43	50.86	49.25	35.65	43.08	43.19	44.85	52.29	GRADE dB	0.00

DAY LEQ 54.11 EVENING I 50.34 NIGHT LEQ 53.44

CNEL 60.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - Waterman Avenue
Highland Avenue to Baseline Stree

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	19665.00
										SPEED	35.00
										DISTANCE	427.00
INPUT PARAMETERS											
Vehicles per hour	1138.88	23.60	39.33	845.49	3.93	6.56	209.66	32.78	54.63	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	65.00
ADJUSTMENTS										DAY LEQ	59.10
Flow	24.82	7.98	10.20	23.52	0.20	2.42	17.47	9.41	11.63		
Distance	-9.38	-9.38	-9.38	-9.38	-9.38	-9.38	-9.38	-9.38	-9.38	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	55.54	48.43	55.86	54.25	40.64	48.08	48.19	49.85	57.29	GRADE dB	0.00

DAY LEQ 59.10 EVENING I 55.34 NIGHT LEQ 58.44

CNEL 65.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - Waterman Avenue
Highland Avenue to Baseline Stree

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	19665.00
										SPEED	35.00
										DISTANCE	135.00
INPUT PARAMETERS											
Vehicles per hour	1138.88	23.60	39.33	845.49	3.93	6.56	209.66	32.78	54.63	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	70.00
ADJUSTMENTS										DAY LEQ	64.11
Flow	24.82	7.98	10.20	23.52	0.20	2.42	17.47	9.41	11.63		
Distance	-4.38	-4.38	-4.38	-4.38	-4.38	-4.38	-4.38	-4.38	-4.38	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	60.54	53.43	60.86	59.25	45.65	53.08	53.19	54.85	62.29	GRADE dB	0.00

DAY LEQ 64.11 EVENING l 60.34 NIGHT LEQ 63.44

CNEL 70.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - Waterman Avenue
Baseline Street to 9th Street

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	27565.00
										SPEED	35.00
										DISTANCE	1893.00
INPUT PARAMETERS											
Vehicles per hour	1596.40	33.08	55.13	1185.15	5.51	9.19	293.89	45.94	76.57	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	60.00
ADJUSTMENTS										DAY LEQ	54.10
Flow	26.28	9.45	11.67	24.99	1.67	3.89	18.94	10.88	13.09		
Distance	-15.85	-15.85	-15.85	-15.85	-15.85	-15.85	-15.85	-15.85	-15.85	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	50.54	43.43	50.86	49.25	35.64	43.08	43.19	44.85	52.29	GRADE dB	0.00

DAY LEQ	54.10	EVENING l	50.34	NIGHT LEQ	53.44

CNEL **60.00**

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - Waterman Avenue
Baseline Street to 9th Street

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	27565.00
										SPEED	35.00
										DISTANCE	598.00
INPUT PARAMETERS											
Vehicles per hour	1596.40	33.08	55.13	1185.15	5.51	9.19	293.89	45.94	76.57	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	65.00
ADJUSTMENTS										DAY LEQ	59.11
Flow	26.28	9.45	11.67	24.99	1.67	3.89	18.94	10.88	13.09		
Distance	-10.85	-10.85	-10.85	-10.85	-10.85	-10.85	-10.85	-10.85	-10.85	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	55.55	48.43	55.87	54.25	40.65	48.08	48.20	49.86	57.29	GRADE dB	0.00

DAY LEQ	59.11	EVENING l	55.34	NIGHT LEQ	58.44

CNEL **65.00**

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - Waterman Avenue
Baseline Street to 9th Street

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	27565.00
										SPEED	35.00
										DISTANCE	189.00
INPUT PARAMETERS											
Vehicles per hour	1596.40	33.08	55.13	1185.15	5.51	9.19	293.89	45.94	76.57	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	70.00
ADJUSTMENTS										DAY LEQ	64.11
Flow	26.28	9.45	11.67	24.99	1.67	3.89	18.94	10.88	13.09		
Distance	-5.84	-5.84	-5.84	-5.84	-5.84	-5.84	-5.84	-5.84	-5.84	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	60.55	53.43	60.87	59.26	45.65	53.09	53.20	54.86	62.30	GRADE dB	0.00

DAY LEQ	64.11	EVENING l	60.35	NIGHT LEQ	63.45

CNEL **70.00**

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - Waterman Avenue
9th Street to 5th Street

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	28870.00
										SPEED	35.00
										DISTANCE	1982.00
INPUT PARAMETERS											
Vehicles per hour	1671.98	34.64	57.74	1241.26	5.77	9.62	307.81	48.12	80.19	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	60.00
ADJUSTMENTS										DAY LEQ	54.11
Flow	26.49	9.65	11.87	25.19	1.87	4.09	19.14	11.08	13.29		
Distance	-16.05	-16.05	-16.05	-16.05	-16.05	-16.05	-16.05	-16.05	-16.05	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	50.54	43.43	50.86	49.25	35.65	43.08	43.19	44.85	52.29	GRADE dB	0.00

DAY LEQ	54.11	EVENING l	50.34	NIGHT LEQ	53.44
CNEL	**60.00**				

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - Waterman Avenue
9th Street to 5th Street

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	28870.00
										SPEED	35.00
										DISTANCE	626.00
INPUT PARAMETERS											
Vehicles per hour	1671.98	34.64	57.74	1241.26	5.77	9.62	307.81	48.12	80.19	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	65.00
ADJUSTMENTS										DAY LEQ	59.11
Flow	26.49	9.65	11.87	25.19	1.87	4.09	19.14	11.08	13.29		
Distance	-11.05	-11.05	-11.05	-11.05	-11.05	-11.05	-11.05	-11.05	-11.05	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	55.55	48.43	55.87	54.26	40.65	48.09	48.20	49.86	57.29	GRADE dB	0.00

DAY LEQ	59.11	EVENING l	55.35	NIGHT LEQ	58.45

CNEL **65.00**

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - Waterman Avenue
9th Street to 5th Street

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	28870.00
										SPEED	35.00
										DISTANCE	198.00
INPUT PARAMETERS											
Vehicles per hour	1671.98	34.64	57.74	1241.26	5.77	9.62	307.81	48.12	80.19	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	70.00
ADJUSTMENTS										DAY LEQ	64.11
Flow	26.49	9.65	11.87	25.19	1.87	4.09	19.14	11.08	13.29		
Distance	-6.05	-6.05	-6.05	-6.05	-6.05	-6.05	-6.05	-6.05	-6.05	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	60.55	53.43	60.87	59.25	45.65	53.09	53.20	54.86	62.29	GRADE dB	0.00

DAY LEQ	64.11	EVENING l	60.34	NIGHT LEQ	63.45
CNEL	**70.00**				

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - Waterman Avenue
5th Street to 2nd Street

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	25005.00
										SPEED	35.00
										DISTANCE	1716.00
INPUT PARAMETERS											
Vehicles per hour	1448.14	30.01	50.01	1075.08	5.00	8.34	266.60	41.68	69.46	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	60.00
ADJUSTMENTS										DAY LEQ	54.11
Flow	25.86	9.03	11.24	24.57	1.24	3.46	18.51	10.45	12.67		
Distance	-15.43	-15.43	-15.43	-15.43	-15.43	-15.43	-15.43	-15.43	-15.43	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	50.55	43.43	50.86	49.25	35.65	43.08	43.20	44.85	52.29	GRADE dB	0.00

DAY LEQ	54.11	EVENING l	50.34	NIGHT LEQ	53.44

CNEL **60.00**

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - Waterman Avenue
5th Street to 2nd Street

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	25005.00
										SPEED	35.00
										DISTANCE	543.00
INPUT PARAMETERS											
Vehicles per hour	1448.14	30.01	50.01	1075.08	5.00	8.34	266.60	41.68	69.46	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	65.00
ADJUSTMENTS										DAY LEQ	59.10
Flow	25.86	9.03	11.24	24.57	1.24	3.46	18.51	10.45	12.67		
Distance	-10.43	-10.43	-10.43	-10.43	-10.43	-10.43	-10.43	-10.43	-10.43	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	55.54	48.43	55.86	54.25	40.64	48.08	48.19	49.85	57.29	GRADE dB	0.00

DAY LEQ	59.10	EVENING l	55.34	NIGHT LEQ	58.44
CNEL	**65.00**				

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - Waterman Avenue
5th Street to 2nd Street

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	25005.00
										SPEED	35.00
										DISTANCE	171.00
INPUT PARAMETERS											
Vehicles per hour	1448.14	30.01	50.01	1075.08	5.00	8.34	266.60	41.68	69.46	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	70.02
ADJUSTMENTS										DAY LEQ	64.12
Flow	25.86	9.03	11.24	24.57	1.24	3.46	18.51	10.45	12.67		
Distance	-5.41	-5.41	-5.41	-5.41	-5.41	-5.41	-5.41	-5.41	-5.41	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	60.56	53.44	60.88	59.27	45.66	53.10	53.21	54.87	62.31	GRADE dB	0.00

DAY LEQ 64.12 EVENING l 60.36 NIGHT LEQ 63.46

CNEL 70.02

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - Waterman Avenue
South of 2nd Street

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	9130.00
										SPEED	35.00
										DISTANCE	627.00
INPUT PARAMETERS											
Vehicles per hour	528.75	10.96	18.26	392.54	1.83	3.04	97.34	15.22	25.36	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	60.00
ADJUSTMENTS										DAY LEQ	54.10
Flow	21.49	4.65	6.87	20.19	-3.13	-0.91	14.14	6.08	8.30		
Distance	-11.05	-11.05	-11.05	-11.05	-11.05	-11.05	-11.05	-11.05	-11.05	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	50.54	43.43	50.86	49.25	35.64	43.08	43.19	44.85	52.29	GRADE dB	0.00

DAY LEQ 54.10 EVENING l 50.34 NIGHT LEQ 53.44

CNEL 60.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - Waterman Avenue
South of 2nd Street

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	9130.00
										SPEED	35.00
										DISTANCE	198.00
INPUT PARAMETERS											
Vehicles per hour	528.75	10.96	18.26	392.54	1.83	3.04	97.34	15.22	25.36	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	65.00
ADJUSTMENTS										DAY LEQ	59.11
Flow	21.49	4.65	6.87	20.19	-3.13	-0.91	14.14	6.08	8.30		
Distance	-6.05	-6.05	-6.05	-6.05	-6.05	-6.05	-6.05	-6.05	-6.05	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	55.55	48.43	55.87	54.26	40.65	48.09	48.20	49.86	57.29	GRADE dB	0.00

DAY LEQ 59.11 EVENING l 55.34 NIGHT LEQ 58.45

CNEL 65.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - Waterman Avenue
South of 2nd Street

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	9130.00
										SPEED	35.00
										DISTANCE	63.00
INPUT PARAMETERS											
Vehicles per hour	528.75	10.96	18.26	392.54	1.83	3.04	97.34	15.22	25.36	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	69.98
ADJUSTMENTS										DAY LEQ	64.08
Flow	21.49	4.65	6.87	20.19	-3.13	-0.91	14.14	6.08	8.30		
Distance	-1.07	-1.07	-1.07	-1.07	-1.07	-1.07	-1.07	-1.07	-1.07	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	60.52	53.40	60.84	59.23	45.62	53.06	53.17	54.83	62.27	GRADE dB	0.00

DAY LEQ 64.08 EVENING l 60.32 NIGHT LEQ 63.42

CNEL 69.98

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - Waterman Avenue
North of I-10 WB On-Ramp

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	40180.00
										SPEED	50.00
										DISTANCE	4600.00
INPUT PARAMETERS											
Vehicles per hour	2326.98	48.22	80.36	1727.53	8.04	13.39	428.39	66.97	111.61	% A	92.00
Speed in MPH	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	71.12	78.79	83.02	71.12	78.79	83.02	71.12	78.79	83.02	CNEL	60.00
ADJUSTMENTS										DAY LEQ	54.98
Flow	26.37	9.54	11.75	25.08	1.75	3.97	19.02	10.96	13.18		
Distance	-19.71	-19.71	-19.71	-19.71	-19.71	-19.71	-19.71	-19.71	-19.71	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	52.78	43.62	50.07	51.49	35.84	42.29	45.43	45.05	51.49	GRADE dB	0.00

DAY LEQ 54.98 EVENING l 52.09 NIGHT LEQ 53.18

CNEL 60.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - Waterman Avenue
North of I-10 WB On-Ramp

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	40180.00
										SPEED	50.00
										DISTANCE	1456.00
INPUT PARAMETERS											
Vehicles per hour	2326.98	48.22	80.36	1727.53	8.04	13.39	428.39	66.97	111.61	% A	92.00
Speed in MPH	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	71.12	78.79	83.02	71.12	78.79	83.02	71.12	78.79	83.02	CNEL	65.00
ADJUSTMENTS										DAY LEQ	59.97
Flow	26.37	9.54	11.75	25.08	1.75	3.97	19.02	10.96	13.18		
Distance	-14.71	-14.71	-14.71	-14.71	-14.71	-14.71	-14.71	-14.71	-14.71	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	57.78	48.62	55.06	56.49	40.84	47.28	50.43	50.04	56.49	GRADE dB	0.00

DAY LEQ 59.97 EVENING l 57.08 NIGHT LEQ 58.18

CNEL 65.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - Waterman Avenue
North of I-10 WB On-Ramp

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	40180.00
										SPEED	50.00
										DISTANCE	460.00
INPUT PARAMETERS											
Vehicles per hour	2326.98	48.22	80.36	1727.53	8.04	13.39	428.39	66.97	111.61	% A	92.00
Speed in MPH	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	71.12	78.79	83.02	71.12	78.79	83.02	71.12	78.79	83.02	CNEL	70.00
ADJUSTMENTS										DAY LEQ	64.98
Flow	26.37	9.54	11.75	25.08	1.75	3.97	19.02	10.96	13.18		
Distance	-9.71	-9.71	-9.71	-9.71	-9.71	-9.71	-9.71	-9.71	-9.71	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	62.78	53.62	60.07	61.49	45.84	52.29	55.43	55.05	61.49	GRADE dB	0.00

DAY LEQ 64.98 EVENING l 62.09 NIGHT LEQ 63.18

CNEL 70.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - Waterman Avenue
South of I-10 WB On-Ramp

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	36540.00
										SPEED	50.00
										DISTANCE	4192.00
INPUT PARAMETERS											
Vehicles per hour	2116.18	43.85	73.08	1571.03	7.31	12.18	389.58	60.90	101.50	% A	92.00
Speed in MPH	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	71.12	78.79	83.02	71.12	78.79	83.02	71.12	78.79	83.02	CNEL	60.00
ADJUSTMENTS										DAY LEQ	54.97
Flow	25.96	9.12	11.34	24.67	1.34	3.56	18.61	10.55	12.77		
Distance	-19.30	-19.30	-19.30	-19.30	-19.30	-19.30	-19.30	-19.30	-19.30	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	52.78	43.61	50.06	51.48	35.83	42.28	45.43	45.04	51.48	GRADE dB	0.00

DAY LEQ 54.97 EVENING l 52.08 NIGHT LEQ 53.17

CNEL **60.00**

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - Waterman Avenue
South of I-10 WB On-Ramp

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	36540.00
										SPEED	50.00
										DISTANCE	1324.00
INPUT PARAMETERS											
Vehicles per hour	2116.18	43.85	73.08	1571.03	7.31	12.18	389.58	60.90	101.50	% A	92.00
Speed in MPH	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	71.12	78.79	83.02	71.12	78.79	83.02	71.12	78.79	83.02	CNEL	65.00
ADJUSTMENTS										DAY LEQ	59.97
Flow	25.96	9.12	11.34	24.67	1.34	3.56	18.61	10.55	12.77		
Distance	-14.30	-14.30	-14.30	-14.30	-14.30	-14.30	-14.30	-14.30	-14.30	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	57.78	48.62	55.06	56.49	40.84	47.28	50.43	50.05	56.49	GRADE dB	0.00

DAY LEQ 59.97 EVENING l 57.08 NIGHT LEQ 58.18

CNEL 65.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - Waterman Avenue
South of I-10 WB On-Ramp

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	36540.00
										SPEED	50.00
										DISTANCE	419.00
INPUT PARAMETERS											
Vehicles per hour	2116.18	43.85	73.08	1571.03	7.31	12.18	389.58	60.90	101.50	% A	92.00
Speed in MPH	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	71.12	78.79	83.02	71.12	78.79	83.02	71.12	78.79	83.02	CNEL	70.00
ADJUSTMENTS										DAY LEQ	64.97
Flow	25.96	9.12	11.34	24.67	1.34	3.56	18.61	10.55	12.77		
Distance	-9.30	-9.30	-9.30	-9.30	-9.30	-9.30	-9.30	-9.30	-9.30	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	62.78	53.62	60.06	61.48	45.83	52.28	55.43	55.04	61.49	GRADE dB	0.00

DAY LEQ 64.97 EVENING l 62.08 NIGHT LEQ 63.17

CNEL 70.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - Baseline Street
I-215 SB Ramps to I-215 NB Ramps

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	22680.00
										SPEED	40.00
										DISTANCE	1870.00
INPUT PARAMETERS											
Vehicles per hour	1313.49	27.22	45.36	975.12	4.54	7.56	241.81	37.80	63.00	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	60.00
ADJUSTMENTS										DAY LEQ	54.41
Flow	24.86	8.02	10.24	23.56	0.24	2.46	17.51	9.45	11.67		
Distance	-15.80	-15.80	-15.80	-15.80	-15.80	-15.80	-15.80	-15.80	-15.80	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	51.42	43.54	50.60	50.13	35.75	42.82	44.07	44.96	52.03	GRADE dB	0.00

DAY LEQ 54.41 EVENING l 51.00 NIGHT LEQ 53.35

CNEL 60.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - Baseline Street
I-215 SB Ramps to I-215 NB Ramps

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	22680.00
										SPEED	40.00
										DISTANCE	591.00
INPUT PARAMETERS											
Vehicles per hour	1313.49	27.22	45.36	975.12	4.54	7.56	241.81	37.80	63.00	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	65.00
ADJUSTMENTS										DAY LEQ	59.41
Flow	24.86	8.02	10.24	23.56	0.24	2.46	17.51	9.45	11.67		
Distance	-10.80	-10.80	-10.80	-10.80	-10.80	-10.80	-10.80	-10.80	-10.80	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	56.42	48.54	55.60	55.13	40.76	47.82	49.07	49.96	57.03	GRADE dB	0.00

DAY LEQ 59.41 EVENING I 56.00 NIGHT LEQ 58.35

CNEL 65.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - Baseline Street
I-215 SB Ramps to I-215 NB Ramps

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	22680.00
										SPEED	40.00
										DISTANCE	187.00
INPUT PARAMETERS											
Vehicles per hour	1313.49	27.22	45.36	975.12	4.54	7.56	241.81	37.80	63.00	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	70.00
ADJUSTMENTS										DAY LEQ	64.41
Flow	24.86	8.02	10.24	23.56	0.24	2.46	17.51	9.45	11.67		
Distance	-5.80	-5.80	-5.80	-5.80	-5.80	-5.80	-5.80	-5.80	-5.80	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	61.42	53.54	60.60	60.13	45.75	52.82	54.07	54.96	62.03	GRADE dB	0.00

DAY LEQ 64.41 EVENING l 61.00 NIGHT LEQ 63.35

CNEL 70.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - Baseline Street
I-215 NB Ramps to E Street

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	24745.00
										SPEED	40.00
										DISTANCE	2038.00
INPUT PARAMETERS											
Vehicles per hour	1433.08	29.69	49.49	1063.90	4.95	8.25	263.83	41.24	68.74	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	60.00
ADJUSTMENTS										DAY LEQ	54.41
Flow	25.24	8.40	10.62	23.94	0.62	2.84	17.89	9.83	12.05		
Distance	-16.17	-16.17	-16.17	-16.17	-16.17	-16.17	-16.17	-16.17	-16.17	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	51.42	43.54	50.61	50.13	35.76	42.82	44.07	44.97	52.03	GRADE dB	0.00

DAY LEQ	54.41	EVENING l	51.00	NIGHT LEQ	53.36

CNEL **60.00**

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - Baseline Street
I-215 NB Ramps to E Street

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	24745.00
										SPEED	40.00
										DISTANCE	645.00
INPUT PARAMETERS											
Vehicles per hour	1433.08	29.69	49.49	1063.90	4.95	8.25	263.83	41.24	68.74	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	65.00
ADJUSTMENTS										DAY LEQ	59.41
Flow	25.24	8.40	10.62	23.94	0.62	2.84	17.89	9.83	12.05		
Distance	-11.18	-11.18	-11.18	-11.18	-11.18	-11.18	-11.18	-11.18	-11.18	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	56.42	48.54	55.60	55.13	40.76	47.82	49.07	49.96	57.03	GRADE dB	0.00

DAY LEQ 59.41 EVENING l 56.00 NIGHT LEQ 58.35

CNEL 65.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - Baseline Street
I-215 NB Ramps to E Street

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	24745.00
										SPEED	40.00
										DISTANCE	204.00
INPUT PARAMETERS											
Vehicles per hour	1433.08	29.69	49.49	1063.90	4.95	8.25	263.83	41.24	68.74	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	70.00
ADJUSTMENTS										DAY LEQ	64.41
Flow	25.24	8.40	10.62	23.94	0.62	2.84	17.89	9.83	12.05		
Distance	-6.18	-6.18	-6.18	-6.18	-6.18	-6.18	-6.18	-6.18	-6.18	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	61.42	53.54	60.60	60.13	45.75	52.82	54.07	54.96	62.03	GRADE dB	0.00

DAY LEQ 64.41 EVENING l 61.00 NIGHT LEQ 63.35

CNEL 70.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - Baseline Street
E Street to Sierra Way

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	21850.00
										SPEED	40.00
										DISTANCE	1800.00
INPUT PARAMETERS											
Vehicles per hour	1265.42	26.22	43.70	939.43	4.37	7.28	232.96	36.42	60.69	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	60.00
ADJUSTMENTS										DAY LEQ	54.41
Flow	24.70	7.86	10.08	23.40	0.08	2.30	17.35	9.29	11.51		
Distance	-15.63	-15.63	-15.63	-15.63	-15.63	-15.63	-15.63	-15.63	-15.63	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	51.42	43.54	50.60	50.13	35.76	42.82	44.07	44.97	52.03	GRADE dB	0.00

DAY LEQ 54.41 EVENING l 51.00 NIGHT LEQ 53.36

CNEL 60.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - Baseline Street
E Street to Sierra Way

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	21850.00
										SPEED	40.00
										DISTANCE	569.00
INPUT PARAMETERS											
Vehicles per hour	1265.42	26.22	43.70	939.43	4.37	7.28	232.96	36.42	60.69	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	65.00
ADJUSTMENTS										DAY LEQ	59.42
Flow	24.70	7.86	10.08	23.40	0.08	2.30	17.35	9.29	11.51		
Distance	-10.63	-10.63	-10.63	-10.63	-10.63	-10.63	-10.63	-10.63	-10.63	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	56.42	48.54	55.61	55.13	40.76	47.82	49.07	49.97	57.03	GRADE dB	0.00

DAY LEQ 59.42 EVENING l 56.00 NIGHT LEQ 58.36

CNEL 65.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - Baseline Street
E Street to Sierra Way

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	21850.00
										SPEED	40.00
										DISTANCE	180.00
INPUT PARAMETERS											
Vehicles per hour	1265.42	26.22	43.70	939.43	4.37	7.28	232.96	36.42	60.69	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	70.00
ADJUSTMENTS										DAY LEQ	64.41
Flow	24.70	7.86	10.08	23.40	0.08	2.30	17.35	9.29	11.51		
Distance	-5.63	-5.63	-5.63	-5.63	-5.63	-5.63	-5.63	-5.63	-5.63	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	61.42	53.54	60.60	60.13	45.76	52.82	54.07	54.97	62.03	GRADE dB	0.00

DAY LEQ 64.41 EVENING l 61.00 NIGHT LEQ 63.36

CNEL 70.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - Baseline Street
Sierra Way to Waterman Avenue

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	21470.00
										SPEED	40.00
										DISTANCE	1770.00
INPUT PARAMETERS											
Vehicles per hour	1243.41	25.76	42.94	923.10	4.29	7.16	228.91	35.78	59.64	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	60.00
ADJUSTMENTS										DAY LEQ	54.41
Flow	24.62	7.78	10.00	23.33	0.00	2.22	17.27	9.21	11.43		
Distance	-15.56	-15.56	-15.56	-15.56	-15.56	-15.56	-15.56	-15.56	-15.56	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	51.42	43.54	50.60	50.13	35.75	42.82	44.07	44.96	52.03	GRADE dB	0.00

DAY LEQ 54.41 EVENING l 51.00 NIGHT LEQ 53.35

CNEL 60.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - Baseline Street
Sierra Way to Waterman Avenue

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	21470.00
										SPEED	40.00
										DISTANCE	559.00
INPUT PARAMETERS											
Vehicles per hour	1243.41	25.76	42.94	923.10	4.29	7.16	228.91	35.78	59.64	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	65.00
ADJUSTMENTS										DAY LEQ	59.42
Flow	24.62	7.78	10.00	23.33	0.00	2.22	17.27	9.21	11.43		
Distance	-10.55	-10.55	-10.55	-10.55	-10.55	-10.55	-10.55	-10.55	-10.55	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	56.43	48.54	55.61	55.13	40.76	47.83	49.08	49.97	57.03	GRADE dB	0.00

DAY LEQ 59.42 EVENING l 56.00 NIGHT LEQ 58.36

CNEL 65.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - Baseline Street
Sierra Way to Waterman Avenue

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	21470.00
										SPEED	40.00
										DISTANCE	177.00
INPUT PARAMETERS											
Vehicles per hour	1243.41	25.76	42.94	923.10	4.29	7.16	228.91	35.78	59.64	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	70.00
ADJUSTMENTS										DAY LEQ	64.41
Flow	24.62	7.78	10.00	23.33	0.00	2.22	17.27	9.21	11.43		
Distance	-5.56	-5.56	-5.56	-5.56	-5.56	-5.56	-5.56	-5.56	-5.56	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	61.42	53.54	60.60	60.13	45.75	52.82	54.07	54.96	62.03	GRADE dB	0.00

DAY LEQ	64.41	EVENING l	61.00	NIGHT LEQ	63.35

CNEL **70.00**

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - Baseline Street
Waterman Avenue to Tippecanoe Avenue

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	20390.00
										SPEED	40.00
										DISTANCE	1680.00
INPUT PARAMETERS											
Vehicles per hour	1180.87	24.47	40.78	876.66	4.08	6.80	217.39	33.98	56.64	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	60.00
ADJUSTMENTS										DAY LEQ	54.41
Flow	24.40	7.56	9.78	23.10	-0.22	2.00	17.05	8.99	11.20		
Distance	-15.33	-15.33	-15.33	-15.33	-15.33	-15.33	-15.33	-15.33	-15.33	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	51.42	43.54	50.60	50.13	35.76	42.82	44.07	44.97	52.03	GRADE dB	0.00

DAY LEQ 54.41 EVENING l 51.00 NIGHT LEQ 53.36

CNEL 60.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - Baseline Street
Waterman Avenue to Tippecanoe Avenue

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	20390.00
										SPEED	40.00
										DISTANCE	531.00
INPUT PARAMETERS											
Vehicles per hour	1180.87	24.47	40.78	876.66	4.08	6.80	217.39	33.98	56.64	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	65.00
ADJUSTMENTS										DAY LEQ	59.42
Flow	24.40	7.56	9.78	23.10	-0.22	2.00	17.05	8.99	11.20		
Distance	-10.33	-10.33	-10.33	-10.33	-10.33	-10.33	-10.33	-10.33	-10.33	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	56.42	48.54	55.61	55.13	40.76	47.82	49.07	49.97	57.03	GRADE dB	0.00

DAY LEQ	59.42	EVENING l	56.00	NIGHT LEQ	58.36

CNEL **65.00**

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - Baseline Street
Waterman Avenue to Tippecanoe Avenue

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	20390.00
										SPEED	40.00
										DISTANCE	168.00
INPUT PARAMETERS											
Vehicles per hour	1180.87	24.47	40.78	876.66	4.08	6.80	217.39	33.98	56.64	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	70.00
ADJUSTMENTS										DAY LEQ	64.41
Flow	24.40	7.56	9.78	23.10	-0.22	2.00	17.05	8.99	11.20		
Distance	-5.33	-5.33	-5.33	-5.33	-5.33	-5.33	-5.33	-5.33	-5.33	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	61.42	53.54	60.60	60.13	45.76	52.82	54.07	54.97	62.03	GRADE dB	0.00

DAY LEQ 64.41 EVENING l 61.00 NIGHT LEQ 63.36

CNEL 70.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - 5th Street
I-215 SB Ramps to I-215 NB Ramps

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	19500.00
										SPEED	40.00
										DISTANCE	1608.00
INPUT PARAMETERS											
Vehicles per hour	1129.32	23.40	39.00	838.40	3.90	6.50	207.90	32.50	54.17	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	60.00
ADJUSTMENTS										DAY LEQ	54.41
Flow	24.20	7.37	9.58	22.91	-0.42	1.80	16.85	8.79	11.01		
Distance	-15.14	-15.14	-15.14	-15.14	-15.14	-15.14	-15.14	-15.14	-15.14	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	51.42	43.54	50.60	50.12	35.75	42.82	44.07	44.96	52.03	GRADE dB	0.00

DAY LEQ 54.41 EVENING l 51.00 NIGHT LEQ 53.35

CNEL 60.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - 5th Street
I-215 SB Ramps to I-215 NB Ramps

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	19500.00
										SPEED	40.00
										DISTANCE	508.00
INPUT PARAMETERS											
Vehicles per hour	1129.32	23.40	39.00	838.40	3.90	6.50	207.90	32.50	54.17	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	65.00
ADJUSTMENTS										DAY LEQ	59.41
Flow	24.20	7.37	9.58	22.91	-0.42	1.80	16.85	8.79	11.01		
Distance	-10.14	-10.14	-10.14	-10.14	-10.14	-10.14	-10.14	-10.14	-10.14	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	56.42	48.54	55.60	55.13	40.76	47.82	49.07	49.97	57.03	GRADE dB	0.00

DAY LEQ 59.41 EVENING I 56.00 NIGHT LEQ 58.36

CNEL 65.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - 5th Street
I-215 SB Ramps to I-215 NB Ramps

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	19500.00
										SPEED	40.00
										DISTANCE	160.00
INPUT PARAMETERS											
Vehicles per hour	1129.32	23.40	39.00	838.40	3.90	6.50	207.90	32.50	54.17	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	70.02
ADJUSTMENTS										DAY LEQ	64.43
Flow	24.20	7.37	9.58	22.91	-0.42	1.80	16.85	8.79	11.01		
Distance	-5.12	-5.12	-5.12	-5.12	-5.12	-5.12	-5.12	-5.12	-5.12	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	61.44	53.56	60.62	60.15	45.78	52.84	54.09	54.98	62.05	GRADE dB	0.00

DAY LEQ 64.43 EVENING l 61.02 NIGHT LEQ 63.37

CNEL 70.02

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - 5th Street
I-215 NB Ramps to Sierra Way

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	21380.00
										SPEED	40.00
										DISTANCE	1762.00
INPUT PARAMETERS											
Vehicles per hour	1238.20	25.66	42.76	919.23	4.28	7.13	227.95	35.63	59.39	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	60.00
ADJUSTMENTS										DAY LEQ	54.41
Flow	24.60	7.77	9.98	23.31	-0.02	2.20	17.25	9.19	11.41		
Distance	-15.54	-15.54	-15.54	-15.54	-15.54	-15.54	-15.54	-15.54	-15.54	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	51.42	43.54	50.60	50.13	35.76	42.82	44.07	44.96	52.03	GRADE dB	0.00

DAY LEQ 54.41 EVENING l 51.00 NIGHT LEQ 53.35

CNEL 60.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - 5th Street
I-215 NB Ramps to Sierra Way

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	21380.00
										SPEED	40.00
										DISTANCE	557.00
INPUT PARAMETERS											
Vehicles per hour	1238.20	25.66	42.76	919.23	4.28	7.13	227.95	35.63	59.39	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	65.00
ADJUSTMENTS										DAY LEQ	59.41
Flow	24.60	7.77	9.98	23.31	-0.02	2.20	17.25	9.19	11.41		
Distance	-10.54	-10.54	-10.54	-10.54	-10.54	-10.54	-10.54	-10.54	-10.54	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	56.42	48.54	55.60	55.13	40.76	47.82	49.07	49.97	57.03	GRADE dB	0.00

DAY LEQ 59.41 EVENING l 56.00 NIGHT LEQ 58.36

CNEL 65.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - 5th Street
I-215 NB Ramps to Sierra Way

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	21380.00
										SPEED	40.00
										DISTANCE	176.00
INPUT PARAMETERS											
Vehicles per hour	1238.20	25.66	42.76	919.23	4.28	7.13	227.95	35.63	59.39	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	70.00
ADJUSTMENTS										DAY LEQ	64.42
Flow	24.60	7.77	9.98	23.31	-0.02	2.20	17.25	9.19	11.41		
Distance	-5.54	-5.54	-5.54	-5.54	-5.54	-5.54	-5.54	-5.54	-5.54	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	61.43	53.54	60.61	60.13	45.76	52.83	54.08	54.97	62.03	GRADE dB	0.00

DAY LEQ 64.42 EVENING l 61.00 NIGHT LEQ 63.36

CNEL 70.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - 5th Street
Sierra Way to Waterman Avenue

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	18180.00
										SPEED	40.00
										DISTANCE	1499.00
INPUT PARAMETERS											
Vehicles per hour	1052.88	21.82	36.36	781.64	3.64	6.06	193.83	30.30	50.50	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	60.00
ADJUSTMENTS										DAY LEQ	54.41
Flow	23.90	7.06	9.28	22.60	-0.72	1.50	16.55	8.49	10.71		
Distance	-14.84	-14.84	-14.84	-14.84	-14.84	-14.84	-14.84	-14.84	-14.84	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	51.42	43.54	50.60	50.13	35.75	42.82	44.07	44.96	52.03	GRADE dB	0.00

DAY LEQ 54.41 EVENING l 51.00 NIGHT LEQ 53.35

CNEL 60.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - 5th Street
Sierra Way to Waterman Avenue

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	18180.00
										SPEED	40.00
										DISTANCE	474.00
INPUT PARAMETERS											
Vehicles per hour	1052.88	21.82	36.36	781.64	3.64	6.06	193.83	30.30	50.50	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	65.00
ADJUSTMENTS										DAY LEQ	59.41
Flow	23.90	7.06	9.28	22.60	-0.72	1.50	16.55	8.49	10.71		
Distance	-9.84	-9.84	-9.84	-9.84	-9.84	-9.84	-9.84	-9.84	-9.84	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	56.42	48.54	55.60	55.13	40.75	47.82	49.07	49.96	57.03	GRADE dB	0.00

DAY LEQ 59.41 EVENING I 56.00 NIGHT LEQ 58.35

CNEL 65.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - 5th Street
Sierra Way to Waterman Avenue

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	18180.00
										SPEED	40.00
										DISTANCE	149.00
INPUT PARAMETERS											
Vehicles per hour	1052.88	21.82	36.36	781.64	3.64	6.06	193.83	30.30	50.50	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	70.02
ADJUSTMENTS										DAY LEQ	64.44
Flow	23.90	7.06	9.28	22.60	-0.72	1.50	16.55	8.49	10.71		
Distance	-4.81	-4.81	-4.81	-4.81	-4.81	-4.81	-4.81	-4.81	-4.81	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	61.45	53.56	60.63	60.15	45.78	52.85	54.10	54.99	62.05	GRADE dB	0.00

DAY LEQ 64.44 EVENING l 61.02 NIGHT LEQ 63.38

CNEL 70.02

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - 5th Street
Waterman Avenue to Tippecanoe Avenue

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	14870.00
										SPEED	40.00
										DISTANCE	1225.00
INPUT PARAMETERS											
Vehicles per hour	861.18	17.84	29.74	639.33	2.97	4.96	158.54	24.78	41.31	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	60.00
ADJUSTMENTS										DAY LEQ	54.41
Flow	23.02	6.19	8.41	21.73	-1.59	0.63	15.67	7.62	9.83		
Distance	-13.96	-13.96	-13.96	-13.96	-13.96	-13.96	-13.96	-13.96	-13.96	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	51.42	43.54	50.60	50.13	35.76	42.82	44.07	44.97	52.03	GRADE dB	0.00

DAY LEQ 54.41 EVENING l 51.00 NIGHT LEQ 53.36

CNEL 60.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - 5th Street
Waterman Avenue to Tippecanoe Avenue

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	14870.00
										SPEED	40.00
										DISTANCE	387.00
INPUT PARAMETERS											
Vehicles per hour	861.18	17.84	29.74	639.33	2.97	4.96	158.54	24.78	41.31	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	65.00
ADJUSTMENTS										DAY LEQ	59.42
Flow	23.02	6.19	8.41	21.73	-1.59	0.63	15.67	7.62	9.83		
Distance	-8.96	-8.96	-8.96	-8.96	-8.96	-8.96	-8.96	-8.96	-8.96	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	56.43	48.54	55.61	55.13	40.76	47.83	49.08	49.97	57.04	GRADE dB	0.00

DAY LEQ 59.42 EVENING l 56.01 NIGHT LEQ 58.36

CNEL 65.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - 5th Street
Waterman Avenue to Tippecanoe Avenue

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	14870.00
										SPEED	40.00
										DISTANCE	122.00
INPUT PARAMETERS											
Vehicles per hour	861.18	17.84	29.74	639.33	2.97	4.96	158.54	24.78	41.31	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	70.02
ADJUSTMENTS										DAY LEQ	64.43
Flow	23.02	6.19	8.41	21.73	-1.59	0.63	15.67	7.62	9.83		
Distance	-3.94	-3.94	-3.94	-3.94	-3.94	-3.94	-3.94	-3.94	-3.94	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	61.44	53.56	60.62	60.15	45.78	52.84	54.09	54.98	62.05	GRADE dB	0.00

DAY LEQ 64.43 EVENING l 61.02 NIGHT LEQ 63.37

CNEL 70.02

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - 5th Street
East of Tippecanoe Avenue

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	13890.00
										SPEED	40.00
										DISTANCE	1145.00
INPUT PARAMETERS											
Vehicles per hour	804.43	16.67	27.78	597.20	2.78	4.63	148.09	23.15	38.58	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	60.00
ADJUSTMENTS										DAY LEQ	54.41
Flow	22.73	5.89	8.11	21.43	-1.89	0.33	15.38	7.32	9.54		
Distance	-13.67	-13.67	-13.67	-13.67	-13.67	-13.67	-13.67	-13.67	-13.67	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	51.42	43.54	50.60	50.13	35.76	42.82	44.07	44.96	52.03	GRADE dB	0.00

DAY LEQ 54.41 EVENING l 51.00 NIGHT LEQ 53.35

CNEL 60.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - 5th Street
East of Tippecanoe Avenue

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	13890.00
										SPEED	40.00
										DISTANCE	362.00
INPUT PARAMETERS											
Vehicles per hour	804.43	16.67	27.78	597.20	2.78	4.63	148.09	23.15	38.58	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	65.00
ADJUSTMENTS										DAY LEQ	59.41
Flow	22.73	5.89	8.11	21.43	-1.89	0.33	15.38	7.32	9.54		
Distance	-8.67	-8.67	-8.67	-8.67	-8.67	-8.67	-8.67	-8.67	-8.67	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	56.42	48.54	55.60	55.13	40.76	47.82	49.07	49.96	57.03	GRADE dB	0.00

DAY LEQ 59.41 EVENING l 56.00 NIGHT LEQ 58.35

CNEL 65.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - 5th Street
East of Tippecanoe Avenue

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	13890.00
										SPEED	40.00
										DISTANCE	114.00
INPUT PARAMETERS											
Vehicles per hour	804.43	16.67	27.78	597.20	2.78	4.63	148.09	23.15	38.58	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	70.02
ADJUSTMENTS										DAY LEQ	64.43
Flow	22.73	5.89	8.11	21.43	-1.89	0.33	15.38	7.32	9.54		
Distance	-3.65	-3.65	-3.65	-3.65	-3.65	-3.65	-3.65	-3.65	-3.65	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	61.44	53.56	60.62	60.15	45.77	52.84	54.09	54.98	62.05	GRADE dB	0.00

DAY LEQ 64.43 EVENING l 61.02 NIGHT LEQ 63.37

CNEL 70.02

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - 5th Street
West of Interstate 210 SB Ramps

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	22690.00
										SPEED	40.00
										DISTANCE	1868.00
INPUT PARAMETERS											
Vehicles per hour	1314.07	27.23	45.38	975.55	4.54	7.56	241.92	37.82	63.03	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	60.00
ADJUSTMENTS										DAY LEQ	54.42
Flow	24.86	8.02	10.24	23.57	0.24	2.46	17.51	9.45	11.67		
Distance	-15.79	-15.79	-15.79	-15.79	-15.79	-15.79	-15.79	-15.79	-15.79	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	51.43	43.54	50.61	50.13	35.76	42.83	44.08	44.97	52.03	GRADE dB	0.00

DAY LEQ	54.42	EVENING l	51.00	NIGHT LEQ	53.36
CNEL	**60.00**				

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - 5th Street
West of Interstate 210 SB Ramps

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	22690.00
										SPEED	40.00
										DISTANCE	591.00
INPUT PARAMETERS											
Vehicles per hour	1314.07	27.23	45.38	975.55	4.54	7.56	241.92	37.82	63.03	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	65.00
ADJUSTMENTS										DAY LEQ	59.41
Flow	24.86	8.02	10.24	23.57	0.24	2.46	17.51	9.45	11.67		
Distance	-10.80	-10.80	-10.80	-10.80	-10.80	-10.80	-10.80	-10.80	-10.80	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	56.42	48.54	55.61	55.13	40.76	47.82	49.07	49.97	57.03	GRADE dB	0.00

DAY LEQ 59.41 EVENING l 56.00 NIGHT LEQ 58.36

CNEL 65.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - 5th Street
West of Interstate 210 SB Ramps

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	22690.00
										SPEED	40.00
										DISTANCE	187.00
INPUT PARAMETERS											
Vehicles per hour	1314.07	27.23	45.38	975.55	4.54	7.56	241.92	37.82	63.03	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	70.00
ADJUSTMENTS										DAY LEQ	64.41
Flow	24.86	8.02	10.24	23.57	0.24	2.46	17.51	9.45	11.67		
Distance	-5.80	-5.80	-5.80	-5.80	-5.80	-5.80	-5.80	-5.80	-5.80	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	61.42	53.54	60.60	60.13	45.76	52.82	54.07	54.96	62.03	GRADE dB	0.00

DAY LEQ 64.41 EVENING l 61.00 NIGHT LEQ 63.35

CNEL 70.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - 5th Street
Interstate 210 SB Ramps to Interstate 210 NB Ramps

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	22110.00
										SPEED	40.00
										DISTANCE	1823.00
INPUT PARAMETERS											
Vehicles per hour	1280.48	26.53	44.22	950.61	4.42	7.37	235.73	36.85	61.42	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	60.00
ADJUSTMENTS										DAY LEQ	54.41
Flow	24.75	7.91	10.13	23.45	0.13	2.35	17.40	9.34	11.56		
Distance	-15.69	-15.69	-15.69	-15.69	-15.69	-15.69	-15.69	-15.69	-15.69	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	51.42	43.54	50.60	50.13	35.75	42.82	44.07	44.96	52.03	GRADE dB	0.00

DAY LEQ	54.41	EVENING l	51.00	NIGHT LEQ	53.35

CNEL **60.00**

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - 5th Street
Interstate 210 SB Ramps to Interstate 210 NB Ramps

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	22110.00
										SPEED	40.00
										DISTANCE	576.00
INPUT PARAMETERS											
Vehicles per hour	1280.48	26.53	44.22	950.61	4.42	7.37	235.73	36.85	61.42	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	65.00
ADJUSTMENTS										DAY LEQ	59.41
Flow	24.75	7.91	10.13	23.45	0.13	2.35	17.40	9.34	11.56		
Distance	-10.68	-10.68	-10.68	-10.68	-10.68	-10.68	-10.68	-10.68	-10.68	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	56.42	48.54	55.60	55.13	40.76	47.82	49.07	49.97	57.03	GRADE dB	0.00

DAY LEQ 59.41 EVENING l 56.00 NIGHT LEQ 58.36

CNEL 65.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - 5th Street
Interstate 210 SB Ramps to Interstate 210 NB Ramps

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	22110.00
										SPEED	40.00
										DISTANCE	182.00
INPUT PARAMETERS											
Vehicles per hour	1280.48	26.53	44.22	950.61	4.42	7.37	235.73	36.85	61.42	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	70.00
ADJUSTMENTS										DAY LEQ	64.42
Flow	24.75	7.91	10.13	23.45	0.13	2.35	17.40	9.34	11.56		
Distance	-5.68	-5.68	-5.68	-5.68	-5.68	-5.68	-5.68	-5.68	-5.68	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	61.43	53.54	60.61	60.13	45.76	52.83	54.08	54.97	62.03	GRADE dB	0.00

DAY LEQ 64.42 EVENING l 61.00 NIGHT LEQ 63.36

CNEL 70.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - 5th Street
East of Interstate 210 NB Ramps

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	28660.00
										SPEED	40.00
										DISTANCE	2362.00
INPUT PARAMETERS											
Vehicles per hour	1659.82	34.39	57.32	1232.23	5.73	9.55	305.57	47.77	79.61	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	60.00
ADJUSTMENTS										DAY LEQ	54.41
Flow	25.87	9.04	11.26	24.58	1.26	3.48	18.52	10.46	12.68		
Distance	-16.81	-16.81	-16.81	-16.81	-16.81	-16.81	-16.81	-16.81	-16.81	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	51.42	43.54	50.60	50.13	35.76	42.82	44.07	44.96	52.03	GRADE dB	0.00

DAY LEQ 54.41 EVENING l 51.00 NIGHT LEQ 53.35

CNEL 60.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - 5th Street
East of Interstate 210 NB Ramps

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	28660.00
										SPEED	40.00
										DISTANCE	747.00
INPUT PARAMETERS											
Vehicles per hour	1659.82	34.39	57.32	1232.23	5.73	9.55	305.57	47.77	79.61	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	65.00
ADJUSTMENTS										DAY LEQ	59.41
Flow	25.87	9.04	11.26	24.58	1.26	3.48	18.52	10.46	12.68		
Distance	-11.81	-11.81	-11.81	-11.81	-11.81	-11.81	-11.81	-11.81	-11.81	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	56.42	48.54	55.60	55.13	40.76	47.82	49.07	49.96	57.03	GRADE dB	0.00

DAY LEQ 59.41 EVENING I 56.00 NIGHT LEQ 58.35

CNEL 65.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - 5th Street
East of Interstate 210 NB Ramps

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	28660.00
										SPEED	40.00
										DISTANCE	236.00
INPUT PARAMETERS											
Vehicles per hour	1659.82	34.39	57.32	1232.23	5.73	9.55	305.57	47.77	79.61	% A	92.00
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	CNEL	70.00
ADJUSTMENTS										DAY LEQ	64.42
Flow	25.87	9.04	11.26	24.58	1.26	3.48	18.52	10.46	12.68		
Distance	-6.81	-6.81	-6.81	-6.81	-6.81	-6.81	-6.81	-6.81	-6.81	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	61.42	53.54	60.61	60.13	45.76	52.83	54.08	54.97	62.03	GRADE dB	0.00

DAY LEQ 64.42 EVENING l 61.00 NIGHT LEQ 63.36

CNEL 70.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
For Secondary and Smaller

Waterman Gardens
Future With Project Traffic Noise - 3rd Street
West of Interstate 215 SB Ramps

	DAYTIME			EVENING			NIGHTTIME		
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS
INPUT PARAMETERS									
Vehicles per hour	277.21	3.36	1.32	204.86	0.60	0.60	51.31	4.44	1.76
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05
ADJUSTMENTS									
Flow	18.68	-0.48	-4.55	17.37	-7.95	-7.94	11.36	0.72	-3.30
Distance	-3.49	-3.49	-3.49	-3.49	-3.49	-3.49	-3.49	-3.49	-3.49
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	55.30	45.85	47.01	53.98	38.38	43.61	47.97	47.06	48.26

ADT	4520.00
SPEED	35.00
DISTANCE	110.00
% A	97.40
% MT	1.84
% HT	0.74
LEFT	-90.00
RIGHT	90.00
CNEL	60.00
DAY LEQ	56.31
Day hour	89.00
Absorbtive?	no
Use hour?	no
GRADE dB	0.00

DAY LEQ 56.31 EVENING LE(54.47 NIGHT LEQ 52.56

CNEL **60.00**

FHWA Sound32 Spreadsheet
Riverside County Published Mix
For Secondary and Smaller

Waterman Gardens
Future With Project Traffic Noise - 3rd Street
West of Interstate 215 SB Ramps

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	4520.00
										SPEED	35.00
										DISTANCE	35.00
INPUT PARAMETERS											
Vehicles per hour	277.21	3.36	1.32	204.86	0.60	0.60	51.31	4.44	1.76	% A	97.40
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	1.84
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	0.74
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	64.98
ADJUSTMENTS										DAY LEQ	61.28
Flow	18.68	-0.48	-4.55	17.37	-7.95	-7.94	11.36	0.72	-3.30		
Distance	1.48	1.48	1.48	1.48	1.48	1.48	1.48	1.48	1.48	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	60.27	50.82	51.98	58.96	43.35	48.58	52.94	52.03	53.23	GRADE dB	0.00

DAY LEQ	61.28		EVENING LE(	59.45		NIGHT LEQ	57.54
CNEL		**64.98**					

FHWA Sound32 Spreadsheet
Riverside County Published Mix
For Secondary and Smaller

Waterman Gardens
Future With Project Traffic Noise - 3rd Street
West of Interstate 215 SB Ramps

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	4520.00
										SPEED	35.00
										DISTANCE	11.00
INPUT PARAMETERS											
Vehicles per hour	277.21	3.36	1.32	204.86	0.60	0.60	51.31	4.44	1.76	% A	97.40
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	1.84
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	0.74
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	70.00
ADJUSTMENTS										DAY LEQ	66.31
Flow	18.68	-0.48	-4.55	17.37	-7.95	-7.94	11.36	0.72	-3.30		
Distance	6.51	6.51	6.51	6.51	6.51	6.51	6.51	6.51	6.51	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	65.30	55.85	57.01	63.98	48.38	53.61	57.97	57.06	58.26	GRADE dB	0.00

DAY LEQ	66.31		EVENING LE(	64.47		NIGHT LEQ	62.56
CNEL		**70.00**					

FHWA Sound32 Spreadsheet
Riverside County Published Mix
For Secondary and Smaller

Waterman Gardens
Future With Project Traffic Noise - 3rd Street
I-215 SB Ramps to I-215 NB Ramps

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	6995.00
										SPEED	35.00
										DISTANCE	170.00
INPUT PARAMETERS											
Vehicles per hour	429.00	5.20	2.04	317.04	0.93	0.93	79.41	6.86	2.72	% A	97.40
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	1.84
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	0.74
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	60.01
ADJUSTMENTS										DAY LEQ	56.31
Flow	20.58	1.41	-2.65	19.26	-6.06	-6.05	13.25	2.62	-1.40		
Distance	-5.38	-5.38	-5.38	-5.38	-5.38	-5.38	-5.38	-5.38	-5.38	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	55.30	45.86	47.01	53.99	38.39	43.62	47.98	47.06	48.26	GRADE dB	0.00

DAY LEQ	56.31		EVENING LE(	54.48		NIGHT LEQ	52.57
CNEL		**60.01**					

FHWA Sound32 Spreadsheet
Riverside County Published Mix
For Secondary and Smaller

Waterman Gardens
Future With Project Traffic Noise - 3rd Street
I-215 SB Ramps to I-215 NB Ramps

	DAYTIME			EVENING			NIGHTTIME		
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS
INPUT PARAMETERS									
Vehicles per hour	429.00	5.20	2.04	317.04	0.93	0.93	79.41	6.86	2.72
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05
ADJUSTMENTS									
Flow	20.58	1.41	-2.65	19.26	-6.06	-6.05	13.25	2.62	-1.40
Distance	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	60.28	50.84	51.99	58.97	43.37	48.60	52.96	52.04	53.24

ADT	6995.00
SPEED	35.00
DISTANCE	54.00
% A	97.40
% MT	1.84
% HT	0.74
LEFT	-90.00
RIGHT	90.00
CNEL	64.99
DAY LEQ	61.29
Day hour	89.00
Absorbtive?	no
Use hour?	no
GRADE dB	0.00

DAY LEQ 61.29 EVENING LE(59.46 NIGHT LEQ 57.55

CNEL 64.99

FHWA Sound32 Spreadsheet
Riverside County Published Mix
For Secondary and Smaller

Waterman Gardens
Future With Project Traffic Noise - 3rd Street
I-215 SB Ramps to I-215 NB Ramps

	DAYTIME			EVENING			NIGHTTIME		
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS
INPUT PARAMETERS									
Vehicles per hour	429.00	5.20	2.04	317.04	0.93	0.93	79.41	6.86	2.72
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00
NOISE CALCULATIONS									
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05
ADJUSTMENTS									
Flow	20.58	1.41	-2.65	19.26	-6.06	-6.05	13.25	2.62	-1.40
Distance	4.62	4.62	4.62	4.62	4.62	4.62	4.62	4.62	4.62
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	65.30	55.86	57.01	63.99	48.39	53.62	57.98	57.06	58.26

ADT	6995.00
SPEED	35.00
DISTANCE	17.00
% A	97.40
% MT	1.84
% HT	0.74
LEFT	-90.00
RIGHT	90.00
CNEL	70.01
DAY LEQ	66.31
Day hour	89.00
Absorbtive?	no
Use hour?	no
GRADE dB	0.00

DAY LEQ 66.31 EVENING LE(64.48 NIGHT LEQ 62.57

CNEL **70.01**

FHWA Sound32 Spreadsheet
Riverside County Published Mix
For Secondary and Smaller

Waterman Gardens
Future With Project Traffic Noise - 3rd Street
East of I-215 NB Ramps

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	9800.00
										SPEED	35.00
										DISTANCE	238.00
INPUT PARAMETERS											
Vehicles per hour	601.03	7.29	2.86	444.17	1.30	1.31	111.25	9.62	3.81	% A	97.40
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	1.84
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	0.74
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	60.01
ADJUSTMENTS										DAY LEQ	56.32
Flow	22.04	2.88	-1.19	20.73	-4.59	-4.58	14.72	4.08	0.06		
Distance	-6.85	-6.85	-6.85	-6.85	-6.85	-6.85	-6.85	-6.85	-6.85	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	55.31	45.86	47.01	53.99	38.39	43.62	47.98	47.07	48.26	GRADE dB	0.00

DAY LEQ 56.32 EVENING LE(54.48 NIGHT LEQ 52.57

CNEL **60.01**

FHWA Sound32 Spreadsheet
Riverside County Published Mix
For Secondary and Smaller

Waterman Gardens
Future With Project Traffic Noise - 3rd Street
East of I-215 NB Ramps

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	9800.00
										SPEED	35.00
										DISTANCE	75.00
INPUT PARAMETERS											
Vehicles per hour	601.03	7.29	2.86	444.17	1.30	1.31	111.25	9.62	3.81	% A	97.40
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	1.84
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	0.74
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	65.03
ADJUSTMENTS										DAY LEQ	61.33
Flow	22.04	2.88	-1.19	20.73	-4.59	-4.58	14.72	4.08	0.06		
Distance	-1.83	-1.83	-1.83	-1.83	-1.83	-1.83	-1.83	-1.83	-1.83	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	60.32	50.88	52.03	59.01	43.40	48.63	53.00	52.08	53.28	GRADE dB	0.00

DAY LEQ	61.33		EVENING LE(	59.50		NIGHT LEQ	57.59
CNEL		**65.03**					

FHWA Sound32 Spreadsheet
Riverside County Published Mix
For Secondary and Smaller

Waterman Gardens
Future With Project Traffic Noise - 3rd Street
East of I-215 NB Ramps

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	9800.00
										SPEED	35.00
										DISTANCE	24.00
INPUT PARAMETERS											
Vehicles per hour	601.03	7.29	2.86	444.17	1.30	1.31	111.25	9.62	3.81	% A	97.40
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	1.84
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	0.74
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	69.98
ADJUSTMENTS										DAY LEQ	66.28
Flow	22.04	2.88	-1.19	20.73	-4.59	-4.58	14.72	4.08	0.06		
Distance	3.12	3.12	3.12	3.12	3.12	3.12	3.12	3.12	3.12	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	65.27	55.82	56.98	63.96	48.35	53.58	57.94	57.03	58.23	GRADE dB	0.00

DAY LEQ	66.28		EVENING LE(	64.45		NIGHT LEQ	62.53
CNEL		**69.98**					

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - 2nd Street
West of Interstate 215 SB Ramps

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	13740.00
										SPEED	35.00
										DISTANCE	942.00
INPUT PARAMETERS											
Vehicles per hour	795.74	16.49	27.48	590.75	2.75	4.58	146.49	22.90	38.17	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	60.00
ADJUSTMENTS										DAY LEQ	54.11
Flow	23.26	6.43	8.64	21.97	-1.36	0.86	15.91	7.85	10.07		
Distance	-12.82	-12.82	-12.82	-12.82	-12.82	-12.82	-12.82	-12.82	-12.82	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	50.55	43.43	50.87	49.26	35.65	43.09	43.20	44.86	52.30	GRADE dB	0.00

DAY LEQ 54.11 EVENING l 50.35 NIGHT LEQ 53.45

CNEL 60.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - 2nd Street
West of Interstate 215 SB Ramps

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	13740.00
										SPEED	35.00
										DISTANCE	298.00
INPUT PARAMETERS											
Vehicles per hour	795.74	16.49	27.48	590.75	2.75	4.58	146.49	22.90	38.17	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	65.00
ADJUSTMENTS										DAY LEQ	59.11
Flow	23.26	6.43	8.64	21.97	-1.36	0.86	15.91	7.85	10.07		
Distance	-7.82	-7.82	-7.82	-7.82	-7.82	-7.82	-7.82	-7.82	-7.82	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	55.55	48.43	55.87	54.25	40.65	48.09	48.20	49.86	57.29	GRADE dB	0.00

DAY LEQ 59.11 EVENING LE(55.34 NIGHT LEQ 58.45

CNEL 65.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - 2nd Street
West of Interstate 215 SB Ramps

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	13740.00
										SPEED	35.00
										DISTANCE	94.00
INPUT PARAMETERS											
Vehicles per hour	795.74	16.49	27.48	590.75	2.75	4.58	146.49	22.90	38.17	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	70.01
ADJUSTMENTS										DAY LEQ	64.12
Flow	23.26	6.43	8.64	21.97	-1.36	0.86	15.91	7.85	10.07		
Distance	-2.81	-2.81	-2.81	-2.81	-2.81	-2.81	-2.81	-2.81	-2.81	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	60.56	53.44	60.88	59.27	45.66	53.10	53.21	54.87	62.30	GRADE dB	0.00

DAY LEQ	64.12	EVENING l	60.36	NIGHT LEQ	63.46

CNEL **70.01**

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - 2nd Street
I-215 SB Ramps to I-215 NB Ramps

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	21125.00
										SPEED	35.00
										DISTANCE	1449.00
INPUT PARAMETERS											
Vehicles per hour	1223.43	25.35	42.25	908.26	4.23	7.04	225.23	35.21	58.68	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	60.00
ADJUSTMENTS										DAY LEQ	54.11
Flow	25.13	8.29	10.51	23.84	0.51	2.73	17.78	9.72	11.94		
Distance	-14.69	-14.69	-14.69	-14.69	-14.69	-14.69	-14.69	-14.69	-14.69	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	50.55	43.43	50.87	49.25	35.65	43.09	43.20	44.86	52.29	GRADE dB	0.00

DAY LEQ 54.11 EVENING I 50.34 NIGHT LEQ 53.45

CNEL 60.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - 2nd Street
I-215 SB Ramps to I-215 NB Ramps

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	21125.00
										SPEED	35.00
										DISTANCE	458.00
INPUT PARAMETERS											
Vehicles per hour	1223.43	25.35	42.25	908.26	4.23	7.04	225.23	35.21	58.68	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	65.00
ADJUSTMENTS										DAY LEQ	59.11
Flow	25.13	8.29	10.51	23.84	0.51	2.73	17.78	9.72	11.94		
Distance	-9.69	-9.69	-9.69	-9.69	-9.69	-9.69	-9.69	-9.69	-9.69	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	55.55	48.43	55.87	54.26	40.65	48.09	48.20	49.86	57.30	GRADE dB	0.00

DAY LEQ	59.11	EVENING l	55.35	NIGHT LEQ	58.45

CNEL **65.00**

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - 2nd Street
I-215 SB Ramps to I-215 NB Ramps

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	21125.00
										SPEED	35.00
										DISTANCE	145.00
INPUT PARAMETERS											
Vehicles per hour	1223.43	25.35	42.25	908.26	4.23	7.04	225.23	35.21	58.68	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	70.00
ADJUSTMENTS										DAY LEQ	64.11
Flow	25.13	8.29	10.51	23.84	0.51	2.73	17.78	9.72	11.94		
Distance	-4.69	-4.69	-4.69	-4.69	-4.69	-4.69	-4.69	-4.69	-4.69	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	60.55	53.43	60.86	59.25	45.65	53.08	53.20	54.85	62.29	GRADE dB	0.00

DAY LEQ	64.11	EVENING l	60.34	NIGHT LEQ	63.44

CNEL **70.00**

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - 2nd Street
I-215 NB Ramps to Waterman Avenue

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	15970.00
										SPEED	35.00
										DISTANCE	1096.00
INPUT PARAMETERS											
Vehicles per hour	924.89	19.16	31.94	686.62	3.19	5.32	170.27	26.62	44.36	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	60.00
ADJUSTMENTS										DAY LEQ	54.11
Flow	23.91	7.08	9.30	22.62	-0.70	1.52	16.56	8.51	10.72		
Distance	-13.48	-13.48	-13.48	-13.48	-13.48	-13.48	-13.48	-13.48	-13.48	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	50.55	43.43	50.86	49.25	35.65	43.08	43.20	44.85	52.29	GRADE dB	0.00

DAY LEQ 54.11 EVENING l 50.34 NIGHT LEQ 53.44

CNEL 60.00

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - 2nd Street
I-215 NB Ramps to Waterman Avenue

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	15970.00
										SPEED	35.00
										DISTANCE	346.00
INPUT PARAMETERS											
Vehicles per hour	924.89	19.16	31.94	686.62	3.19	5.32	170.27	26.62	44.36	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	65.01
ADJUSTMENTS										DAY LEQ	59.11
Flow	23.91	7.08	9.30	22.62	-0.70	1.52	16.56	8.51	10.72		
Distance	-8.47	-8.47	-8.47	-8.47	-8.47	-8.47	-8.47	-8.47	-8.47	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	55.55	48.44	55.87	54.26	40.65	48.09	48.20	49.86	57.30	GRADE dB	0.00

DAY LEQ 59.11 EVENING l 55.35 NIGHT LEQ 58.45

CNEL 65.01

FHWA Sound32 Spreadsheet
Riverside County Published Mix
Larger than Secondary

Noise Analysis for Waterman Gardens
Future With Project Traffic Noise - 2nd Street
I-125 NB Ramp to Waterman Avenue

	DAYTIME			EVENING			NIGHTTIME				
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	ADT	15970.00
										SPEED	35.00
										DISTANCE	109.00
INPUT PARAMETERS											
Vehicles per hour	924.89	19.16	31.94	686.62	3.19	5.32	170.27	26.62	44.36	% A	92.00
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	% MT	3.00
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	% HT	5.00
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	LEFT	-90.00
										RIGHT	90.00
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	CNEL	70.02
ADJUSTMENTS										DAY LEQ	64.13
Flow	23.91	7.08	9.30	22.62	-0.70	1.52	16.56	8.51	10.72		
Distance	-3.45	-3.45	-3.45	-3.45	-3.45	-3.45	-3.45	-3.45	-3.45	Day hour	89.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Absorbtive?	no
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	Use hour?	no
LEQ	60.57	53.45	60.89	59.28	45.67	53.11	53.22	54.88	62.31	GRADE dB	0.00

DAY LEQ	64.13	EVENING l	60.37	NIGHT LEQ	63.47

CNEL **70.02**

Kunzman Associates, Inc.

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Orange, California 92868
(714) 973-8383

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Proposed Waterman + Baseline Neighborhood Transformation Specific Plan
Solid Waste Services Questionnaire

1. Which County owned or operated landfill(s), material recovery facilities or other solid waste disposal facilities would serve the proposed project?

   Mid-Valley Sanitary Landfill (MVSL), located at 2390 North Alder Avenue, Rialto, CA 92377, or an alternate facility is the San Timoteo Sanitary Landfill (STSL), located at 31 Refuse Road, Redlands, CA 92373.

2. What are the maximum capacity and the total remaining capacity of the landfill(s) that serve the project area? What is (are) the anticipated life span of these landfill(s)?

   The permitted disposal area of the MVSL is 408 acres, with a design capacity of 101.3 million cubic yards. There is approximately 66,949,246 cubic yards of remaining permitted capacity. The current Solid Waste Facilities Permit (SWFP) has an estimated closure date of 2033; however, there is currently enough capacity through approximately September 2053.

   The permitted disposal area of the STSL is 114 acres, with a design capacity of 20.5 million cubic yards. There is approximately 12,786,050 cubic yards of remaining permitted capacity. The current SWFP has an estimated closure date of 2043; however, there is currently enough capacity through approximately 2054.

3. What is the daily maximum treatment capacity of the landfill(s) and what is the daily disposal average?

   The MVSL is currently permitted to accept a maximum tonnage of 7,500 tons per day. The current average tonnage per day is approximately 3,700 tons.

   The STSL is currently permitted to accept a maximum tonnage of 2,000 tons per day. The current average tonnage per day is approximately 900 tons.

4. What is the solid waste generation factor for a transportation facility? Based on the project description included in the cover letter, are the County's existing solid waste disposal facilities adequate to handle the amount of refuse that would be generated by the proposed project?

   Below is information found on CalRecycle's web page. The County does not have waste generation data for different industries.

Waste Generation Source	Gen. Rate	Units of Measure	Source Date	Source	Notes
Transportation,/ communication/ utilities	1.4 9.2	lb/100 sq ft/day lb/employee/day	May 1997	Guide to Solid Waste and Recycling Plans for Development Projects (Santa Barbara County Public Works Department)	Cites SWANA Tech. Bull. 85-6; Recovery Sciences, 1987; and Matrix Mgmt Group, "Best Management Practices Analysis for Solid Waste"

The County's disposal facilities are more than adequate to accommodate the refuse generated by the proposed project.

5. What mitigation measures are recommended or required to reduce project-level and cumulative impacts on the County's solid waste disposal system?

Since the project is in the City of San Bernardino, the County has no recommendations or requirements to reduce the amount of solid waste disposed. However, the State has several regulations that require the City to reduce waste disposal, such as requiring a Construction & Demolition Debris Management Plan, Mandatory Commercial Recycling and Mandatory Commercial Organics Recycling. Contact the City to find out their current requirements.

6. What recycling efforts would apply to the proposed project? Please indicate recommended techniques for the recreational use.

Since the project is in the City of San Bernardino, the County has no recommendations or requirements to reduce the amount of solid waste disposed. However, the State has several regulations that require the City to reduce waste disposal, such as requiring a Construction & Demolition Debris Management Plan, Mandatory Commercial Recycling and Mandatory Commercial Organics Recycling. Contact the City to find out their current requirements.

7. Please add any other comments you may wish to make regarding this project.

Response Prepared By:

Arthur L. Rivera	Deputy Director, Solid Waste Management Division
Name	**Title**
County of San Bernardino	10/28/15
Agency	**Date**

Proposed Waterman + Baseline Neighborhood Transformation Specific Plan
Schools Services Questionnaire

1. Are the attached school attendance boundary maps still current? Maps are from US Dept. of Education National Center for Education Statistics and for 2013-2014 (the attendance boundary maps on the District's website are from 2009-10). New elementary and middle school boundary maps are attached. High school boundaries are unchanged.

2. Please fill out the Table below (*SBCUSD Schools Serving Project Site*) with capacity and enrollment information.

3. Does SBCUSD plan to build any new or expanded schools that would serve the project site? No.

    a. If so:

        i. What school (or proposed school) and school level?

        ii. Where?

        iii. What capacity school or expansion?

4. Please confirm or correct: SBCUSD currently charges Level II fees pursuant to SB 50 of $4.81 per square foot of assessable space for new residential construction. $4.06

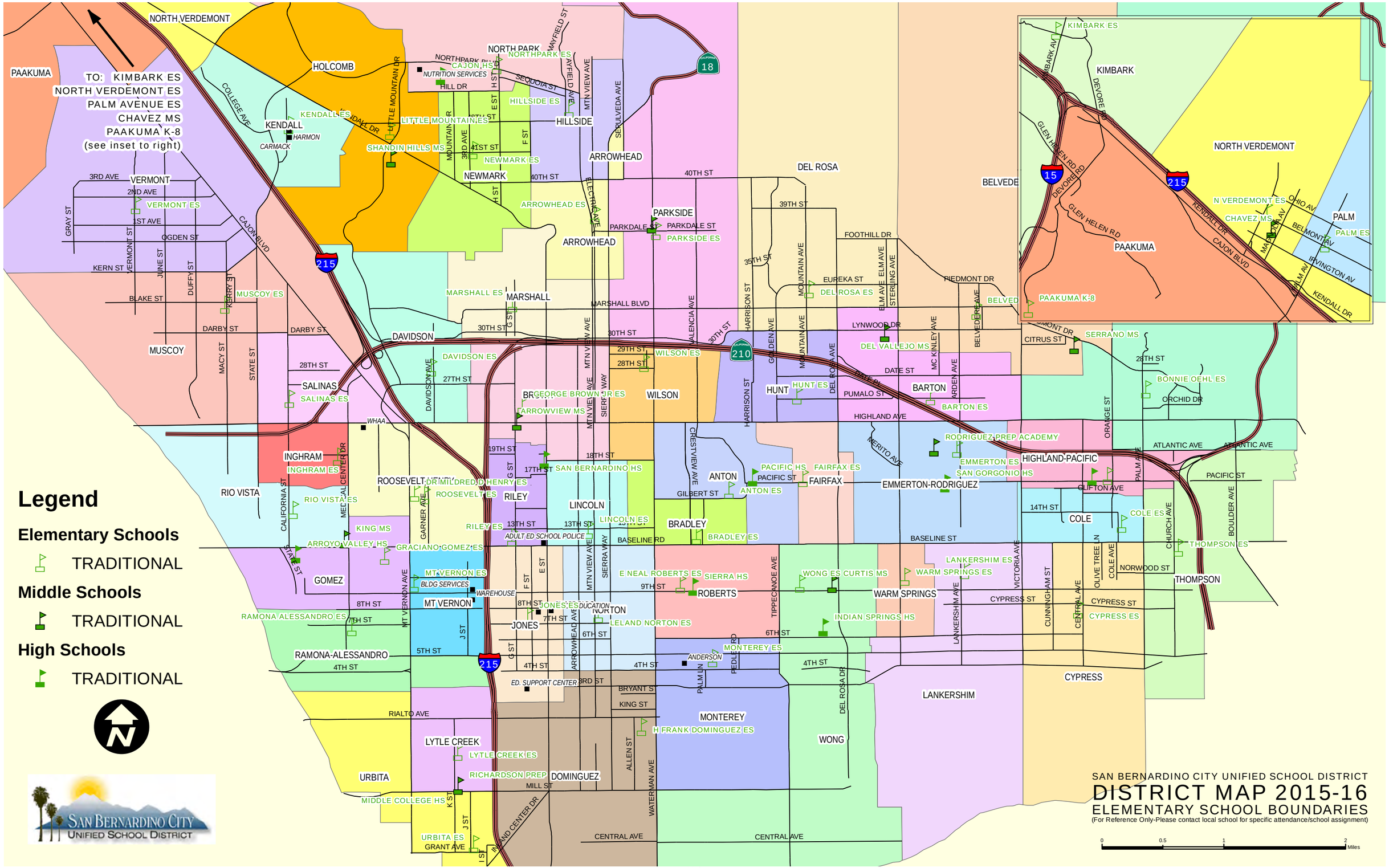
    a. What Level 1 fees does SBCUSD currently charge for commercial and industrial construction? $0.54

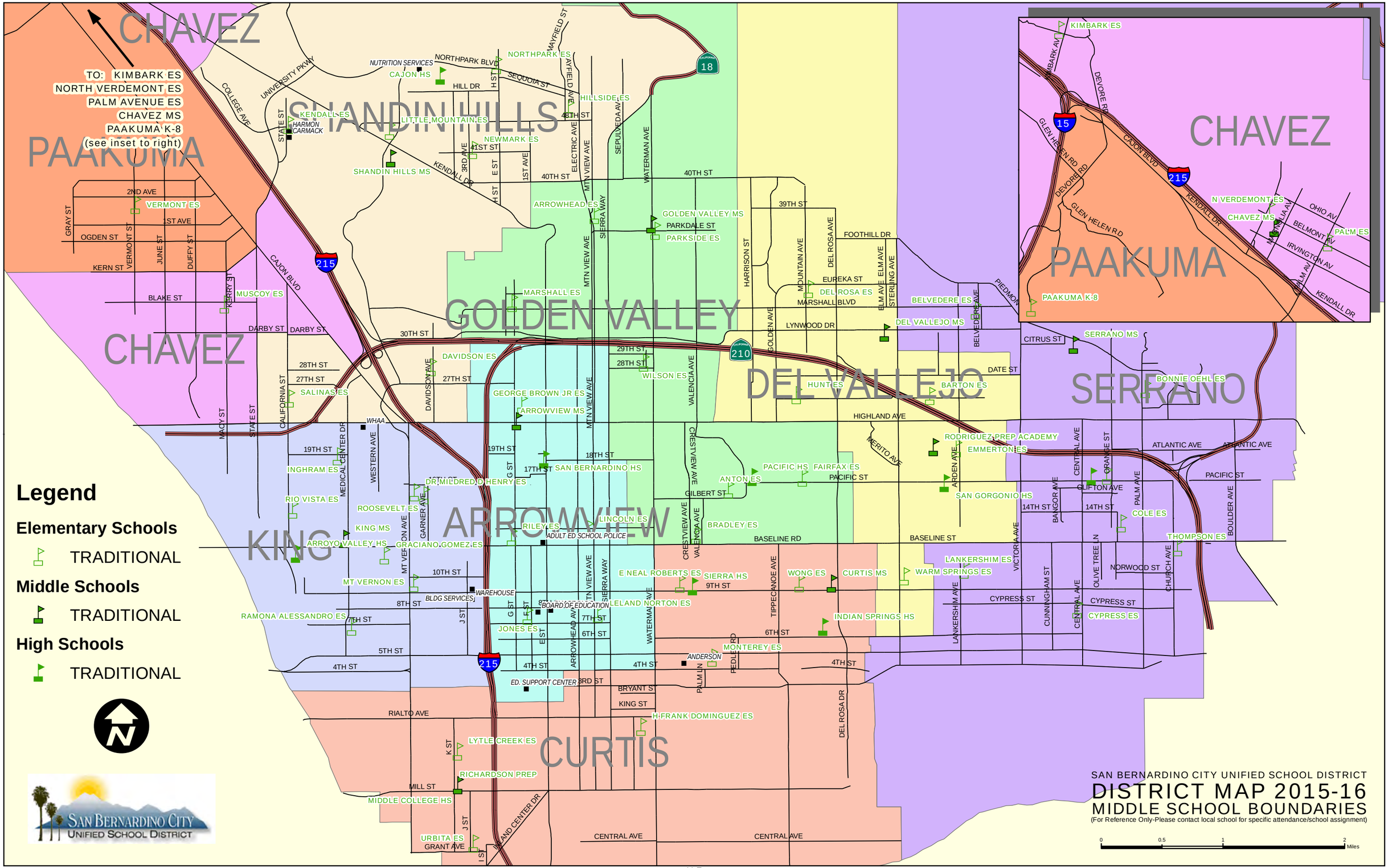
5. What student generation factors does SBCUSD use?

Student Generation Factors			
	Elementary School	Middle School	High School
Single-family detached residential	0.2971	0.1464	0.2134
Single-family attached residential	0.4216	0.2090	0.2052
Multi-family residential	0.4216	0.2090	0.2052

Table 5.14-3 SBCUSD Schools Serving Project Site

School and School Level Address and Distance from Site Boundary	Capacity (students)			Enrollment
	Permanent Classrooms	Portable Classrooms	Total	
Schools Onsite				
Roberts Elementary [K-6] 494 E 9th St	20	7	27	509
Sierra Continuation High [9-12] 570 E 9th St	13	8	21	420
Other Schools with Attendance Boundaries Overlapping Site				
Elementary [K-6]				
Monterey 794 Monterey Ave, next to east boundary	24	7	31	556
Norton 747 N Mountain View Ave, next to west site boundary	34	0	31	537
Lincoln 255 W 13th St, about 720 feet west of west site boundary	33	7	40	767
Bing Wong 1250 E 9th St, about 600 feet east of east site boundary	35	0	35	751
Bradley 1300 Valencia Ave, next to north site boundary	32	6	38	584
Anton 1501 Anton Ct., about 0.4 mile north	29	0	29	726
Wilson 2894 Belle St, about 0.5 mile north	25	1	26	507
Middle [6-8]				
Curtis 1050 N Del Rosa Dr, about 0.3 mile east	48	0	48	823
Arrowview 2299 N G St, about 0.5 mile west	50	10	60	1110
Golden Valley 3800 N Waterman Ave, about 1.7 miles north	41	7	48	810
High [9-12]				
Indian Springs 650 N Del Rosa Dr, about 0.3 mile southeast	100	0	100	1781
Pacific 1020 Pacific St, about 0.5 mile north	72	21	93	1339
San Bernardino 1850 N E St, about 0.8 mile west	76	16	92	1612


TO: KIMBARK ES
NORTH VERDEMONT ES
PALM AVENUE ES
CHAVEZ MS
PAAKUMA K-8
(see inset to right)
Legend
Elementary Schools
TRADITIONAL
Middle Schools
TRADITIONAL
High Schools
TRADITIONAL
SAN BERNARDINO CITY UNIFIED SCHOOL DISTRICT
DISTRICT MAP 2015-16
ELEMENTARY SCHOOL BOUNDARIES
(For Reference Only-Please contact local school for specific attendance/school assignment)
0 0.5 1 2 Miles
NORTH VERDEMONT
PAAKUMA
HOLCOMB
NORTH PARK
KENDALL
HILLSIDE
ARROWHEAD
NEWMARK
DEL ROSA
BELVEDERE
PARKSIDE
MARSHALL
DAVIDSON
MUSCOY
SALINAS
WILSON
HUNT
BARTON
INGHRAM
ROOSEVELT
RIO VISTA
RILEY
LINCOLN
ANTON
BRADLEY
HIGHLAND-PACIFIC
EMMERTON-RODRIGUEZ
FAIRFAX
COLE
GOMEZ
MT VERNON
JONES
NORTON
ROBERTS
WARM SPRINGS
THOMPSON
RAMONA-ALESSANDRO
LANKERSHIM
CYPRESS
MONTEREY
WONG
LYTLE CREEK
URBITA
DOMINGUEZ
KIMBARK
PALM
PAACUMA
NORTH VERDEMONT
215
210
18
15


CHAVEZ
TO: KIMBARK ES
NORTH VERDEMONT ES
PALM AVENUE ES
CHAVEZ MS
PAAKUMA K-8
(see inset to right)
PAAKUMA
SHANDIN HILLS
GOLDEN VALLEY
DEL VALLEJO
SERRANO
KING
ARROWVIEW
CURTIS
Legend
Elementary Schools
TRADITIONAL
Middle Schools
TRADITIONAL
High Schools
TRADITIONAL
SAN BERNARDINO CITY UNIFIED SCHOOL DISTRICT
DISTRICT MAP 2015-16
MIDDLE SCHOOL BOUNDARIES
(For Reference Only-Please contact local school for specific attendance/school assignment)
0
0.5
1
2
Miles
KIMBARK ES
N VERDEMONT ES
CHAVEZ MS
PAAKUMA K-8
VERMONT ES
MUSCOY ES
MARSHALL ES
ARROWHEAD ES
GOLDEN VALLEY MS
PARKDALE ST
PARKSIDE ES
DEL ROSA ES
DEL VALLEJO MS
BELVEDERE ES
SERRANO MS
BONNIE OEHL ES
HUNT ES
BARTON ES
DAVIDSON ES
WILSON ES
GEORGE BROWN JR ES
ARROWVIEW MS
SALINAS ES
INGHRAM ES
RIO VISTA ES
ROOSEVELT ES
KING MS
ARROYO VALLEY HS
GRACIANO GOMEZ ES
MT VERNON ES
RAMONA ALESSANDRO ES
SAN BERNARDINO HS
DR. MILDRED D. HENRY ES
RILEY ES
LINCOLN ES
ADULT ED SCHOOL POLICE
E NEAL ROBERTS ES
SIERRA HS
LELAND NORTON ES
JONES ES
ED. SUPPORT CENTER
WAREHOUSE
BLDG SERVICES
BOARD OF EDUCATION
ANDERSON
MONTEREY ES
INDIAN SPRINGS HS
WONG ES
CURTIS MS
WARM SPRINGS ES
LANKERSHIM ES
RODRIGUEZ PREP ACADEMY
EMMERTON ES
SAN GORGONIO HS
PACIFIC HS
FAIRFAX ES
ANTON ES
BRADLEY ES
COLE ES
THOMPSON ES
CYPRESS ES
H FRANK DOMINGUEZ ES
LYTLE CREEK ES
RICHARDSON PREP
MIDDLE COLLEGE HS
URBITA ES
CAJON HS
NUTRITION SERVICES
NORTHPARK ES
HILLSIDE ES
KENDALL ES
HARMON CARMACK
LITTLE MOUNTAIN ES
NEWMARK ES
SHANDIN HILLS MS
WHAA
215
210
18
15

Proposed Waterman + Baseline Neighborhood Transformation Specific Plan
Fire Questionnaire

1. Who provides fire protection and medical response service for the project site? Do other jurisdictions provide mutual aid? If so, who are they?

The San Bernardino City Fire Department provides fire protection and medical services for the project site area. American Medical Response (AMR) provides ambulance transport.

The San Bernardino City Fire Department participates in the Statewide Master Mutual Aid Plan. The Fire Department also has automatic aid agreements with the cities of Loma Linda, Colton, Rialto, Redlands and the County of San Bernardino

2. What are the locations of responding station(s)?

#221 200 E Third Street, 92410

#222 1201 W. Ninth Street, 92411

#224 2641 N 'E' Street, 92405

#225 1640 Kendall Dr. 92407

#226 1920 Del Rosa Ave. 92404

#227 282 W. 40th St. 92407

#228 3398 E. Highland Ave. 92346

#229 202 Meridian Ave. 92410

#231 450 Vanderbilt Way, 92408

#232 6065 N. Palm Ave. 92407

3. What type of equipment and manpower does each station have?

#221	Type 1 Engine - 3-person	Truck Company - 3-person
#222	Type 1 Engine - 3-person	
#224	Type 1 Engine - 3-person	Truck Company - 3-person
#225	Type 1 Engine - 3-person	Type III Engine - cross-staffed
#226	Type 1 Engine - 3-person	Type III Engine - cross-staffed
#227	Type 1 Engine - 3-person	Type III Engine - cross-staffed
#228	Type 1 Engine -3-person	Type III Engine - cross-staffed
#229	Type 1 Engine - 3-person	
#231	Type 1 Engine - 3-person	HM Unit - cross-staffed
#232	Type 1 Engine - 3-person	Type III Engine - cross-staffed

4. What is the approximate fire flow requirement for the proposed project?

Contact the San Bernardino Municipal Water Department for fire flow requirements

5. What is the average response time to the project site? What is the department's standard for desired response time for emergency and non-emergency calls?

The Fire Department has a response time goal of 8 minutes or less 90% of the time. The Fire Department has experienced the closure of two fire stations over the last year and therefore the average response time has increased to approximately 9 ½ minutes 90% of the time.

6. Are there any existing deficiencies in the level of fire protection service currently provided to the area including and surrounding the project site?

The Fire Department has experienced the closure of two fire stations over the last year and therefore the average response times throughout the City have increased. Also due to the reduction in staffing the Fire Department has reduced the capability of specialty programs such as hazardous materials response, heavy rescue and arson investigation

8. Would this project have a significant impact on the ability to maintain adequate level of fire protection service to the area?

There may be other consideration based on the occupancy type and future tenants of structures within the area

9. What mitigation measures are required or recommended to reduce fire hazards and reduce potential impacts on fire service?

None known of at this time

10. Please add any other comments you may wish to make regarding this project.

The City of San Bernardino is in the process of contracting their fire protection and emergency medical services with the San Bernardino County Fire Department. This process is expected to be completed by the mid-part of next years. Answers to any and all questions may change as the services are transitioned from the City to the County.

Response Prepared By:

Dan Harker	Acting Deputy Fire Chief
Name	**Title**
San Bernardino City Fire Dept.	10/27/2015
Agency	**Date**

Proposed Waterman + Baseline Neighborhood Transformation Specific Plan
Water Services Questionnaire

1. Please describe the existing and planned water facilities in the project area. Please provide maps and plans for reference, if available.

   Attached, for your reference, please find the SBMWD Water Atlas sheets for the project area. Exhibits showing planned water facility improvements are also attached and listed below:
   - Waterman Ave 20" Water Main Replacement Project
   - Intermediate Pressure Zone to IVDA 24" Transmission Main Extension

2. Please list the cities or communities served by your agency.

   Potable Water Services:
   - Majority of City of San Bernardino (see attached exhibit showing SBMWD service boundary)
   - San Bernardino County Areas within City of San Bernardino Limits

   Wastewater Treatment Services:
   - City of San Bernardino
   - San Bernardino County Areas within City of San Bernardino Limits
   - East Valley Water District Service Area
   - City of Loma Linda

3. What are the water consumption factors applicable to a transportation facility development? What about residential, commercial, office, and school development? Please state the estimated water demand for the proposed project and the adequacy of the current water supply.

   - Attached, for your reference, please find the Water Duty Factors (WDF's) for potable water and the Sewer Capacity Fee Schedule for sewer treatment.

4. What are your sources of water? What are the future sources of water?

   Existing Sources of Water:
   - Groundwater

   Future Sources of Water:
   - Groundwater
   - Recycled Water (No effective date available)

Proposed Waterman + Baseline Neighborhood Transformation Specific Plan
Water Services Questionnaire

5. What impact will the proposed project, in combination with all the other development projects in the area, have on your ability to provide water service?

   - Development will cause an impact to SBMWD facilities. More detailed water consumption information and wastewater discharge flows will be required to further analyze the impact to SBMWD facilities. Also, a hydraulic analysis as well as a water supply assessment may be necessary depending on the size and consumption demand of each development.

6. What water conservation measures do you recommend for the proposed project?

   Utilize drought tolerant landscaping and high-efficiency irrigation products. Please visit the San Bernardino Municipal Water Department's website at www.sbcitywater.org for more information and resources regarding water conservation.

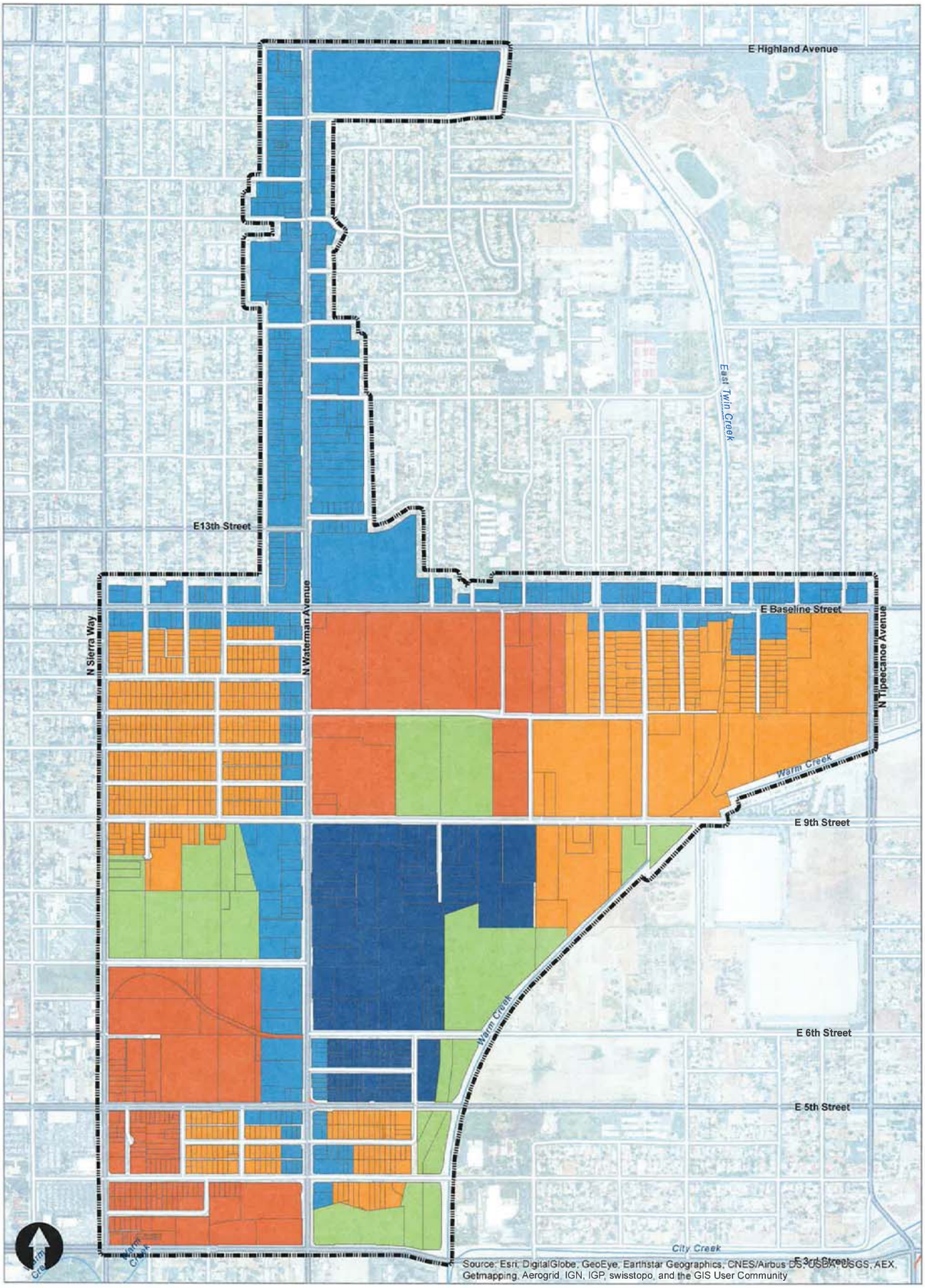
7. Please add any other comments you may wish to make regarding this project.

   - All new water services, unless part of a developer-installed water main project, shall be installed by SBMWD through a Rule and Regulation No. 5 application. All developer-installed water mains shall be installed per Rule and Regulation No. 20.
   - For all new sewer connections, please verify sewer main availability with City of San Bernardino Public Works Department then contact San Bernardino Municipal Water Department regarding sewer capacity charges.

Response Prepared By:

Francisco Lopez-Jimenez — Associate Engineer
Name — **Title**

San Bernardino Municipal Water Department — 10/6/15
Agency — **Date**



Plan Area Boundary

Specific Plan Zones

Open Space

Neighborhood Residential

Corridor Mixed Use

Urban Mixed Use

Employment

Proposed Waterman + Baseline Neighborhood Transformation Specific Plan
Police Questionnaire

1. Please indicate which police station would serve the proposed project, the station's location, distance to the project site, and staffing.

   The project area is serviced by the main Police Station located at 710 N. D Street, SB CA 92401. The station is located approximately 1.4 miles from the project location. The staffing level varies based on shift assignment and day of the week.

2. What is the response time to the project site? What is the department's standard for desired response time for emergency and non-emergency calls?

   The average response times (for calendar year 2015 to date) are as follows:

Emergency	6.80 minutes
In-progress	30.69 minutes
Report	125.33 minutes

   Our desired response time is not standard per call type, the type and circumstances dictate the response level.

3. Please indicate the type of service calls or service demands anticipated by the proposed use.

   The type of service calls range from violent crime to traffic issues throughout the area of the project. During the construction phases of the project service calls relating to theft (materials, copper wire and tubing, trespass and loitering are anticipated. Upon completion calls relating to domestic violence, assaults, narcotics and welfare checks to be among the top list of service demands.

4. Given the existing level of staffing and equipment, will the police department be able to provide police services to the proposed project? If not, please indicate what will be required to serve the project.

   The police department will continue to provide services to the proposed project area. The staffing levels are not at a desired level however; services will be provided.

5. What impact will the proposed project, in combination with all the other projects planned in the area, have on the ability of the police department to provide police services in the area?

   The project, as a whole, will have an impact our current level of service. Based on the level of activity throughout the city it is not feasible to have an officer stationary within the project area boundaries. The level of security measures taken by the construction and management organizations will be a key factor.

6. What mitigation measures, if any, would you recommend for the proposed project?

   The department recommends a level of security measures be considered to include onsite 24-hour security guards, camera systems for monitoring the perimeter and interior areas, fencing and if possible a secured parking lot. Ample exterior lighting throughout the project area is highly recommended.

6. Please add any comments you may wish to make regarding this matter.

Continued communication between the project managers (both on and off site) and the police department is recommended for faster resolutions to issues or concerns that may arise.

Response Prepared By:

Paul Williams	Captain
Name	**Title**
San Bernardino Police Department	10/1/15
Agency	**Date**

FINAL Waterman Gardens

Transportation Impact Analysis

Report

Prepared for:
City of San Bernardino

MAY 2016

OC15-0378

FEHR PEERS
Improving Communities Since 1985

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Appendix B: Existing Traffic Counts

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1.0 EXECUTIVE SUMMARY

Fehr & Peers has completed a transportation assessment for the proposed Waterman Gardens project in San Bernardino, California. This Traffic Impact Analysis (TIA) was developed based on the requirements within the City of San Bernardino Traffic Impact Study Guidelines, 2015 and San Bernardino County Congestion Management Program, 2005.

The proposed project consists of approximately 710 acres located centrally in the City of San Bernardino. The City of San Bernardino has initiated the proposed Waterman + Baseline Neighborhood Transformation Plan to promote the revitalization of the neighborhood centered around the intersection on Waterman Avenue and Baseline Avenue. The Plan boundaries are loosely formed by Sierra Way to the west, Tippecanoe Avenue and the flood control channel on the east, 3rd Street to the south, and Highland Avenue to the north. The Specific Plan allows for a maximum build out of up to 4,340 residential units and 3,570,448 square feet of non-residential uses. It also establishes a land use and development framework, helping to identify much needed transportation and infrastructure improvements. To implement the vision for the neighborhood, the Plan creates six "districts" that together would achieve a mix of residential uses and commercial uses.

Future traffic forecasts were developed for each scenario identified below through the San Bernardino Transportation Analysis Model to determine trip distribution and ambient growth. The evaluation assessed 23 study intersections throughout the study area. Intersections were evaluated using the Synchro * level of service analysis software and is consistent with Highway Capacity Manual (HCM) 2010 methodologies.

As part of Fehr & Peers' assessment, the following scenarios were evaluated:

- Existing (2015) Conditions
- Existing Plus Project (2015) Conditions
- Build Out (2035) Conditions
- Build Out (2035) Plus Project Conditions

The results of the traffic analysis indicate that three of the study locations were significantly impacted by the proposed project traffic in existing conditions and seven of the study locations were significantly impacted by the proposed project traffic in year 2035. It is recommended that the project sponsor provide several mitigation methodologies to combat higher volumes surrounding the Waterman Gardens project. The following table provides a summary of impacted intersections and in which scenario they are affected, and whether it is possible to mitigate the problems.

TABLE 1-1: SUMMARY OF IMPACTED INTERSECTIONS

Impacted Intersection	Scenario Impact Occurrence	Impact Solution
1. Waterman Avenue & 30th Street	Build Out (2035) Plus Project	Signal Improvements
2.Waterman Avenue & SR-210 Eastbound Ramps	Existing (2015) Plus Project, Build Out (2035) Plus Project	Significant & Unavoidable
8. Waterman Avenue & Baseline Street	Build Out (2035) Plus Project	Restriping
10. Waterman Avenue & 9th Street	Build Out (2035) Plus Project	Restriping
12. I-215 Northbound Off-Ramp & 5th Street	Build Out (2035) Plus Project	Significant & Unavoidable
16. I-210 Southbound Ramps & 5th Street	Existing (2015) Plus Project, Build Out (2035) Plus Project	Significant & Unavoidable
17. I-210 Northbound Ramps & 5th Street	Existing (2015) Plus Project, Build Out (2035) Plus Project	Significant & Unavoidable
20. I-215 Southbound On-Ramp & 2nd Street	Existing (2015) Plus Project, Build Out (2035) Plus Project	Optimize Signal Timing
21. I-215 Northbound Off-Ramp & 2nd Street	Existing (2015) Plus Project, Build Out (2035) Plus Project	Optimize Signal Timing
23. Waterman Avenue & I-10 Westbound On-Ramp	Existing (2015) Plus Project, Build Out (2035) Plus Project	Signal Installation

2.0 INTRODUCTION

2.1 PURPOSE AND OBJECTIVES

The purpose of the report is to summarize the findings of the transportation analyses completed for the proposed neighborhood development project located in San Bernardino, CA. Needed improvements were identified to ensure study area intersections operate at an acceptable level of service. This Transportation Impact Analysis (TIA) was developed based on the requirements within the Congestion Management Program (CMP), 2005, City of San Bernardino Traffic Impact Guidelines developed by the San Bernardino Associated Governments in 2015 and input from the City and County of San Bernardino and City of Highland.

The objectives include the following:

- Document existing traffic, bicycle, pedestrian, and transit conditions within the study area.
- Evaluate traffic conditions at and General Plan Build-Out (2035)
- Determine if any transportation improvements are needed to achieve the City of San Bernardino level of service requirements.

The approved Scoping Agreement is included in Appendix A.

2.2 SITE LOCATION AND STUDY AREA

The project plan area is located at the center of the City of San Bernardino within the Riverside-San Bernardino metropolitan area, also referred to as the "Inland Empire." The Plan area includes approximately 710 acres. The Specific Plan allows for a maximum build out of up to 4,340 residential units and 3,570,448 square feet of non-residential uses.

The project study area was established based on discussions with staff at the City of San Bernardino and covers the areas within and adjacent to the project which would be utilized by project traffic. The regional project location is shown on Figure 2-1.

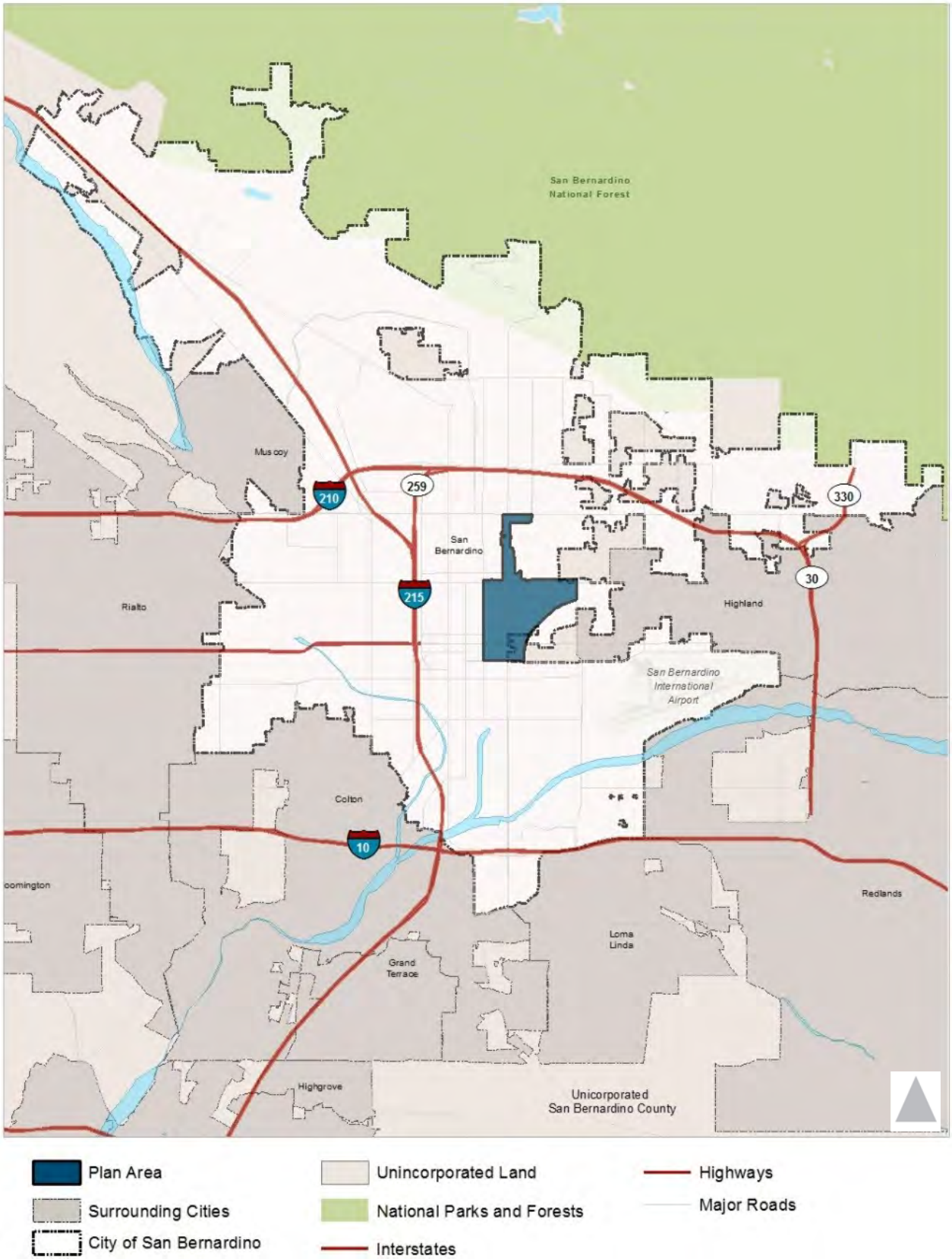


Figure 2-1
Regional Project Location

2.3 DEVELOPMENT PROJECT DESCRIPTION

The proposed project consists of six "districts" that together would achieve a mix of residential uses and commercial uses. Overall, the implementation of the Plan would increase existing residential uses from an estimated 2,049 units to approximately 4,341 units, and would increase commercial uses from roughly 2,366,385 square feet to approximately 3,570,448 square feet.

The six districts included in the plan are:

District 1 - Uptown Professional District. The Uptown Professional District is approximately 82 acres located in the northern portion of the Plan area. It includes all the parcels fronting Waterman Avenue between Highland Avenue and 13th Street. The Plan seeks to consolidate the medical uses scattered along Waterman Avenue into a focused district that leverages the demand generated by St. Bernardine Medical Center. District 1 will be zoned entirely as a mixed use district allowing for office uses, neighborhood serving commercial uses and limited residential uses up to 20 dwelling units an acre with a focus on senior housing.

District 2 - Westside Neighborhood District. The Westside Neighborhood District includes approximately 127 acres at the western end of the Plan area. The boundaries of this district are formed by Sierra Way to the west, Waterman Avenue to the east, and 5th Street on the south. The primary vision for this district is to improve and preserve the existing single family neighborhoods to the west of Waterman Avenue.

District 3 - Midtown Core District. The boundaries of the district are Waterman Avenue on the west, 9th Street on the south, with no formal roadway boundaries to the north or east. Centered on a redesigned Olive Avenue, this 120-acre district is envisioned as a pedestrian-oriented avenue with a variety of housing options, commercial shops and eating establishments along Waterman & Baseline Avenues

District 4 - Eastside Neighborhood District. The Eastside Neighborhood District includes approximately 144 acres at the eastern end of the Plan area adjacent to the Midtown Core. The boundaries of this district are loosely formed by Tippecanoe Avenue and the flood control channel to the east and south, the parcels fronting Baseline to the north, with no formal boundary to the west. This district is envisioned to have mixed use development along Baseline Street that complements and enhances the existing single family neighborhoods to the south.

District 5 - Gateway District. The Gateway Lake district is approximately 97 acres located south of 7th Street, east of Sierra Way, north of 3rd Street and west of Waterman Avenue. District 5 allows for mixed use development along Waterman Avenue, with a small single family enhancement area in the center of area. The majority of the district, including Seccombe Lake, will allow for higher density residential development

up to 30 dwelling units per acre with compatible neighborhood serving commercial uses in the form of vertical or horizontal mixed use

District 6 - Employment District. The 140-acre district is located south of 9th Street, east of Waterman Avenue, north of 3rd Street and west of the flood control channel. While the existing uses on-site are overwhelmingly auto-related, the implementation of this Specific Plan will transform this district into a hub of office, commercial, and business park uses (mix of business and support services) to establish new job opportunities in close proximately to new and existing residential development.

TABLE 2-1: WATERMAN GARDENS DEVELOPMENT STATISTICS

District Name	Area (acres)	Existing Residential (units)	Existing Commercial (square feet)	Proposed Residential (units	Proposed Commercial (square feet)
Uptown Professional	81.7	259 units	1,244,332 SF	277 units	513,363 SF
Westside Residential Neighborhood	127.0	397 units	243,519 SF	808 units	342,852 SF
Midtown Core Mixed Use	119.2	344 units	346,981 SF	1,017 units	610,450 SF
Eastside Residential Neighborhood	144.5	657 units	108,527 SF	1,402 units	206,614 SF
Gateway	97.4	229 units	136,318 SF	675 units	444,896 SF
Mixed Business	140.9	60 units	286,708 SF	162 units	1,452,273 SF
Total	**710.7**	**1,946 units**	**2,366,385 SF**	**4,341 units**	**3,570,448 SF**

Source: *Waterman Gardens Specific Plan, 2015.*

2.4 ANALYSIS SCENARIOS

To identify significant project impacts, the following four scenarios were evaluated:

- Existing (2015) – Consists of existing traffic counts collected in the study area in September 2015.
- Existing Plus Project (2015) – Consists of existing traffic counts collected in the study area in September 2015, then adding traffic generated by the proposed project.
- Build Out (2035) – Consists of traffic volumes based on the Waterman Gardens's Specific Plan. The Furness method was utilized to forecast future traffic volumes by utilizing the San Bernardino Transportation Anazysis Model (SBTAM).
- Build Out (2035) Plus Project – Consists of adding traffic generated by the proposed project to the Build Out (2035) scenario.

3.0 ANALYSIS METHODOLOGIES

3.1 LEVEL OF SERVICE CRITERIA

3.1.1 INTERSECTION LEVEL OF SERVICE

Fehr & Peers' analysis of intersections employs a methodology based on empirical research conducted by the Transportation Research Board (TRB) and other authorities. Signalized and unsignalized intersection operations were evaluated using methodologies provided in Highway Capacity Manual (HCM) 2010 (TRB) and are consistent with the Congestion Management Program (2007) requirements for San Bernardino County and city guidelines.

The HCM 2010 methodology for signalized and all-way stop-controlled intersections estimates the average control delay for the vehicle at the intersection. For side-street stop-controlled intersections, the methodology estimates the control delays for each turning movement and identifies the delay for the longest delayed approach (if there is a shared lane, delay is averaged for all turning movements from that lane). After the quantitative delay estimates are complete, the methodology assigns a qualitative letter grade that represents the operations of the intersection. These grades range from level of service (LOS) A (minimal delay) to LOS F (excessive congestion). LOS E represents at-capacity operations. Descriptions of the LOS letter grades for signalized and unsignalized intersections are provided in Table 3-1.

The Synchro 8 software package was used to facilitate the HCM 2010 calculations. A base saturation flow rate of 1800 pc/hr/ln was assumed per the CMP for existing condition scenarios. Peak hour factors were measured as part of the data collection process and are used in the analysis .For future year scenarios, a base saturation flow rate of 1900 pc/hr/ln was used, as was a peak hour flow rate of 0.95. Existing traffic signal timing parameters from timing sheets were used for signalized intersections.

To develop the future year volumes, the San Bernardino Transportation Analysis Model (SBTAM) was used. SBTAM is a TransCAD based travel demand model focused on San Bernardino County. This tool is used throughout the entire county to ensure consistency in future forecast volumes. The Furness method was then used to develop intersection turning movement forecasts for the future year 2035. The Furness method applies the growth between the base and future year models and distributes the growth proportionately to the count data. Furness forecasting worksheets are provided in Appendix I.

TABLE 3-1: INTERSECTION LEVEL OF SERVICE CRITERIA

Level of Service	Description	Signalized Delay (Seconds)	Unsignalized Delay (Seconds)
A	Progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.	≤ 10.0	≤ 10.0
B	Progression is good, cycle lengths are short, or both. More vehicles stop than with LOS A, causing higher levels of average delay.	> 10.0 to 20.0	> 10.0 to 15.0
C	Higher congestion may result from fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level, though many still pass through the intersection without stopping.	> 20.0 to 35.0	> 15.0 to 25.0
D	The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.	> 35.0 to 55.0	> 25.0 to 35.0
E	This level is considered by many agencies to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences.	> 55.0 to 80.0	> 35.0 to 50.0
F	This level is considered unacceptable with oversaturation, which is when arrival flow rates exceed the capacity of the intersection. This level may also occur at high V/C ratios below 1.0 with many individual cycle failures. Poor progression and long cycle lengths may also be contributing factors to such delay levels.	> 80.0	> 50.0

Source: *Highway Capacity Manual* (Transportation Research Board, 2010).

3.2 PERFORMANCE CRITERIA AND THRESHOLDS OF SIGNIFICANCE

3.2.1 CITY OF SAN BERNARDINO PERFORMANCE CRITERIA

The definition of an intersection deficiency in the City of San Bernardino is based on the City of San Bernardino General Plan Circulation Element. The City of San Bernardino General Plan states that target LOS "D" be maintained at City intersections wherever possible. Mitigation measures are required for roadway corridors/locations where traffic conditions show an LOS worse than the minimum acceptable LOS.

Caltrans endeavors to maintain a target LOS at the transition between LOS "C" and LOS "D" on State highway facilities, however, Caltrans acknowledges that this may not always be feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS. If an existing State highway facility is operating at less than the appropriate target LOS, the existing MOE should be maintained.

3.2.2 THRESHOLDS OF SIGNIFICANCE

For intersections within the City of San Bernardino jurisdiction, traffic impacts at an intersection are to be considered "significant" when any of the following changes in the volume to capacity (V/C) ratios occur between the "without project" and the "with project" conditions identified in Item 3 above:

LOS Without Project	V/C Difference
C	> 0.0400
D	> 0.0200
E, F	> 0.0100

The LOS and V/C ratios above are based on the delay methodology outlined in the Highway Capacity Manual.

3.2.3 MITIGATION REQUIREMENTS

Once level of service problems under existing conditions and future scenarios are identified, measures that will provide an acceptable LOS are necessary. These measures shall be assumed to be in place for subsequent analyses. Mitigation measures must be identified for intersections that show a significant project impact, and operate at LOS E or worse under the conditions identified above. The LOS with mitigation must be improved to LOS D or better for intersections. Mitigation measures for both opening

year and future build-out year conditions must be identified. Mitigation measures may need to be identified for other conditions, depending on the project phasing and timing.

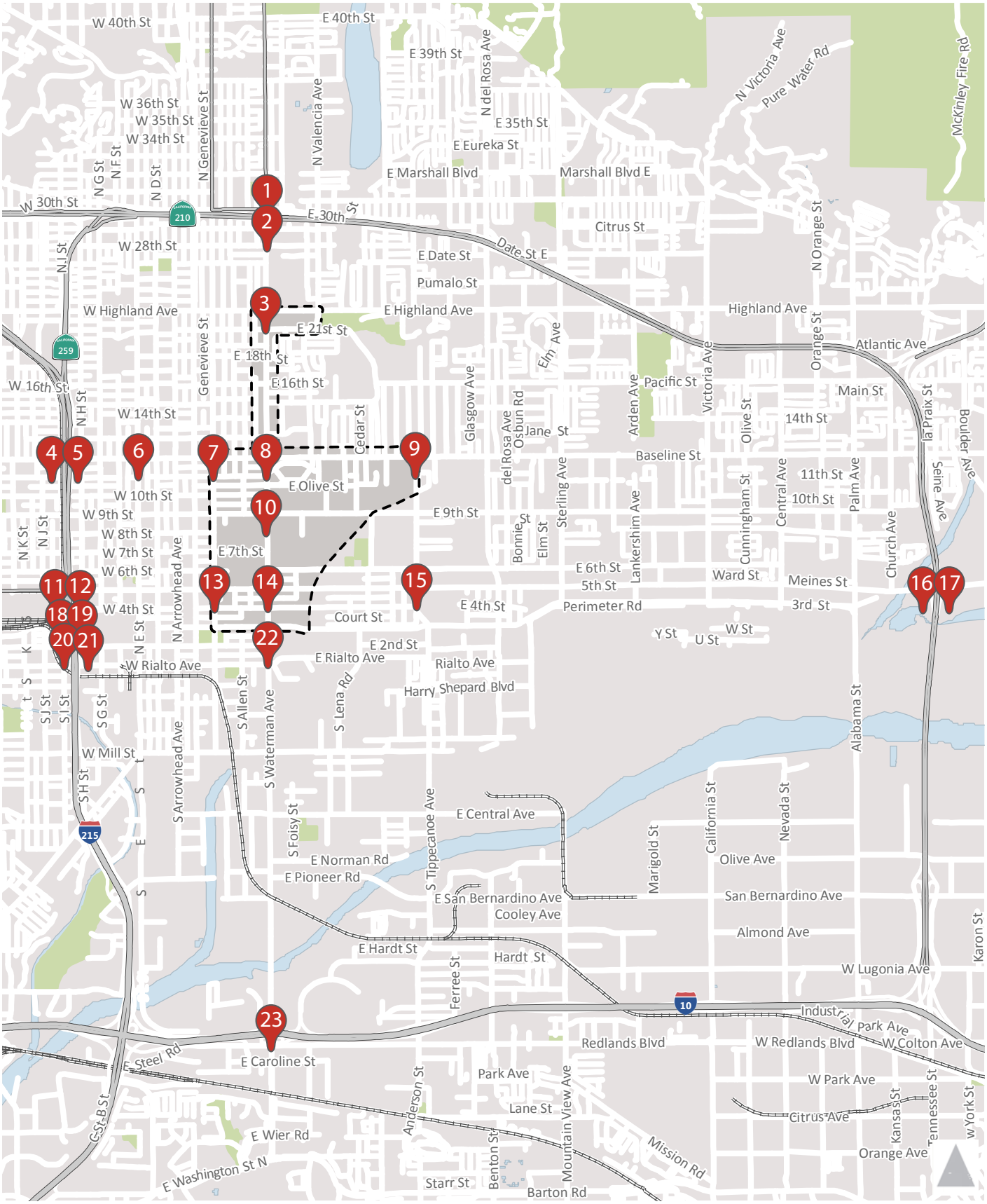
The percentage of fair-share for the project is calculated at each impacted location using the total trips generated by the project divided by the total "new" traffic, which is the net increase in traffic volume from all proposed projects (Other Projects plus Project) and growth. The cost of mitigation shall be estimated using verifiable cost estimates from reliable and recognized sources such as the CMP guidelines. Fair-share cost of mitigation shall be calculated using the fair-share percentage of the project volumes multiplied by total estimated cost of mitigation.

4.0 EXISTING CONDITIONS

4.1 STUDY AREA INTERSECTIONS

Twenty-three study intersections were identified for this analysis based on Fehr & Peers knowledge of the study area and input from staff at the City of San Bernardino. These locations are listed below and are shown on Figure 4-1.

1. Waterman Avenue & 30th Street
2. Waterman Avenue & SR-210 Eastbound Ramps
3. Waterman Avenue & Highland Avenue
4. I-215 Southbound Ramps & Baseline Street
5. I-215 Northbound Ramps & Baseline Street
6. E Street & Baseline Street
7. Sierra Way & Baseline Street
8. Waterman Avenue & Baseline Street
9. Tippecanoe Avenue & Baseline Street
10. Waterman Avenue & 9th Street
11. I-215 Southbound Ramps & 5th Street
12. I-215 Northbound Ramps & 5th Street
13. Sierra Way & 5th Street
14. Waterman Avenue & 5th Street
15. Tippecanoe Avenue & 5th Street
16. I-210 Southbound Ramps & 5th Street
17. I-210 Northbound Ramps & 5th Street
18. I-215 Southbound Off-Ramp & 3rd Street
19. I-215 Northbound On-Ramp & 3rd Street
20. I-215 Southbound On-Ramp & 2nd Street
21. I-215 Northbound Off-Ramp & 2nd Street
22. Waterman Avenue & 2nd Street
23. Waterman Avenue & I-10 Westbound On-Ramp



LEGEND

Study Intersection

Plan Boundary

Figure 4-1
Project Study Intersections

4.2 EXISTING TRAFFIC CONTROLS AND INTERSECTION GEOMETRICS

The following section is a description of regional and local roadways that provide access to the Specific Plan area.

Regional Roads

Interstate 215 (I-215) San Bernardino Freeway**:** I-215 is a ten lane uninterrupted highway oriented north-south and is west of the Specific Plan area. I-215 southbound passes through downtown San Bernardino and terminates in Temecula. I-215 northbound intersects with I-15 for access through the San Bernardino Mountains. The project area can be accessed by going east after taking the 2nd Street, 3rd Street, 5th Street, or Baseline Street exits.

State Route 210 (SR-210) Martin A. Matich Highway: SR-210 is an east-west connector of Highland and San Dimas and has three lanes in each direction. Towards the west in San Dimas, it turns into Interstate 210 and continues to Pasadena. Towards the east, it terminates at Interstate 10 in Redlands. The Specific Plan area can be accessed via SR-210 by exiting on Waterman Avenue and going south or by exiting Base Line and going west.

Interstate 10 (I-10) Christopher Columbus Transcontinental Freeway**:** I-10 is a ten lane uninterrupted highway oriented east-west and is south of the Specific Plan area. The western terminus of I-10 is at State Route 1 (SR 1) in Santa Monica, California and the eastern terminus is at I-95 in Jacksonville, Florida. I-10 intersects with I-215 southwest of the project site and intersects with SR-210 southeast of the project site.

State Route 18 (SR-18) Rim of the World Highway**:** SR-18 is a four lane highway oriented north-south and is directly north of the Specific Plan area. SR-18 begins at Waterman Avenue and State Route 210 in San Bernardino and ends at State Route 138 near Adelanto.

Local Roads

2nd Street: 2nd Street is classified as a secondary arterial oriented in the east-west direction and is located south of the Specific Plan boundary. 2nd Street is 62 feet wide, consists of two lanes of traffic in the east and west bound directions, and a two-way left turn lane allowing left turns for both traffic directions. On-street parking is allowed on both sides of 2nd street. Access to 2nd Street is provided by signalized and stop controlled intersections. The posted speed limit is 35 miles per hour.

3rd Street: 3rd Street is classified as a major arterial in the City of San Bernardino between the east Specific Plan boundary at the City Creek and Waterman Avenue and is oriented in the east-west direction. Between Waterman Avenue and Sierra Way, 3rd Street is classified as a local street. 3rd Street is 54 feet wide for users and allows for two lanes of traffic in both the east and west bound directions with no median in the Specific Plan area. East of Waterman Avenue, 3rd Street has a two-way left turn lane allowing for left turns from traffic in both directions and an additional right turn lane for traffic in the westbound direction. This segment of 3rd Street consists of signalized intersections, stop controlled intersections, and uncontrolled access. The posted speed limit is 40 miles per hour.

5th Street: 5th Street is classified as a major arterial oriented in the east–west direction from Sierra Way to the City Creek crossing on the east Specific Plan boundary. This segment of 5th Street is 64 feet wide, consists of two lanes of traffic in each direction, and has a two-way left turn lane allowing for left turns for both traffic directions. On-street parking is allowed on both sides of 5th Street between Waterman Avenue and Sierra Way. Access to 5th Street is controlled by signalized intersections, stop controlled intersections, and uncontrolled access points. The posted speed limit is 40 miles per hour.

9th Street: 9th Street is classified as a secondary arterial oriented in the east-west direction for the entirety of the Specific Plan area. 9th Street is 66 feet wide, consists of two lanes for traffic in the east and west bound directions, and has a two-way left turn lane allowing for left turns from both directions. On-street parking is allowed on 9th Street. Access to 9th Street is controlled by signalized and stop controlled intersections, as well as uncontrolled access points. The posted speed limit is 30 miles per hour.

Baseline Street: Baseline Street is classified as a major arterial with access to Waterman Avenue and runs the entire length of the Specific Plan boundary in the east-west direction from Sierra Way to Tippecanoe Avenue. Baseline Street is 66 feet wide, consists of two lanes of traffic in each direction, and has a two-way left turn lane allowing for left turns at access roads in both directions. On-street parking is allowed. Access to Baseline Street is controlled by signalized intersections and stop controlled access roads. The posted speed limit is 40 miles per hour.

21st Street: 21st Street is classified as a secondary arterial oriented in the east-west direction between Waterman Avenue and Valencia Avenue and as a collector street west of Waterman Avenue. Between Waterman Avenue and Valencia Avenue, 21st Street is 54 wide, has on-street parking, consists of two lanes of traffic in both directions, and has a two-way left turn lane that allows for eastbound left turns into a medical center parking lot and eastbound and westbound left turns onto Crestview Road. East of Waterman Avenue, 21st Street has one lane of traffic in both directions, and on-street parking is allowed on the south side of the street. There are stop controlled and uncontrolled access points, as well as signalized intersections on 21st Street in the Specific Plan area. The posted speed limit is 35 miles per hour.

Highland Avenue: Highland Avenue is classified as a major arterial oriented in the east-west direction and is the north Specific Plan area boundary from Belle Street to Valencia Avenue. Highland Avenue is 65 feet wide, has for two lanes of traffic in each direction, and has a two-way left turn lane allowing for left turns from traffic in both directions. There is also an additional right turn lane for east bound traffic at the Waterman Avenue intersection. Highland Avenue has stop controlled and uncontrolled access, as well as signalized intersections. The posted speed limit is 35 miles per hour.

Sierra Way: Sierra Way is classified as a secondary arterial road with two lanes for traffic in the north- and south-bound directions and is the western boundary of the Specific Plan Area. Sierra Way is 60 feet wide and has an additional lane for left turns in both directions at the 3rd and 5th Street intersections. On-street parking is allowed in a majority of the Specific Plan area on Sierra Way. The posted speed limit in this area is 40 miles per hour.

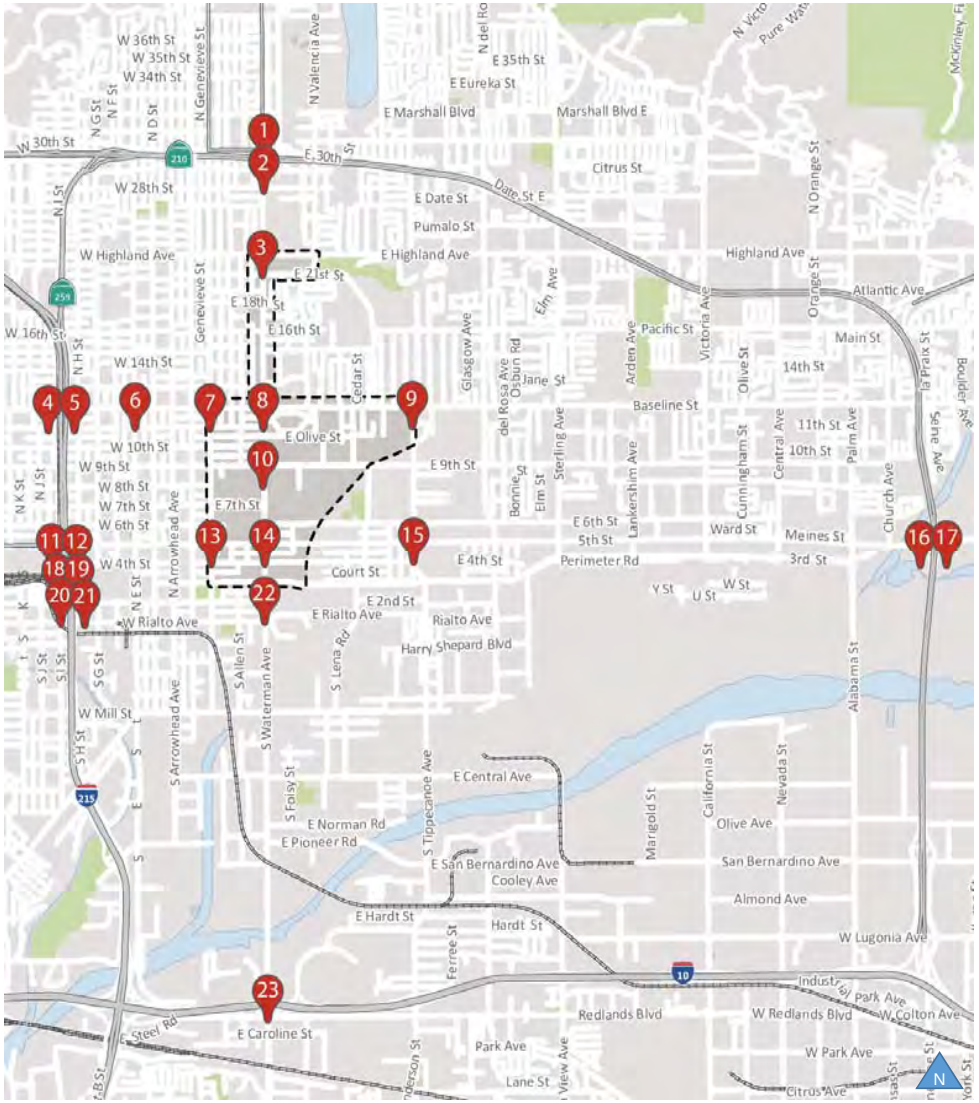
Waterman Avenue: Waterman Avenue is classified as a major arterial with three lanes of traffic in both the north- and south-bound directions. Waterman Avenue is 66 feet wide and has a two-way left turn lane allowing for left turns from both directions. There are signalized intersections and stop controlled access to Waterman Avenue in the Specific Plan area. On-street parking is only allowed north of Evans Street. The posted speed limit is 35 miles per hour.

Tippecanoe Avenue: Tippecanoe Avenue is classified as a secondary arterial oriented in the north-south directions and acts as the east border of the Specific Plan area. Tippecanoe is 68 feet wide and consists of two lanes for traffic in each direction. There are signalized access and uncontrolled access points. No on-street parking is allowed along Tippecanoe Avenue in the Specific Plan area. The posted speed limit is 40 miles per hour.

4.3 EXISTING TRAFFIC VOLUMES

Fehr & Peers collected existing traffic counts in September 2015 at study intersections during the morning (7:00 to 9:00 AM) and evening (4:00 to 6:00 PM) peak hours.

Figure 4-2 summarizes the existing intersection turning movement volumes for the AM and PM peak hour and is used to represent Existing Conditions. Existing traffic count data is provided in Appendix B.



Project Site
Study Intersection

Movement Volume
AM (PM)

Intersection Control
Signal
Stop
Roundabout

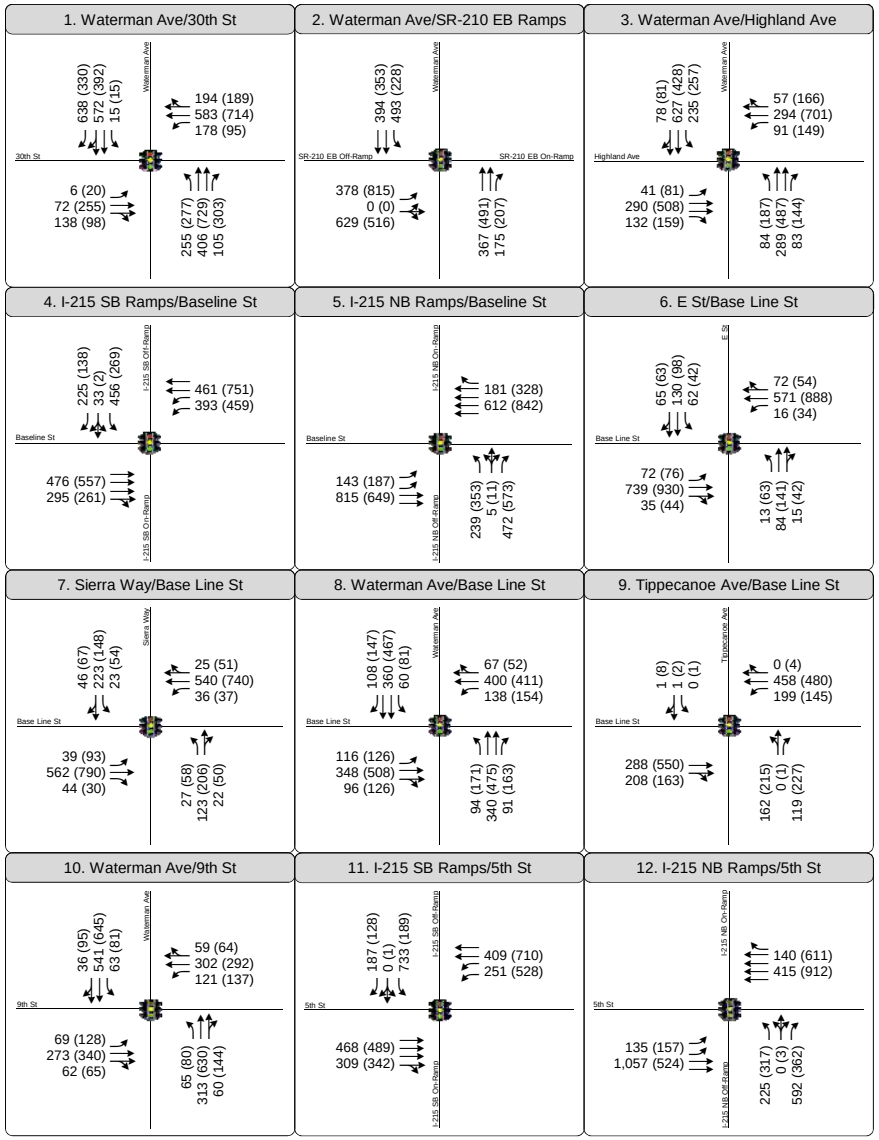
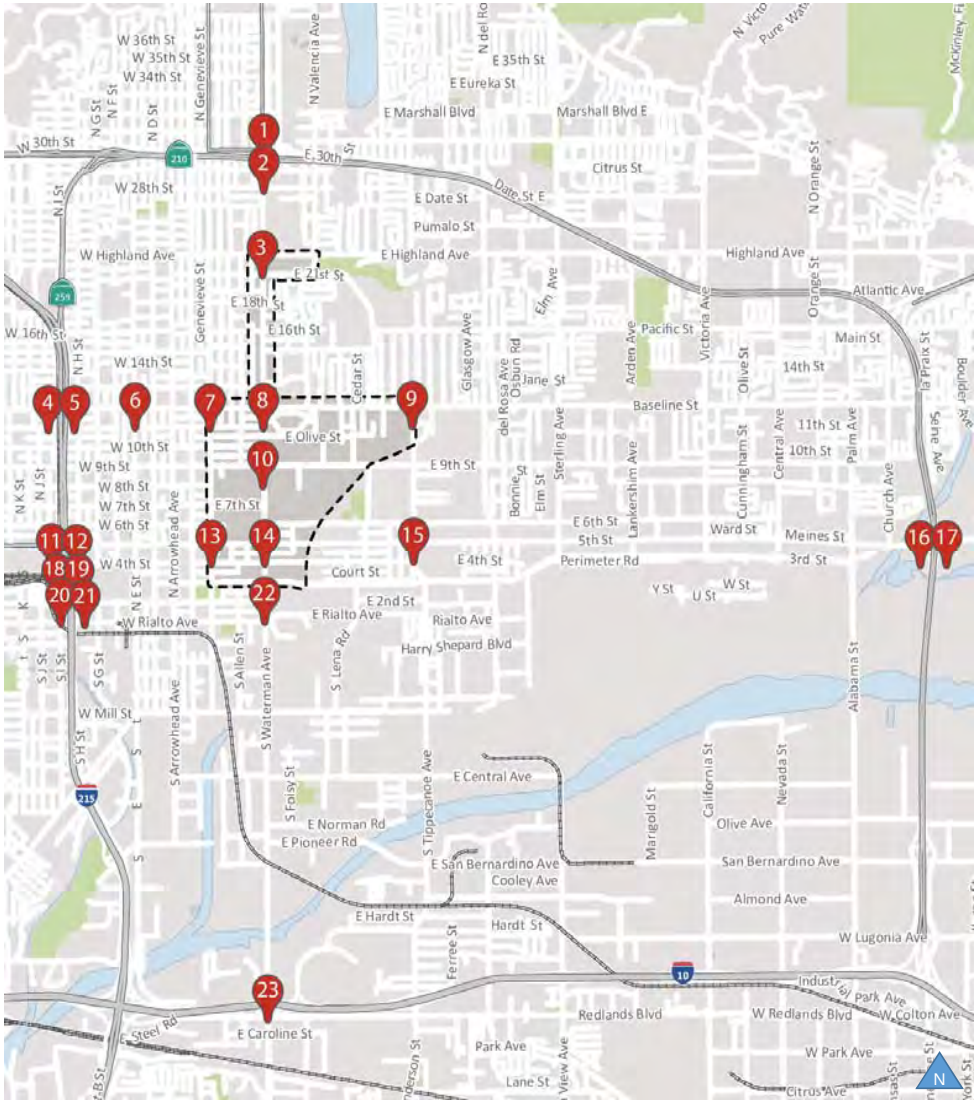
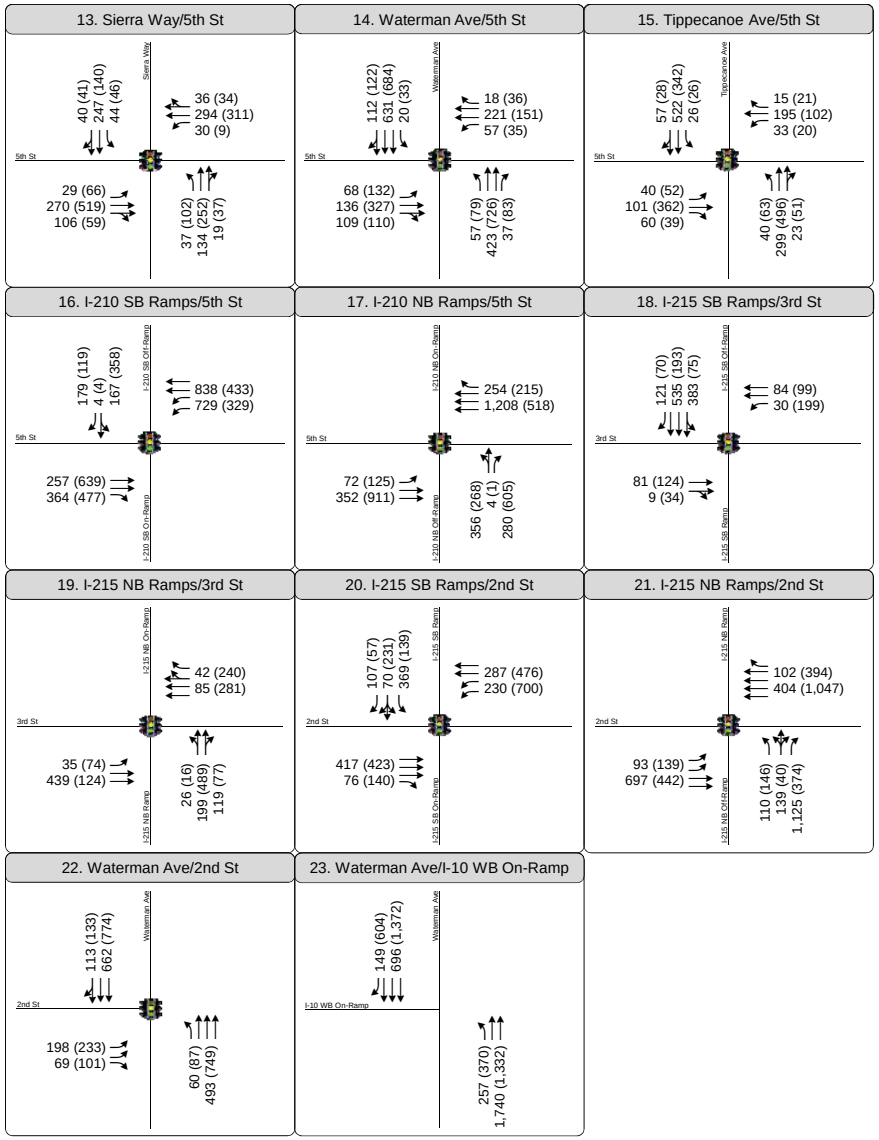


Figure 4-2
Peak Hour Traffic Volumes and Lane Configurations
Existing (2015) Conditions





Project Site
Study Intersection

Movement Volume
AM (PM)

Intersection Control
Signal
Stop
Roundabout

Figure 4-2
Peak Hour Traffic Volumes and Lane Configurations
Existing (2015) Conditions

4.4 EXISTING DELAY AND LEVEL OF SERVICE

4.4.1 EXISTING INTERSECTION OPERATIONS

Existing traffic volumes and lane configurations collected in the field were used to evaluate operations at the study intersections for existing AM and PM peak hour conditions. The results are summarized in Table 4-1.

TABLE 4-1: INTERSECTION LEVEL OF SERVICE: EXISTING (2015) CONDITIONS

Intersection	Control	AM Peak		PM Peak	
		Delay	LOS	Delay	LOS
1. Waterman Avenue & 30th Street	Signalized	43.1	D	**64.1**	**E**
2. Waterman Avenue & SR-210 Eastbound Ramps	Signalized	**>80.0**	**F**	**>80.0**	**F**
3. Waterman Avenue & Highland Avenue	Signalized	43.5	D	42.3	D
4. I-215 Southbound Ramps & Baseline Street	Signalized	14.9	B	14.5	B
5. I-215 Northbound Ramps & Baseline Street	Signalized	10.7	B	12.4	B
6. E Street & Baseline Street	Signalized	12.0	B	19.9	B
7. Sierra Way & Baseline Street	Signalized	15.5	B	27.6	C
8. Waterman Avenue & Baseline Street	Signalized	35.1	D	**>80.0**	**F**
9. Tippecanoe Avenue & Baseline Street	Signalized	16.5	B	17.7	B
10. Waterman Avenue & 9th Street	Signalized	24.4	C	**67.7**	**E**
11. I-215 Southbound Ramps & 5th Street	Signalized	17.1	B	13.7	B
12. I-215 Northbound Ramps & 5th Street	Signalized	10.7	B	12.7	B
13. Sierra Way & 5th Street	Signalized	21.1	C	17.3	B
14. Waterman Avenue & 5th Street	Signalized	18.0	B	25.0	C
15. Tippecanoe Avenue & 5th Street	Signalized	14.4	B	22.8	C
16. I-210 Southbound Ramps & 5th Street	Signalized	28.9	C	**44.4**	**D**
17. I-210 Northbound Ramps & 5th Street	Signalized	24.4	C	**>80.0**	**F**
18. I-215 Southbound Off-Ramp & 3rd Street	Signalized	16.4	B	15.6	B
19. I-215 Northbound On-Ramp & 3rd Street	Signalized	7.7	A	9.7	A

TABLE 4-1: INTERSECTION LEVEL OF SERVICE: EXISTING (2015) CONDITIONS

Intersection	Control	AM Peak		PM Peak	
		Delay	LOS	Delay	LOS
20. I-215 Southbound On-Ramp & 2nd Street	Signalized	18.7	B	**61.0**	**E**
21. I-215 Northbound Off-Ramp & 2nd Street	Signalized	**>80.0**	**F**	16.9	B
22. Waterman Avenue & 2nd Street	Signalized	9.8	A	11.0	B
23. Waterman Avenue & I-10 Westbound On-Ramp	Unsignalized	1.8	A	**>50.0**	**F**

Notes:
1. Worst case movement delay is reported for unsignalized intersections.
2. Intersections operating below acceptable LOS are shown in bold.

Source: *Fehr & Peers, 2015.*

As shown in Table 4-1, the following nine study intersections operate below the acceptable LOS threshold during the peak hours:

1. Waterman Avenue & 30th Street (PM Peak Hour LOS E)
2. Waterman Avenue & SR-210 Eastbound Ramps (AM & PM Peak Hour LOS F)
8. Waterman Avenue & Baseline Street (PM Peak Hour LOS E)
10. Waterman Avenue & 9th Street (PM Peak Hour LOS E)
16. I-210 Southbound Ramps & 5th Street (PM Peak Hour LOS D)
17. I-210 Northbound Ramps & 5th Street (PM Peak Hour LOS F)
20. I-215 Southbound On-Ramp & 2nd Street (PM Peak Hour LOS E)
21. I-215 Northbound Off-Ramp & 2nd Street (AM Peak Hour LOS F)
23. Waterman Avenue & I-10 Westbound On-Ramp (PM Peak Hour LOS F)

4.5 EXISTING BICYCLE, PEDESTRIAN, AND TRANSIT FACILITIES

4.5.1 EXISTING BICYCLE FACILITIES

The City of San Bernardino designates Multi-Purpose Trails and Bikeways that are available for use by bicyclists. The City designates three types of trails including Primary, Regional, and Local Multi-Purpose. Primary Multi-Purpose Trails serve an entire region, Regional Multi-Purpose Trails provide regional connections, and Local Multi-Purpose Trails provide connections within San Bernardino. The City also designates four types of Bikeways including Class I, Class II, and Class III. Bicycle facilities in the City of San Bernardino consist of the following:

Class I - Bike Path or Shared Use Path:

Class I bikeways are bikeways physically separated from any street or highway. Shared Use Paths may also be used by pedestrians, skaters, wheelchair users, joggers, and other non-motorized users.

Class II - Bike Lane:

Class II bike lanes are a portion of roadway that has been designated by striping, signaling, and pavement markings for the preferential or exclusive use of bicyclists.

Class III – Bike Route:

Class III bike routes are any road, street, path, or way that in some manner is specifically designated for bicycle travel regardless of whether such facilities are designated for the exclusive use of bicycles or are to be shared with other transportation modes. Under the Caltrans Design Standards, signed shared roadways and signed bike routes are considered Class III facilities. They are a shared roadway that has been designated by signing as a preferred route for bicycle use.

Within the Specific Plan area, there are Class II Bikeways along 5th Street east of Waterman Avenue. Bicyclists commonly use the sidewalks for local circulation, which indicates a lack of bicycle infrastructure for the community. Bicycle facilities within the City of San Bernardino are shown on Figure 4-3.

According to the San Bernardino Associated Governments (SANBAG) Non-Motorized Transportation Plan (Revised May 2015), there are plans to add Class I Bike Paths along the City Creek on the eastern edge of the Specific Plan area. Class II Bike Lanes are also planned along 5th Street, Highland Avenue, Waterman Avenue, and Baseline Road. According to the General Plan, the Mid-City Connector, a Regional Multi-Purpose Trail along the City Creek, is proposed within the Specific Plan Area. There is also a Local Multi-Purpose Trail proposed along Highland Avenue within the Specific Plan Area.

4.5.2 EXISTING PEDESTRIAN FACILITIES

A majority of the roadway system in the Specific Plan area does not provide adequate infrastructure for pedestrians. There are areas throughout the Specific Plan area where the sidewalk is missing on one or both sides of the roadway. The locations within the Specific Plan Area where there are no sidewalks on one or both sides of the road include:

- Tippecanoe Avenue
- 5th Street east of Waterman Avenue
- Waterman Avenue between 6th Street and 5th Street

- N. Canyon Road
- Barton Street
- 16th Street
- Monterey Avenue
- Perris Hill Road

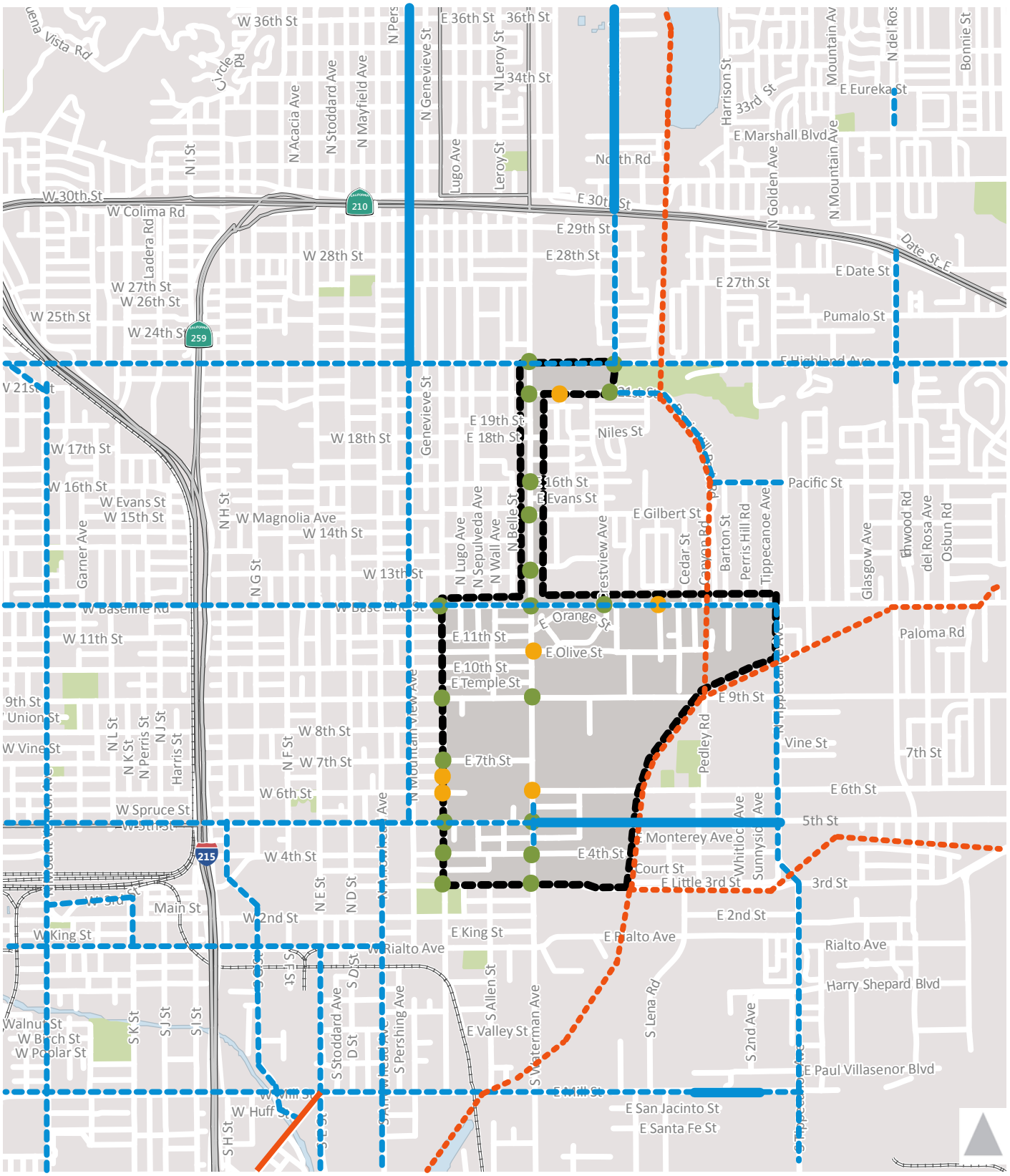
The locations where the sidewalks terminate are:

- Gilbert Street
- Wabash Street
- Olive Street between Wall Avenue and Waterman Avenue & between N. La Junita Street and the Specific Plan boundary
- 7th Street west of Waterman Avenue
- Waterman Avenue between 4th Street and 3rd Street
- 10th Street west of Waterman Avenue
- Cedar Street
- 3rd Street east of Waterman Avenue
- Baseline west of Barton Road

Unmarked crosswalks are another factor that can inhibit pedestrian activity. These intersections limit pedestrian capability to safely access all sides of the intersection and may force them to cross unsafely. The addition of crosswalks on all sides of the identified intersection is recommended to improve pedestrian access and safety. Within the Specific Plan area, there are five major intersections that provide only partial crossing marks:

- 21st Street & N. Kenwood Avenue
- Baseline Street & N. Myrtle Drive
- Waterman Avenue & Olive Street
- Waterman Avenue & 6th Street
- 21st Street & Crestview Avenue

Many of the local streets along Waterman Avenue and Baseline Road do not have crosswalks. This limits pedestrian access along these major roadways. Crosswalks within the specific plan boundary are shown in Figure 4-3.



LEGEND

- Existing Class I Bike Lane
- Existing Class II Bike Lane
- Proposed Class I Bike Lane
- Proposed Class II Bike Lane
- Crosswalk In Some Directions
- Crosswalk In All Directions
- Plan Boundary

Figure 4-3
Pedestrian and Bicycle Facilities

4.5.3 EXISTING TRANSIT FACILITIES

Bus Routes

Bus service is provided to this area by OmniTrans. This area is served by six routes: 1, 3 & 4, 5, 7, 8 and 15.

Route 1: Route 1 runs from Arrowhead Regional Medical Center in Colton to Del Rosa. Within the Specific Plan Area, this route provides service along 5th Street, Waterman Avenue, 21st Street, Valencia Avenue, and Highland Avenue. Headways are every 15 minutes between the hours of 4:50AM and 12:00PM Monday through Friday, then 30 minutes between 12:01PM-11:01PM. On weekends, the route operates with 30 minute headways between 6:00AM and 9:00PM.

Route 3/4: Routes 3 & 4 are circular loops that serve West San Bernardino, Baseline Road, and Highland Avenue. The Route 3 loop travels counter-clockwise while the Route 4 loop travels clockwise. Within the Specific Plan Area, these routes provide service to Baseline Street and Highland Avenue. Route 3/4 operates with 15 minute headways between 4:40AM and 11:26PM on weekdays and with 20 minute headways between 7:24AM and 8:54PM on weekends. Through the 4th Street transfer, this route connects with the sbX Rapid Transit Route.

Route 5: Route 5 serves San Bernardino, Del Rosa, and California State University San Bernardino. Within the Specific Plan Area, this route provides service to Gilbert Street and Waterman Avenue. Route 5 operates with 30 minute headways between 4:45AM and 10:38PM Monday through Friday, with one hour headways between 6:33AM and 9:17PM on Saturdays, and with one hour headways between 6:33AM and 7:34 PM on Sundays.

Route 7: Route 7 runs from California State University San Bernardino to the 4th Street Transfer Station. This route provides service along Sierra Way within the Specific Plan Area. On the weekdays, Route 7 operates with 30 minute headways from 6:17AM to 12:06PM and then with one hour headways until 7:36 PM. This route runs with one hour headways between 7:16AM and 6:35PM on Saturdays and between 8:16AM and 5:35PM on Sundays.

Route 8: Route 8 runs from San Bernardino to Crafton Hills College and provides service to the Specific Plan Area along 3rd Street. This route runs with 30 minute headways between 4:50AM and 10:01PM Monday through Friday. Route 8 runs with 60 minute headways between 6:55AM and 7:05PM on Saturdays and between 7:22AM and 7:05PM on Sundays.

Route 15: Route 15 provides San Bernardino passengers access to Fontana, Highland and Redlands. The route passes through the project site on Waterman Avenue and 4th Street. Route 15 runs between 5:09AM

to 10:43PM on weekdays with 30 minute headways and on weekends from 6:36AM to 7:30PM with one hour headways.

Bus stop amenities in this Specific Plan area are limited, including but not limited to lacking shelters, lacking shade and containing poor pedestrian connectivity. Bus routes within the City of San Bernardino are shown in Figure 4-4.

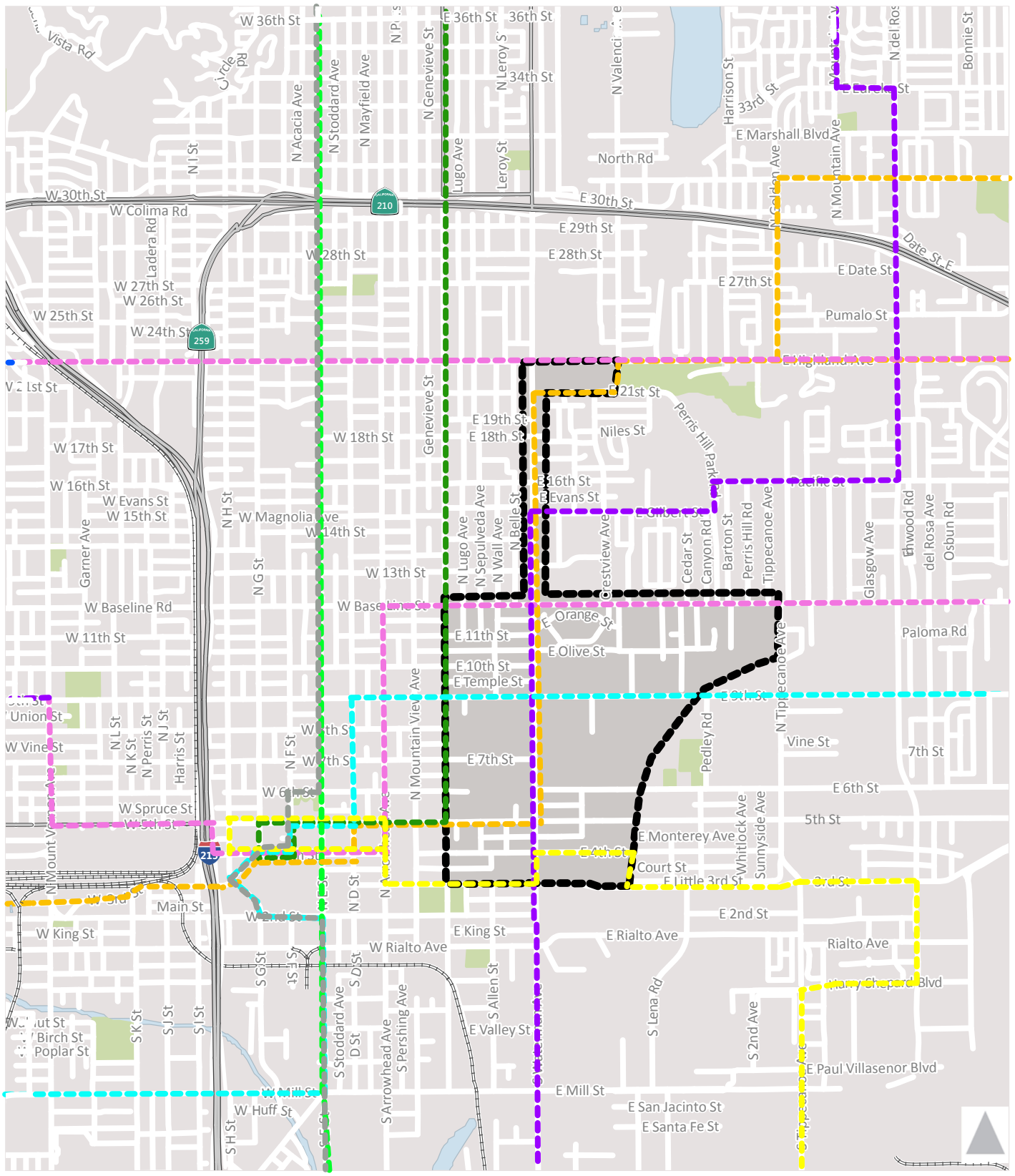
Train Routes

The train station is located just outside of the study area, but still provides service that may impact those that live and work in Waterman Gardens. The following routes provide service to and from San Bernardino.

- Amtrak Southwest Chief – This route runs between Chicago and Los Angeles and has stops in Arizona, New Mexico, Colorado, Kansas, Missouri, and Iowa. It stops in San Bernardino daily at approximately 5:32 AM and 7:59 PM.
- Metrolink San Bernardino Line – The San Bernardino Line is the busiest of Southern California's seven Metrolink lines, running from Downtown Los Angeles east through the San Gabriel Valley.
- Metrolink Inland Empire–Orange County Line – This route runs between San Bernardino and Oceanside and has stops in Riverside, Corona, Orange, Santa Ana, Tustin, Irvine, San Juan Capistrano, and San Clemente. It runs between approximately 5:00 AM and 8:00 PM on weekdays and between 7:30 AM and 7:15 AM on weekends. Headways vary between 30 and 90 minutes.

Improvements providing extension of the two Metrolink routes serving San Bernardino to extend one mile eastward to the San Bernardino Transit Center (about 0.5 mile southwest of the Specific Plan area boundary) are under construction, with completion scheduled in Summer of 2016 according to SANBAG Downtown San Bernardino Passenger Rail Project informational packets from February 26, 2014 (http://www.sanbag.ca.gov/projects/redlands-sb-rail/FINALSANBAGTransitRailHandout22114b.pdf).

SANBAG is also planning a The Redlands Passenger Rail Project (RPRP) for a proposed passenger rail line to operate between the San Bernardino Transit Center and the University of Redlands. The nine miles of Metrolink-owned track would operate about 0.3 miles south of the Specific Plan Area. The service would use diesel-powered light rail vehicles ("diesel multiple units"). The nearest planned station to the Specific Plan area is the San Bernardino Transit Center about 0.5 mile to the southwest. The EIR and Environmental Impact Statement (EIR/EIS) for the project was certified in March 2015. Service is scheduled to start in 2020 according to SANBAG Redlands Passenger Rail Project informational packets from December 14, 2015 (http://www.sanbag.ca.gov/projects/redlands-sb-rail/RPRPFactSheetDecember2015.pdf).



LEGEND

- sbX Green Line
- Route 2
- Route 5
- Route 8
- Plan Boundary
- Route 1
- Route 3/4
- Route 7
- Route 15

Figure 4-4
Transit Routes

5.0 EXISTING PLUS PROJECT CONDITIONS

This section identifies the methodology utilized to calculate traffic volumes within the study area for the existing plus project conditions analysis scenarios. It then provides the intersection operations for those future scenarios, signal warrant analysis, and impact assessment.

5.1 PROJECT TRAFFIC

5.1.1 PROJECT TRIP GENERATION

The methods most commonly used by traffic engineers (the ITE Trip Generation Manual) to estimate the trip generation of proposed developments exaggerate the impacts of "smart growth" projects. This misrepresentation escalates development costs, skews public perception, and raises resistance to the types of development that actually generate the least environmental impacts. For this project, the team utilized MainStreet (MXD+), a tool based on EPA and NCHRP research, which reduces the bias and more accurately portrays the traffic impacts of mixed use, compact, infill and transit oriented development proposals. It is one of the most accurate estimation tools that exists today and provides the most accurate and valuable transportation planning and forecasting services in the industry.

Variables used in the MXD model include general site information such as geographic factors, the land use of the surrounding area, and site/surrounding area demographics. Geographic factors, such as the site of the developed area and intersection density, influence internalization from a spatial standpoint – the denser the area the more likely certain types of trips can be completed within the mixed-use development and without the need to travel externally. Land use factors and demographics, such as employment, average household size, and vehicle ownership, influence how people in the mixed-used development might decide to travel.

To develop trip estimates that would be generated by the changes in land use proposed by the Waterman Gardens Specific Plan, Fehr & Peers developed trip estimates for the existing land use and the proposed land use in order to find the difference in trips between the two scenarios. This difference in trips is what is considered the “project only” trip generation estimates.

Table 5-1 summarizes the anticipated daily, AM, and PM peak hour of trips generated by the proposed project (known as the project only trips).

TABLE 5-1: WATERMAN GARDENS PROJECT TRIPS

Methodology	Daily Total	AM In	AM Out	AM Total	PM In	PM Out	PM Total
ITE	13,092	1,488	1,344	2,833	1,306	1,224	2,530
MXD+	12,024	1,226	1,088	2,314	1,046	1,002	2,048

Source: *Fehr & Peers, 2015.*

5.1.2 PROJECT TRIP DISTRIBUTION

Project trip distribution was determined using the San Bernardino Transportation Analysis Model (SBTAM). SBTAM select zone runs were utilized to develop trip distribution. Using both the Base Year and Future Year model select zone assignment outputs, the team was able to model trip distribution. An internal team excel-based program was used to model and assign the distribution for all 23 project intersections.

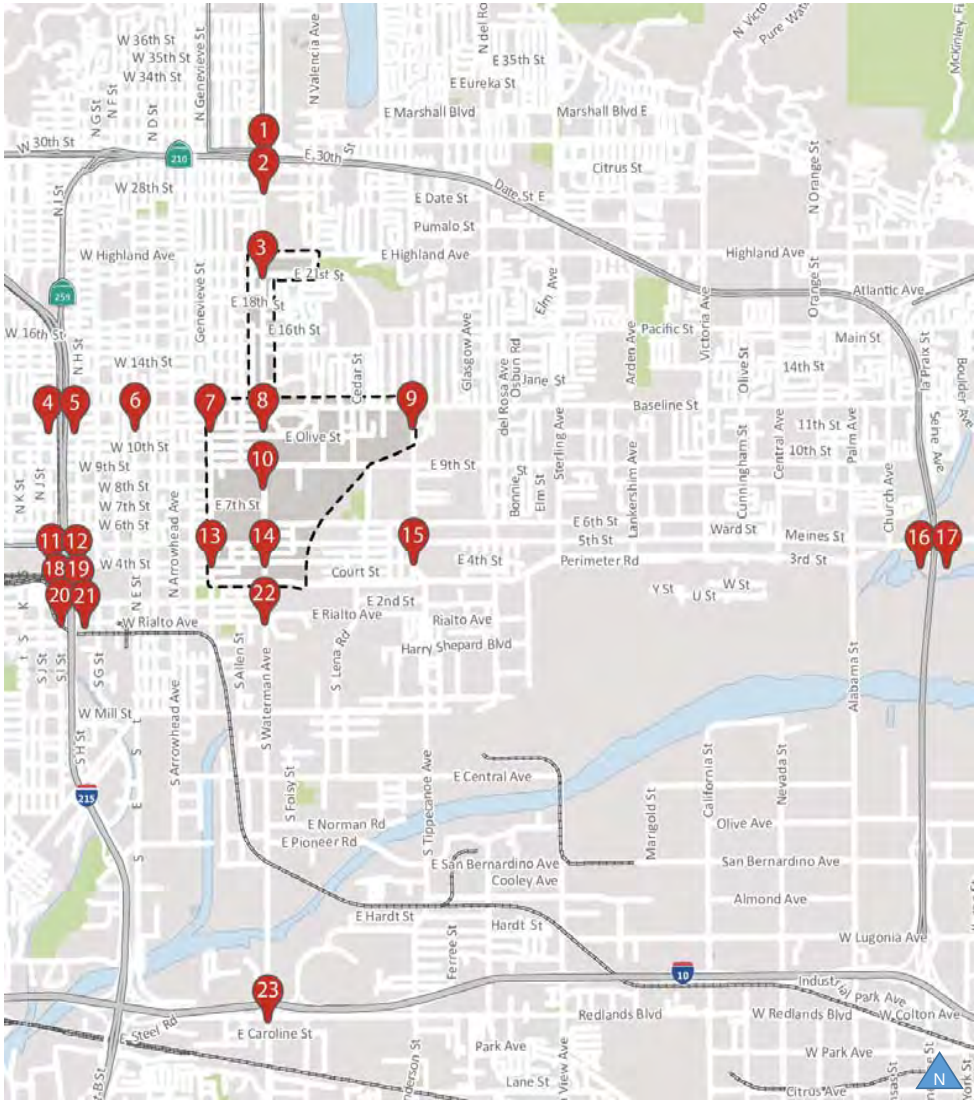
5.2 EXISTING PLUS PROJECT (2015)

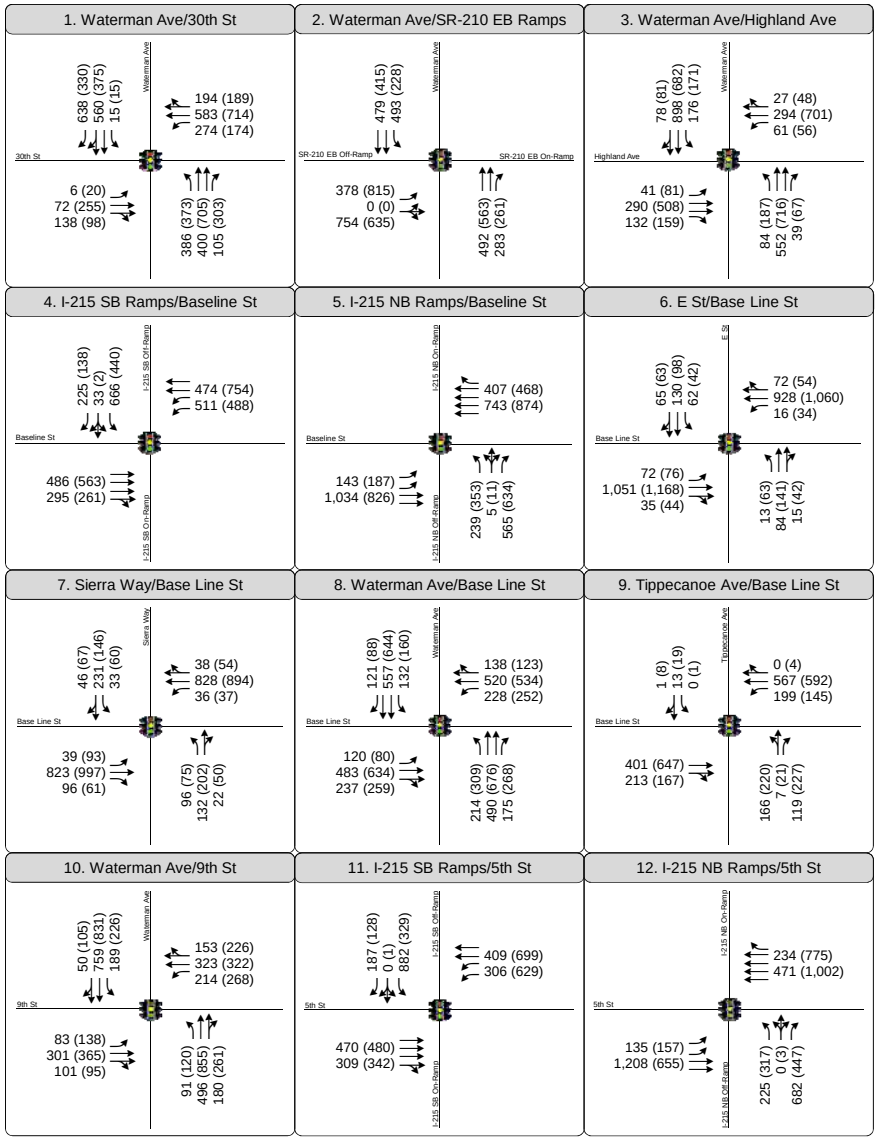
5.2.1 EXISTING PLUS PROJECT TRAFFIC VOLUMES

Existing Plus Project (2015) traffic volumes are forecast by combining existing traffic volumes with the proposed project traffic volumes. Figure 5-1 shows the Existing Plus Project (2015) AM and PM peak hour volumes.

5.2.2 EXISTING PLUS PROJECT LEVEL OF SERVICE

The results of the Existing Plus Project (2015) intersection operations are summarized in Table 5-2. The corresponding LOS reports are provided in Appendix D.



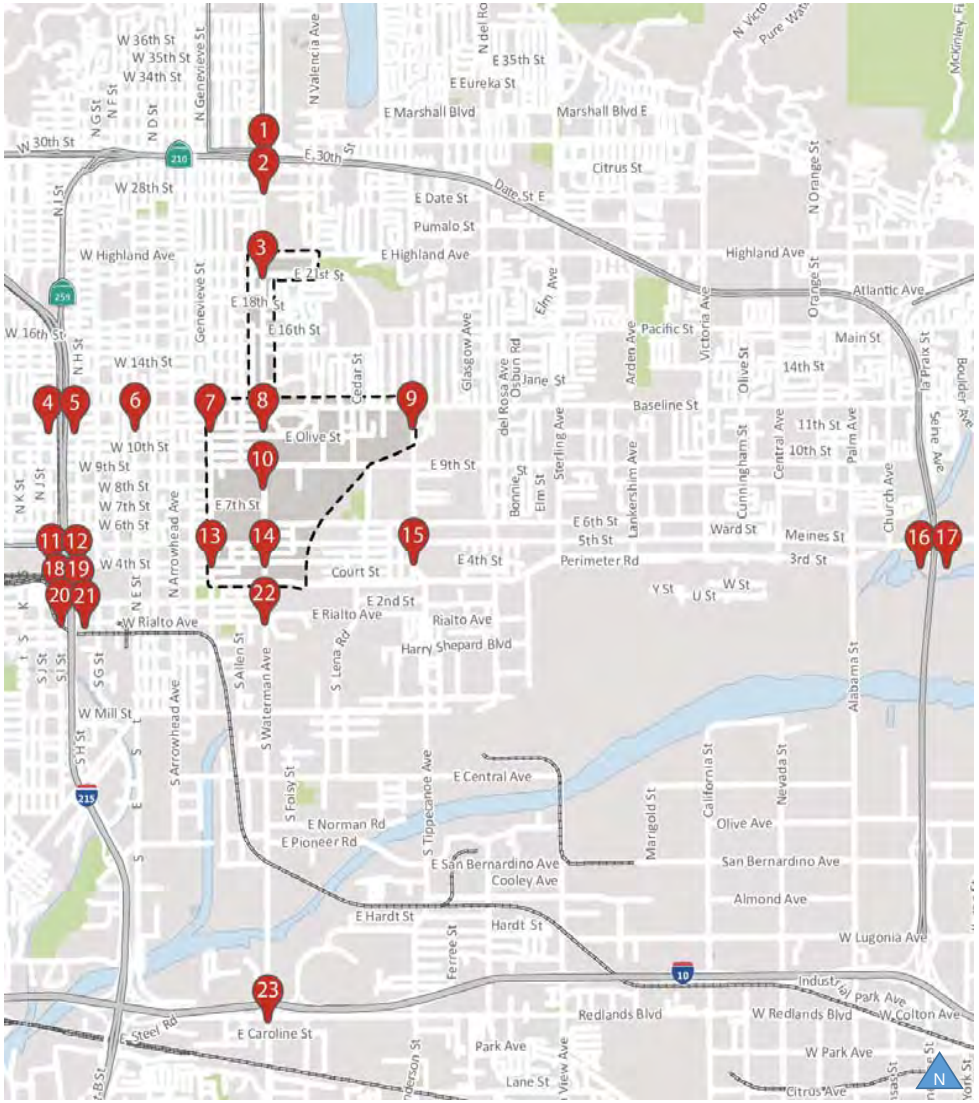


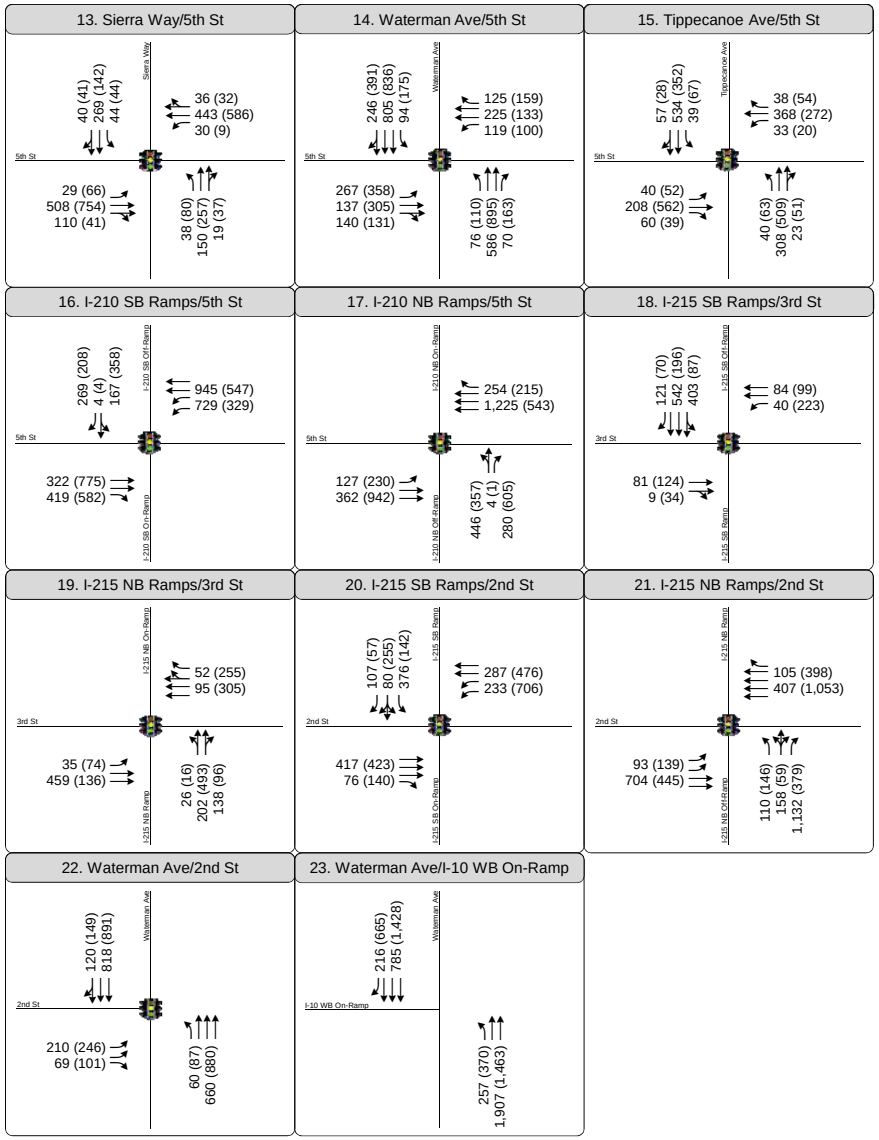
Project Site
Study Intersection

Movement Volume
AM (PM)

Intersection Control
Signal
Stop
Roundabout

Figure 5-1
Peak Hour Traffic Volumes and Lane Configurations
Existing (2015) Plus Project Conditions





Project Site
Study Intersection

Movement Volume
AM (PM)

Intersection Control
Signal
Stop
Roundabout

Figure 5-1
Peak Hour Traffic Volumes and Lane Configurations
Existing (2015) Plus Project Conditions

TABLE 5-2: INTERSECTION LEVEL OF SERVICE: EXISTING PLUS PROJECT (2015) CONDITIONS

Intersection	Control	AM Peak		PM Peak	
		Delay	LOS	Delay	LOS
1. Waterman Avenue & 30th Street	Signalized	48.2	D	53.9	D
2. Waterman Avenue & SR-210 Eastbound Ramps	Signalized	**>80.0**	**F**	**>80.0**	**F**
3. Waterman Avenue & Highland Avenue	Signalized	44.7	D	43.6	D
4. I-215 Southbound Ramps & Baseline Street	Signalized	20.5	C	14.5	B
5. I-215 Northbound Ramps & Baseline Street	Signalized	13.3	B	16.6	B
6. E Street & Baseline Street	Signalized	11.7	B	14.1	B
7. Sierra Way & Baseline Street	Signalized	19.7	B	33.7	C
8. Waterman Avenue & Baseline Street	Signalized	41.0	D	54.2	D
9. Tippecanoe Avenue & Baseline Street	Signalized	16.1	B	18.8	B
10. Waterman Avenue & 9th Street	Signalized	30.4	C	42.4	D
11. I-215 Southbound Ramps & 5th Street	Signalized	20.3	C	15.1	B
12. I-215 Northbound Ramps & 5th Street	Signalized	12.6	B	23.2	C
13. Sierra Way & 5th Street	Signalized	20.5	C	16.8	B
14. Waterman Avenue & 5th Street	Signalized	22.6	C	24.2	C
15. Tippecanoe Avenue & 5th Street	Signalized	19.4	B	25.6	C
16. I-210 Southbound Ramps & 5th Street	Signalized	30.6	C	**45.2**	**D**
17. I-210 Northbound Ramps & 5th Street	Signalized	**37.9**	**D**	**>80.0**	**F**
18. I-215 Southbound Off-Ramp & 3rd Street	Signalized	17.3	B	14.1	B
19. I-215 Northbound On-Ramp & 3rd Street	Signalized	7.8	A	10.8	B
20. I-215 Southbound On-Ramp & 2nd Street	Signalized	18.9	B	**52.5**	**D**
21. I-215 Northbound Off-Ramp & 2nd Street	Signalized	**>80.0**	**F**	17.9	B
22. Waterman Avenue & 2nd Street	Signalized	9.2	A	10.2	B
23. Waterman Avenue & I-10 Westbound On-Ramp	Unsignalized	2.7	A	**>50.0**	**F**

Notes:
1. Worst case movement delay is reported for unsignalized intersections.
2. Intersections operating below acceptable LOS are shown in bold.

Source: *Fehr & Peers, 2015.*

As shown in Table 5-2, the following six study intersections operate unacceptably during the AM and PM peak hours in the Existing Plus Project (2015) scenario:

2. Waterman Avenue & SR-210 Eastbound Ramps (AM & PM Peak Hour LOS F)
16. I-210 Southbound Ramps & 5th Street (PM Peak Hour LOS D)
17. I-210 Northbound Ramps & 5th Street (AM Peak Hour LOS D, PM Peak Hour LOS F)
20. I-215 Southbound On-Ramp & 2nd Street (PM Peak Hour LOS D)
21. I-215 Northbound Off-Ramp & 2nd Street (AM Peak Hour LOS F)
23. Waterman Avenue & I-10 Westbound On-Ramp (PM Peak Hour LOS F)

Some of the intersections experience a decrease in delay with the addition of proposed project traffic and operate acceptably in the "plus project" condition. These intersections are:

1. Waterman Avenue & 30th Street (PM Peak Hour LOS D)
8. Waterman Avenue & Baseline Street (PM Peak Hour LOS D)
10. Waterman Avenue & 9th Street (PM Peak Hour LOS D)

The decrease in delay is attributed to multiple factors. The proposed changes in land use increase trips in most parts of the study area while decreasing trips from some parcels. In some cases at the above three locations, turning movements were reduced due to the proposed project trip assignment. In all cases of the above noted intersections, the intersection as a whole increased in traffic volumes. Typically, the new traffic volumes were assigned to the freeways in the form of additional through movements. As long as there is through movement capacity available, when through movements are added to an intersection the average delay at the intersection can improve since these vehicles are experiencing low delay.

5.2.3 SIGNAL WARRANT ANALYSIS

A peak hour traffic signal warrant[1] assessment was prepared for the unsignalized intersection at Waterman Avenue and the I-10 Westbound ramp to identify if the intersection satisfies the peak hour volume warrant for traffic signal installation.

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[1] This analysis is intended to examine the general correlation between the planned level of future development and the need to install new traffic signals. It estimates future development-generated traffic compared against a sub-set of the standard traffic signal warrants recommended in the Federal Highway Administration Manual on Uniform Traffic Control Devices and associated State guidelines. This analysis should not serve as the only basis for deciding whether and when to install a signal. To reach such a decision, the full set of warrants should be investigated based on field-measured, rather than forecast, traffic data and a thorough study of traffic and roadway conditions by an experienced engineer. Furthermore, the decision to install a signal should not be based solely upon the warrants,

The results indicate that a warrant is satisfied for the PM peak hour in the Existing Plus Project (2015) scenario. Technical calculations are provided in Appendix H.

5.2.4 IMPACT ASSESSMENT

5.2.4.1 Intersection Impacts

Table 5-3 shows the changes in volume-to-capacity (V/C) ratio from Existing Conditions to Existing Plus Project Conditions for intersections operating below acceptable LOS.

TABLE 5-3: INTERSECTION IMPACTS:
EXISTING PLUS PROJECT (2015) CONDITIONS

Intersection	Peak Hour	Existing (2015) Conditions		Existing (2015) Plus Project Conditions		Change in V/C	Result
		LOS	V/C	LOS	V/C		
2. Waterman Avenue & SR-210 Eastbound Ramps	AM PM	F F	0.82 1.03	F F	1.02 0.94	**0.02** -0.09	**Impact**
16. I-210 Southbound Ramps & 5th Street	PM	D	0.85	D	0.7	-0.15	**Impact**
17. I-210 Northbound Ramps & 5th Street	PM	F	1.12	F	0.91	-0.21	**Impact**
20. I-215 Southbound On-Ramp & 2nd Street	PM	E	0.57	D	0.68	**0.11**	**Impact**
21. I-215 Northbound Off-Ramp & 2nd Street	AM	F	0.79	F	0.78	-0.01	**Impact**
23. Waterman Avenue & I-10 Westbound On-Ramp	PM	F	-	F	-	-	**Impact**

Notes:
1. Increases in V/C ratio above acceptable standards are shown in bold for intersections in City of San Bernardino jurisdiction.
2. Intersections within Caltrans jurisdiction have designated impacts regardless of the increase in V/C as long as traffic was added to an intersection already operating below acceptable standards.

Source: *Fehr & Peers, 2015.*

since the installation of signals can lead to certain types of collisions. The City of San Bernardino should undertake regular monitoring of actual traffic conditions and accident data, and timely re-evaluation of the full set of warrants in order to prioritize and program intersections for signalization.

As discussed in the Section 5.2.2, an increase in project traffic can still result in a decrease in overall intersection delay or V/C ratio. In the case of a V/C ratio, as long as traffic is not added to the critical movements, the intersection total V/C ratio can improve.

Based on the performance criteria and thresholds of significance provided in Section 3.2.2, the proposed project is impacted at the following intersections:

2. Waterman Avenue & SR-210 Eastbound Ramps
16. I-210 Southbound Ramps & 5th Street
17. I-210 Northbound Ramps & 5th Street
20. 20. I-215 Southbound On-Ramp & 2nd Street
21. I-215 Northbound Off-Ramp & 2nd Street
23. Waterman Avenue & I-10 Westbound On-Ramp

5.2.4.2 Pedestrian, Bicycle, and Transit Impacts

The project has a very high level of pedestrian connectivity within the site with an extensive network of pedestrian-only trails and sidewalks connecting all areas of the project. This internal pedestrian network is complemented through additional pedestrian facilities on the boundary of the project including sidewalks on Sierras Way, 3rd Street and Base Line Street.

Class I (off-road) Bicycle Trails are proposed through the site and along the project boundaries adjacent to the flood channels. Striped bicycle lanes in both directions of travel at project boundaries are also proposed on Waterman Avenue, Base Line Street, 5th Street and Tippecanoe Avenue. The bicycle lanes will be located on-street and will share right-of-way with motor vehicles.

It is concluded that the project has more than sufficient on-site and off-site pedestrian and bicyclist connectivity.

Several of the OmniTrans bus routes travel through the proposed project area, and the project sponsor should ensure that transit access and operations are not negatively impacted.

6.0 BUILD-OUT (2035) WITHOUT PROJECT TRAFFIC

6.1 DESCRIPTION OF METHODOLOGY

As previously explained, the Furness method was used to identify the growth between the base and future years of SBTAM. SBTAM has a base year of 2008, therefore we adjusted the growth rate proportionally based on the number of years the project is from 2035 (currently 20 years away). The Furness method was used and applied proportionate link level growth to existing counts which was then applied in Synchro to determine future year LOS. Furness worksheets are provided in Appendix I.

6.2 BUILD-OUT (2035) NO PROJECT TRAFFIC VOLUMES AND LEVEL OF SERVICE

The results of the Build-Out (2035) No Project intersection operations are summarized in Table 6-1. The Corresponding LOS reports are provided in Appendix E. Figure 6-1 provides the AM and PM peak hour volumes for the Build-Out (2035) No Project scenario.

As shown in Table 6-1, seven of the study intersections operate unacceptably during the peak hours in the Build-Out (2035) No Project scenario. They include:

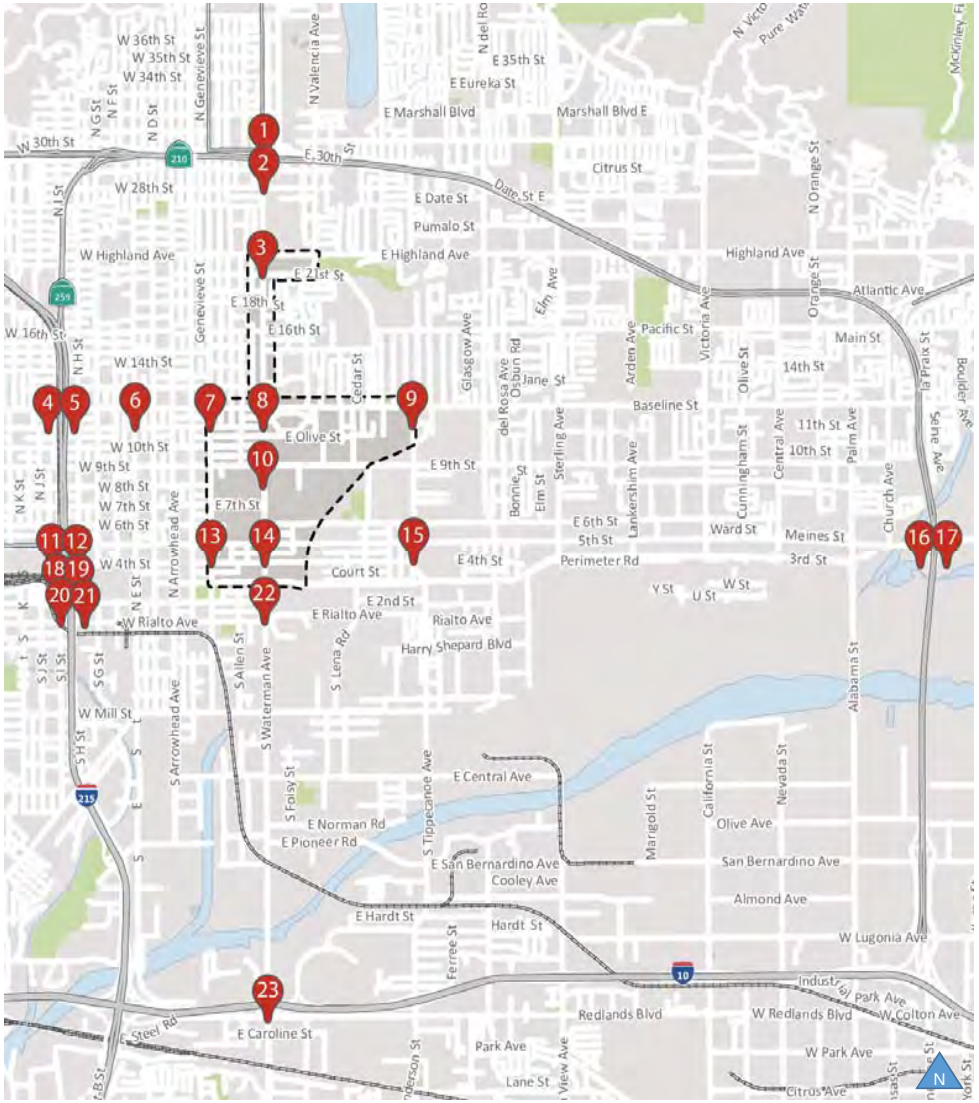
1. Waterman Avenue & 30th Street (AM & PM Peak Hour LOS E)
2. Waterman Avenue & SR-210 Eastbound Ramps (AM & PM Peak Hour LOS F)
16. I-210 Southbound Ramps & 5th Street (AM Peak Hour LOS E & PM Peak Hour LOS F)
17. I-210 Northbound Ramps & 5th Street (AM Peak Hour LOS D, PM Peak Hour LOS F)
20. I-215 Southbound On-Ramp & 2nd Street (PM Peak Hour LOS E)
21. I-215 Northbound Off-Ramp & 2nd Street (AM Peak Hour LOS E)
23. Waterman Avenue & I-10 Westbound On-Ramp (PM Peak Hour LOS F)

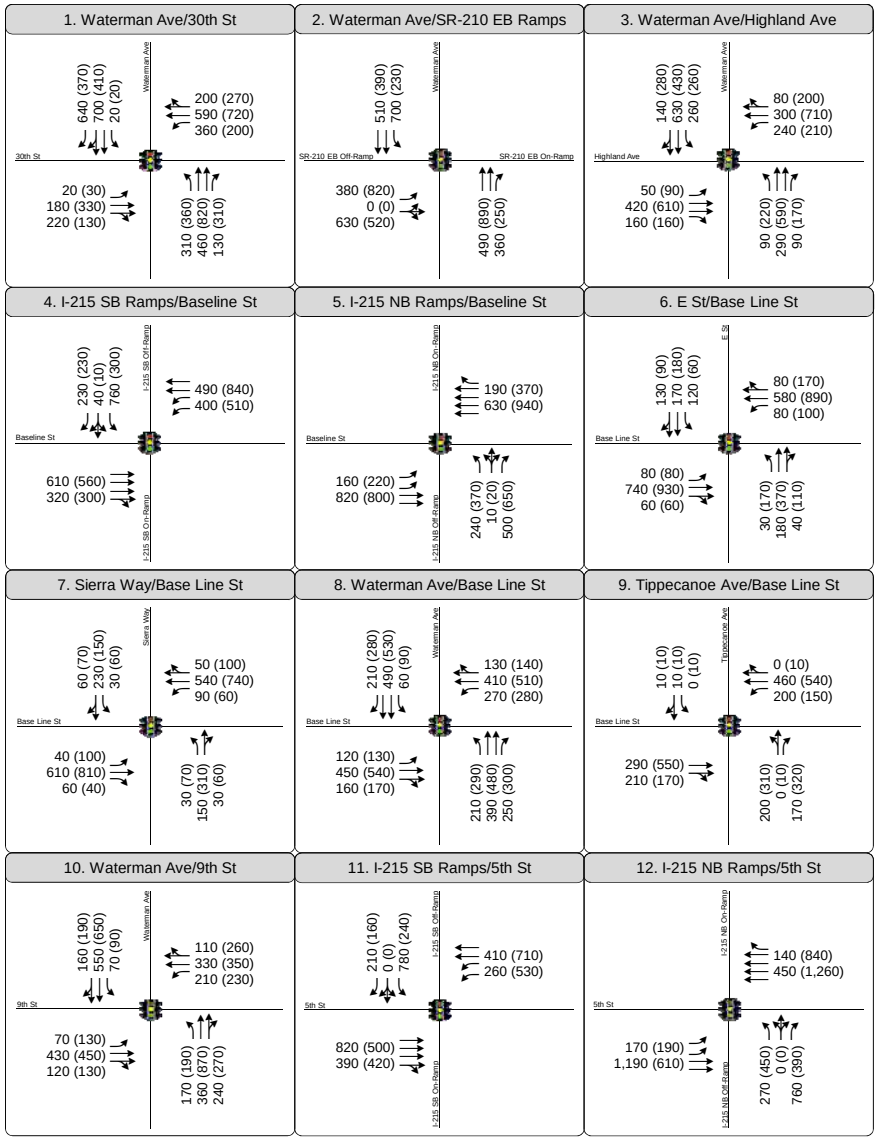
TABLE 6-1: INTERSECTION LEVEL OF SERVICE: BUILD-OUT (2035) NO PROJECT CONDITIONS

Intersection	Control	AM Peak		PM Peak	
		Delay	LOS	Delay	LOS
1. Waterman Avenue & 30th Street	Signalized	**74.2**	**E**	**59.9**	**E**
2. Waterman Avenue & SR-210 Eastbound Ramps	Signalized	**>80.0**	**F**	**>80.0**	**F**
3. Waterman Avenue & Highland Avenue	Signalized	46.8	D	48.1	D
4. I-215 Southbound Ramps & Baseline Street	Signalized	16.1	B	11	B
5. I-215 Northbound Ramps & Baseline Street	Signalized	9.7	A	13.1	B
6. E Street & Baseline Street	Signalized	16.6	B	20.3	C
7. Sierra Way & Baseline Street	Signalized	15.8	B	19.5	B
8. Waterman Avenue & Baseline Street	Signalized	40.3	D	50.6	D
9. Tippecanoe Avenue & Baseline Street	Signalized	17.4	B	19.5	B
10. Waterman Avenue & 9th Street	Signalized	31.2	C	35.2	D
11. I-215 Southbound Ramps & 5th Street	Signalized	17.6	B	13.6	B
12. I-215 Northbound Ramps & 5th Street	Signalized	12.9	B	27.4	C
13. Sierra Way & 5th Street	Signalized	19.5	B	17.3	B
14. Waterman Avenue & 5th Street	Signalized	22.8	C	27.5	C
15. Tippecanoe Avenue & 5th Street	Signalized	15.9	B	18.3	B
16. I-210 Southbound Ramps & 5th Street	Signalized	**73.9**	**E**	**>80.0**	**F**
17. I-210 Northbound Ramps & 5th Street	Signalized	**41.2**	**D**	**>80.0**	**F**
18. I-215 Southbound Off-Ramp & 3rd Street	Signalized	17.9	B	13.3	B
19. I-215 Northbound On-Ramp & 3rd Street	Signalized	8.3	A	11	B
20. I-215 Southbound On-Ramp & 2nd Street	Signalized	18.3	B	**70.4**	**E**
21. I-215 Northbound Off-Ramp & 2nd Street	Signalized	**72.5**	**E**	19.3	B
22. Waterman Avenue & 2nd Street	Signalized	12.2	B	11.5	B
23. Waterman Avenue & I-10 Westbound On-Ramp	TWSC	2.7	A	**>50.0**	**F**

Notes:
1. Worst case movement delay is reported for side-street stop controlled intersections.
2. Intersections operating below acceptable LOS are shown in bold.

Source: *Fehr & Peers, 2015.*



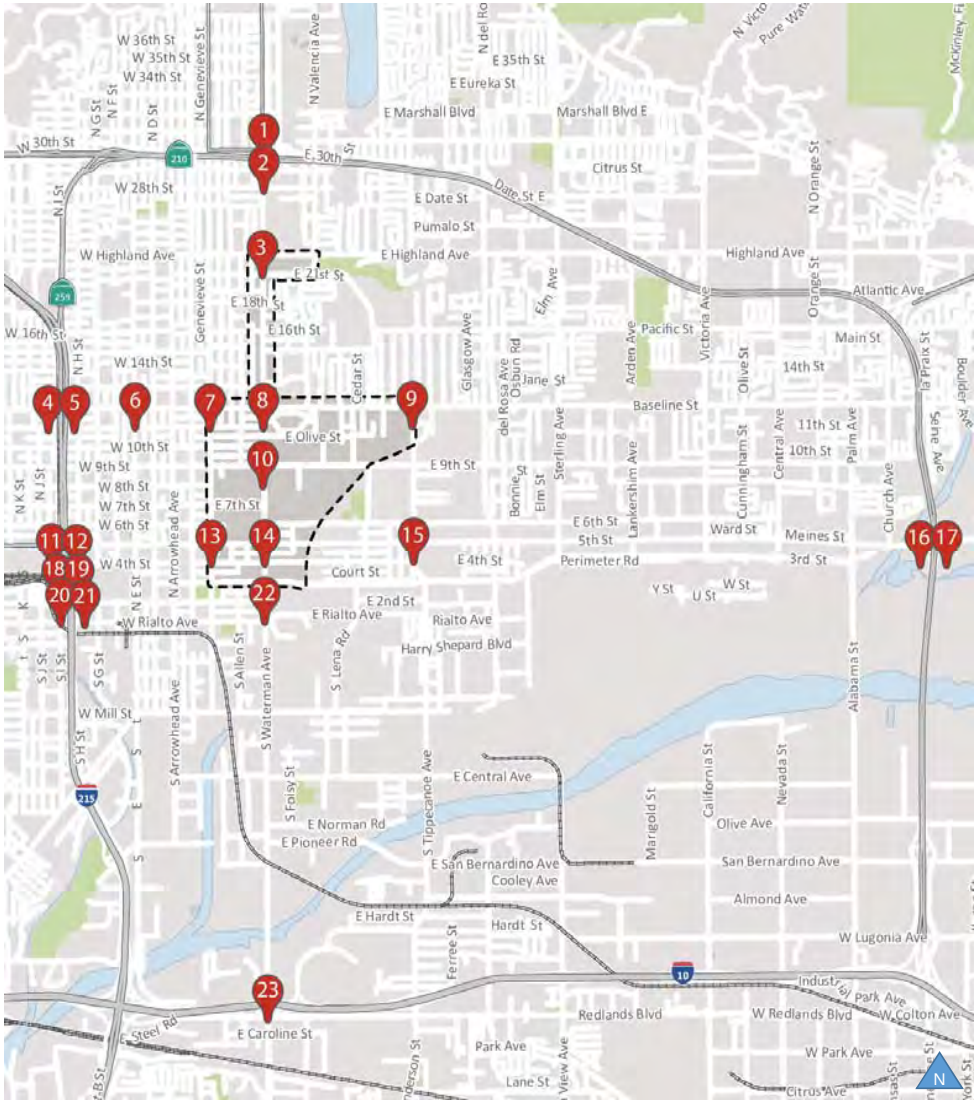


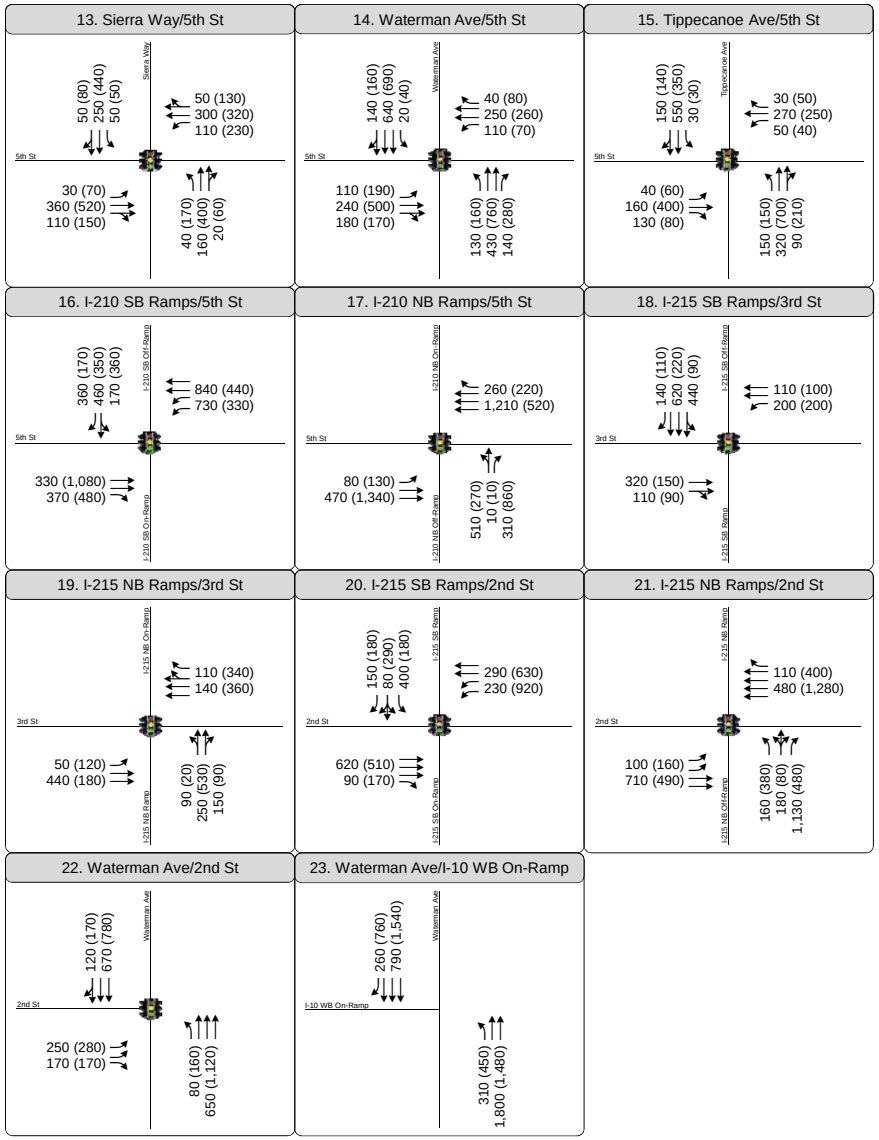
Project Site
Study Intersection

Movement Volume
AM (PM)

Intersection Control
Signal
Stop
Roundabout

Figure 6-1
Peak Hour Traffic Volumes and Lane Configurations
Build Out (2035) Conditions





Project Site
Study Intersection

Movement Volume
AM (PM)

Intersection Control
Signal
Stop
Roundabout

Figure 6-1
Peak Hour Traffic Volumes and Lane Configurations
Build Out (2035) Conditions

7.0 BUILD-OUT (2035) PLUS PROJECT TRAFFIC VOLUMES AND LEVEL OF SERVICE

7.1 DESCRIPTION OF METHODOLOGY

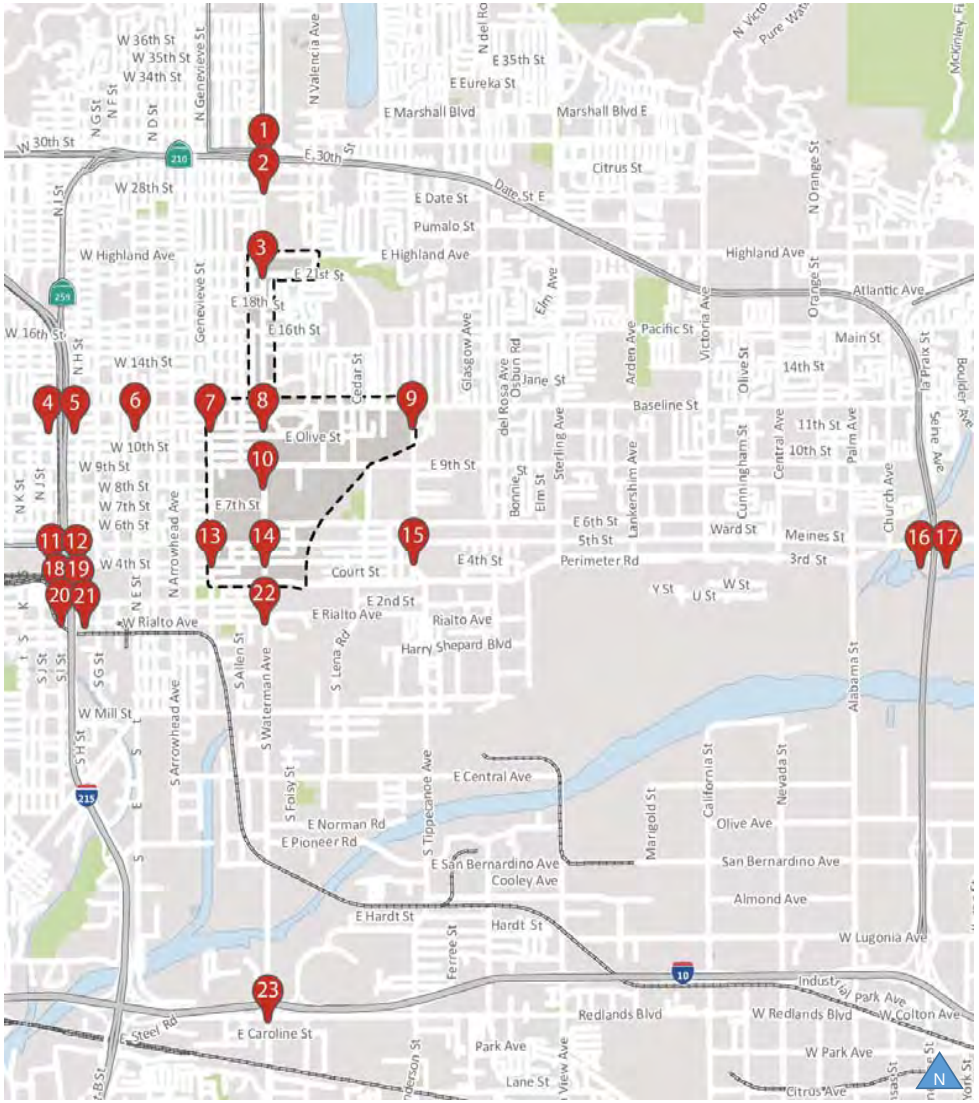
Using the same methodology as in Chapter 6 to determine build-out volumes, we added in project-only volumes to get the build-out (2035) plus project traffic volumes.

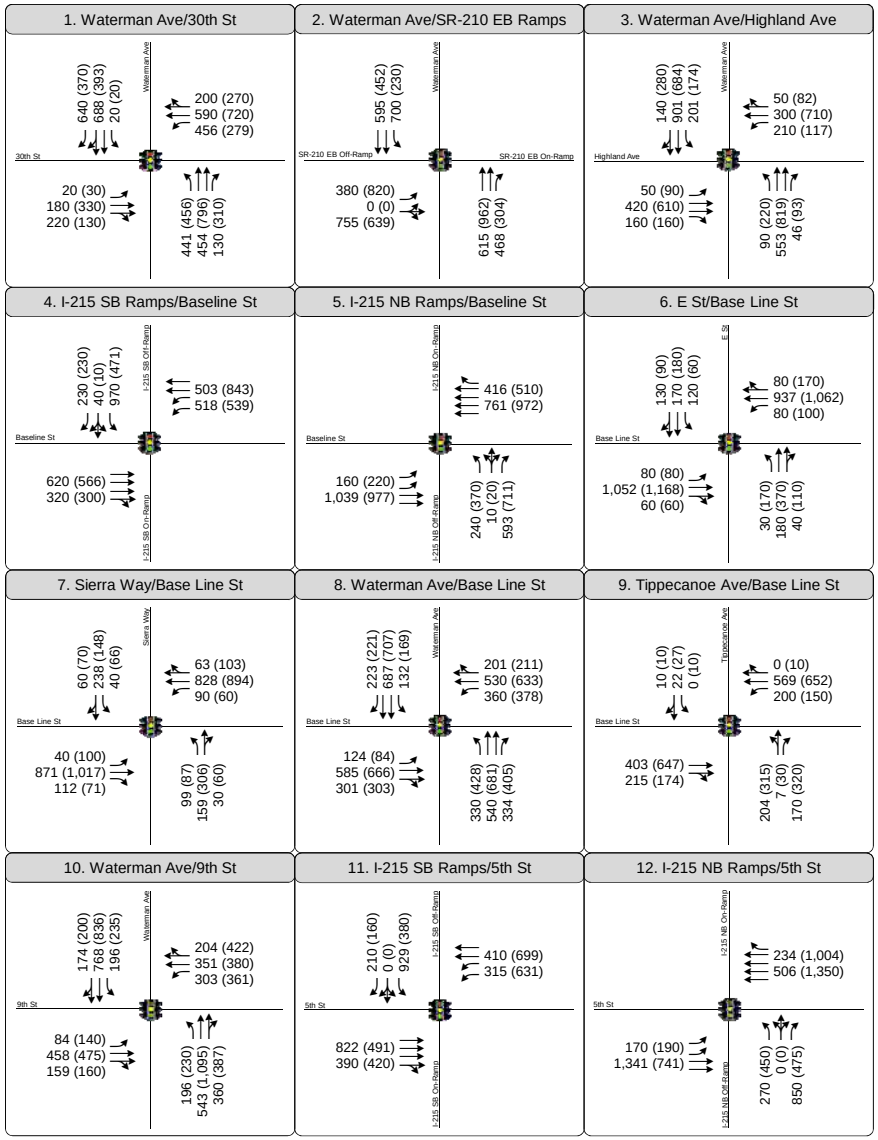
7.2 TRIP GENERATION AND DISTRIBUTION

The trip distribution for the proposed project in the 2035 study year remains the same as the 2015 base year. The Corresponding LOS reports are provided in Appendix F.

Figure 7-1 provides the AM and PM peak hour volumes for the Build-Out (2035) Plus Project scenario.

The results of the Build-Out (2035) Plus Project intersection operations are summarized in Table 7-1. The Corresponding LOS reports are provided in Appendix F.



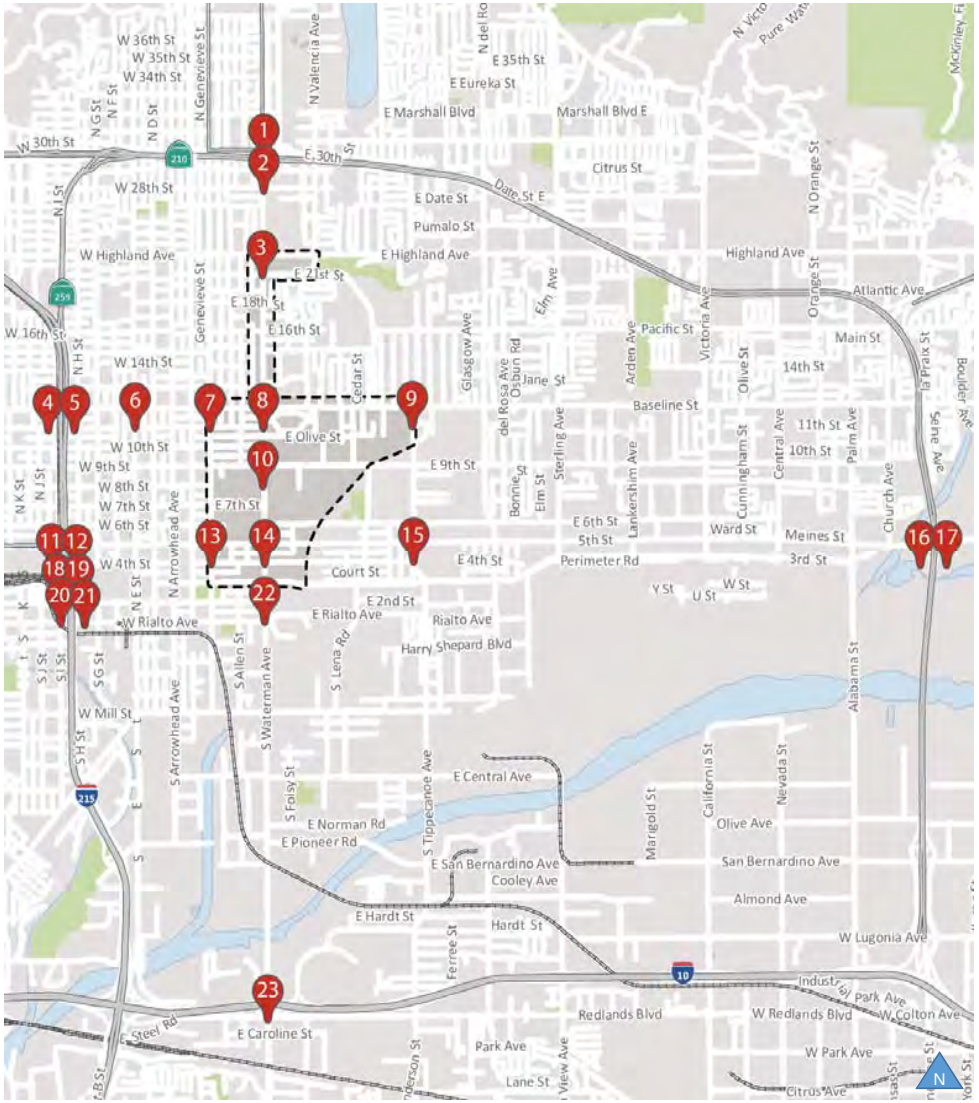


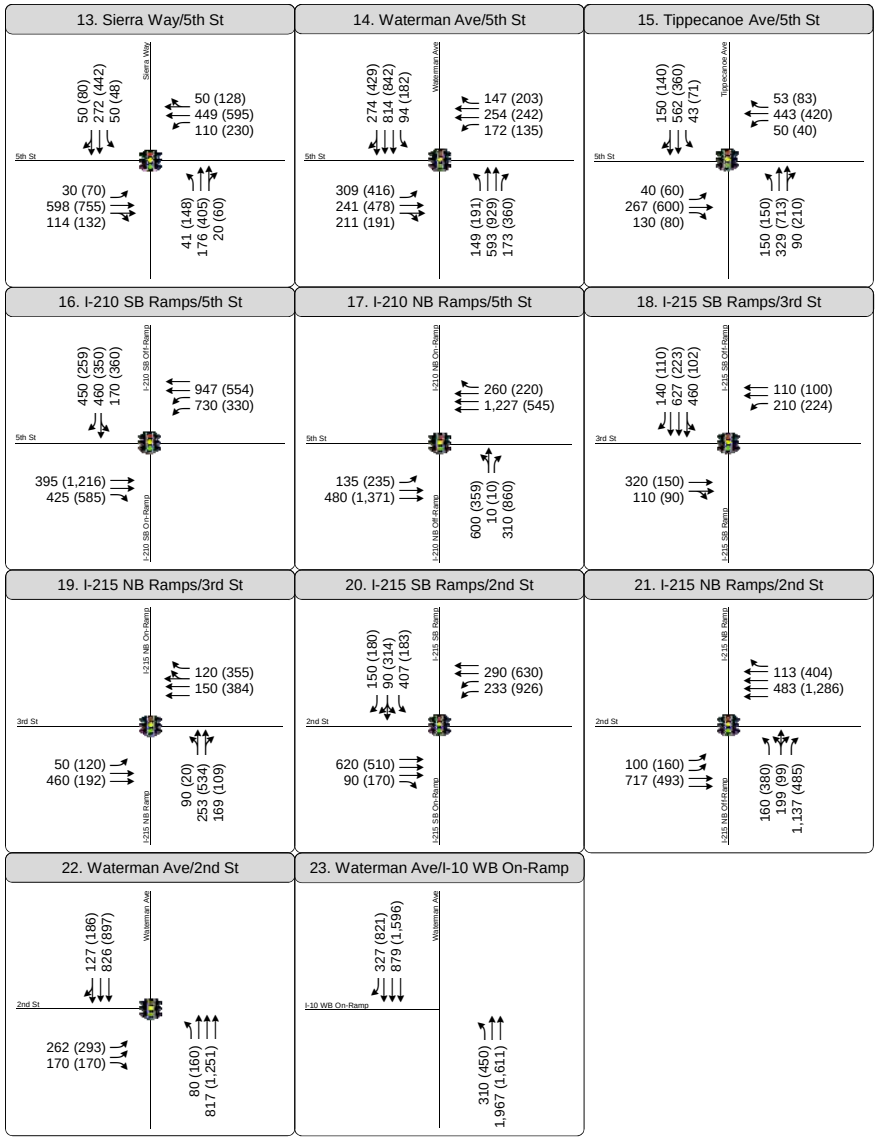
Project Site
Study Intersection

Movement Volume
AM (PM)

Intersection Control
Signal
Stop
Roundabout

Figure 7-1
Peak Hour Traffic Volumes and Lane Configurations
Build Out (2035) Plus Project Conditions





Project Site
Study Intersection

Movement Volume
AM (PM)

Intersection Control
Signal
Stop
Roundabout

Figure 7-1
Peak Hour Traffic Volumes and Lane Configurations
Build Out (2035) Plus Project Conditions

TABLE 7-1: INTERSECTION LEVEL OF SERVICE: BUILD-OUT (2035) PLUS PROJECT CONDITIONS

Intersection	Control	AM Peak		PM Peak	
		Delay	LOS	Delay	LOS
1. Waterman Avenue & 30th Street	Signalized	**>80.0**	**F**	**72.3**	**E**
2. Waterman Avenue & SR-210 Eastbound Ramps	Signalized	**>80.0**	**F**	**>80.0**	**F**
3. Waterman Avenue & Highland Avenue	Signalized	44.7	D	43.9	D
4. I-215 Southbound Ramps & Baseline Street	Signalized	21.3	C	13.3	B
5. I-215 Northbound Ramps & Baseline Street	Signalized	11.3	B	15.2	B
6. E Street & Baseline Street	Signalized	16.9	B	21.9	C
7. Sierra Way & Baseline Street	Signalized	19.6	B	28	C
8. Waterman Avenue & Baseline Street	Signalized	**69.3**	**E**	**88.4**	**F**
9. Tippecanoe Avenue & Baseline Street	Signalized	16.8	B	19.9	B
10. Waterman Avenue & 9th Street	Signalized	37.3	D	**75.8**	**E**
11. I-215 Southbound Ramps & 5th Street	Signalized	20.9	C	16.1	B
12. I-215 Northbound Ramps & 5th Street	Signalized	16.1	B	**54.6**	**D**
13. Sierra Way & 5th Street	Signalized	18.7	B	18.8	B
14. Waterman Avenue & 5th Street	Signalized	26.4	C	25.6	C
15. Tippecanoe Avenue & 5th Street	Signalized	19.4	B	23.1	C
16. I-210 Southbound Ramps & 5th Street	Signalized	**>80.0**	**F**	**>80.0**	**F**
17. I-210 Northbound Ramps & 5th Street	Signalized	**63.6**	**E**	**>80.0**	**F**
18. I-215 Southbound Off-Ramp & 3rd Street	Signalized	18.4	B	13.4	B
19. I-215 Northbound On-Ramp & 3rd Street	Signalized	8.4	A	11.3	B
20. I-215 Southbound On-Ramp & 2nd Street	Signalized	18.5	B	**72.2**	**E**
21. I-215 Northbound Off-Ramp & 2nd Street	Signalized	**77.0**	**E**	19.5	B
22. Waterman Avenue & 2nd Street	Signalized	11.5	B	11.4	B
23. Waterman Avenue & I-10 Westbound On-Ramp	TWSC	3.3	A	**>80.0**	**F**

Notes:
1. Worst case movement delay is reported for side-street stop controlled intersections.
2. Intersections operating below acceptable LOS are shown in bold.

Source: *Fehr & Peers, 2015.*

As shown in Table 7-1, ten of the study intersections operate unacceptably during the peak hours in the Build-Out (2035) Plus Project scenario, including:

1. Waterman Avenue & 30th Street (AM Peak Hour LOS F & PM Peak Hour LOS E)
2. Waterman Avenue & SR-210 Eastbound Ramps (AM & PM Peak Hour LOS F)
8. Waterman Avenue & Baseline Street (AM Peak Hour LOS E & PM Peak Hour LOS F)
10. Waterman Avenue & 9th Street (PM Peak Hour LOS E)
12. I-215 Northbound Ramps & 5th Street (PM Peak Hour LOS D)
16. I-210 Southbound Ramps & 5th Street (AM & PM Peak Hour LOS F)
17. I-210 Northbound Ramps & 5th Street (AM Peak Hour LOS E & PM Peak Hour LOS F)
20. I-215 Southbound On-Ramp & 2nd Street (PM Peak Hour LOS E)
21. I-215 NB Off-Ramp/I-215 NB Ramp & 2nd St (AM Peak Hour LOS E)
23. Waterman Avenue & I-10 Westbound On-Ramp (PM Peak Hour LOS F)

7.2.1 SIGNAL WARRANT ANALYSIS

A peak hour traffic signal warrant[2] assessment was prepared for the unsignalized intersection at Waterman and the I-10 WB ramp to identify if the intersection satisfies the peak hour volume warrant for traffic signal installation.

Results indicate that a warrant is satisfied for the AM and PM peak hour under both the Build-Out (2035) No Project scenario and Build-Out (2035) Plus Project scenario. Technical calculations are provided in Appendix H.

[2] This analysis is intended to examine the general correlation between the planned level of future development and the need to install new traffic signals. It estimates future development-generated traffic compared against a sub-set of the standard traffic signal warrants recommended in the Federal Highway Administration Manual on Uniform Traffic Control Devices and associated State guidelines. This analysis should not serve as the only basis for deciding whether and when to install a signal. To reach such a decision, the full set of warrants should be investigated based on field-measured, rather than forecast, traffic data and a thorough study of traffic and roadway conditions by an experienced engineer. Furthermore, the decision to install a signal should not be based solely upon the warrants, since the installation of signals can lead to certain types of collisions. The City of San Bernardino should undertake regular monitoring of actual traffic conditions and accident data, and timely re-evaluation of the full set of warrants in order to prioritize and program intersections for signalization.

7.2.2 IMPACT ASSESSMENT

7.2.2.1 Intersection

Table 7-2 shows the changes in volume-to-capacity (V/C) ratio from Future (2035) Conditions to Future (2035) Plus Project Conditions for intersections operating below acceptable LOS.

**TABLE 7-2: INTERSECTION IMPACTS:
FUTURE YEAR PLUS PROJECT (2035) CONDITIONS**

Intersection	Peak Hour	Future (2035) Conditions		Future (2035) Plus Project Conditions		Change in V/C	Result
		LOS	V/C	LOS	V/C		
1. Waterman Avenue & 30th St	AM PM	E E	1.14 0.81	F E	1.38 1.01	0.24 0.2	**Impact**
2. Waterman Avenue & SR-210 Eastbound Ramps	AM PM	F F	1.02 0.98	F F	1.23 1.03	0.21 0.05	**Impact**
8. Waterman Avenue & Baseline Avenue	AM PM	D D	0.66 0.75	E F	0.94 1.06	0.28 0.31	**Impact**
10. Waterman Avenue & 9TH Street	PM	D	0.74	E	0.98	0.24	**Impact**
12. I-215 Northbound Off-Ramp & 5th Street	PM	C	0.64	D	0.79	0.15	**Impact**
16. I-210 Southbound Ramps & 5th Street	AM PM	E F	0.95 0.99	F F	0.99 1.03	0.04 0.04	**Impact**
17. I-210 Northbound Ramps & 5th Street	AM PM	D F	0.73 1.12	E F	0.84 1.19	0.11 0.07	**Impact**
20. I-215 Southbound On-Ramp & 2nd Street	PM	E	0.74	E	0.76	0.02	**Impact**
21. I-215 Northbound Off-Ramp & 2nd Street	AM	E	0.74	E	0.76	0.02	**Impact**
23. Waterman Avenue & I-10 Westbound On-Ramp	PM	F	-	F	-	-	**Impact**

Notes:
1. Increases in V/C ratio above acceptable standards are shown in bold for intersections in City of San Bernardino jurisdiction.
2. Intersections within Caltrans jurisdiction have designated impacts regardless of the increase in V/C as long as traffic was added to an intersection already operating below acceptable standards.

Source: *Fehr & Peers, 2015.*

Based on the performance criteria and thresholds of significance provided in Section 3.2.2, the project in year 2035 has a significant impact on the following intersections:

1. Waterman Avenue & 30th Street
2. Waterman Avenue & SR-210 Eastbound Ramps
8. Waterman Avenue & Baseline Street
10. Waterman Avenue & 9th Street
12. I-215 Northbound Ramps & 5th Street
16. I-210 Southbound Ramps & 5th Street
17. I-210 Northbound Ramps & 5th Street
20. I-215 Southbound On-Ramp & 2nd Street
21. I-215 Northbound Ramps & 2nd Street
23. Waterman Avenue & I-10 Westbound On-Ramp

7.2.2.2 Pedestrian, Bicycle, and Transit Impacts

The project has a very high level of pedestrian connectivity within the site with an extensive network of pedestrian-only trails and sidewalks connecting all areas of the project. This internal pedestrian network is complemented through additional pedestrian facilities on the boundary of the project including sidewalks on Sierras Way, 3rd Street and Base Line Street.

Class I (off-road) Bicycle Trails are proposed through the site and along the project boundaries adjacent to the flood channels. Striped bicycle lanes in both directions of travel at project boundaries are also proposed on Waterman Avenue, Base Line Street, 5th Street and Tippecanoe Avenue. The bicycle lanes will be located on-street and will share right-of-way with motor vehicles.

It is concluded that the project has more than sufficient on-site and off-site pedestrian and bicyclist connectivity.

Several of the OmniTrans bus routes travel through the proposed project area, and the project sponsor should ensure that transit access and operations are not negatively impacted.

The project only proposes to improve bicycle, pedestrian, and transit connectivity.

8.0 MITIGATION MEASURES

This chapter provides a summary of the key findings and project impacts for each scenario analyzed, and recommended mitigation measures to mitigate these impacts.

8.1 SUMMARY OF IMPACTS

As stated previously, the following level of service significance criteria was employed to determine if the project causes significant traffic impacts to the study area. The criteria are consistent with the City of San Bernardino level of service policy and the San Bernardino County CMP Guidelines.

A significant impact would occur at a study intersection when the project-related traffic causes:

- A signalized intersection to degrade from an acceptable LOS D or better to LOS E or LOS F, or
- The V/C ratio to increase by 0.02 or more at a signalized intersection that operates at LOS E or LOS F, or
- Causes an unsignalized intersection operating at LOS D or better to degrade to LOS E or LOS F and the intersection satisfies the Manual for Uniform Traffic Control Devices (MUTCD) Peak Hour Volume Warrant for Traffic Signal Installation, or
- Adds traffic to an unsignalized intersection operating at an unacceptable LOS E or LOS F such that it satisfies the MUTCD Peak Hour Volume Warrant for traffic signal installation.

Based upon the significance criteria identified, the addition of the project will significantly impact the following locations under each analyzed scenario:

8.1.1 EXISTING (2015) PLUS PROJECT CONDITIONS

- Waterman Avenue & SR-210 Eastbound Ramps – The project adds traffic to the intersection already operating at LOS F in the AM and PM peak hours.
- I-210 Southbound Ramps & 5th Street – The project adds traffic to the intersection already operating at LOS D in the PM peak hour.
- I-210 Northbound Ramps & 5th Street – The project adds traffic to the intersection already operating at LOS F in the PM peak hour.
- I-215 Southbound Ramps & 2nd Street – The project adds traffic to the intersection already operating at LOS E in the PM peak hour.
- I-215 Northbound Ramps & 2nd Street – The project adds traffic to the intersection already operating at LOS F in the AM peak hour.

- Waterman Ave & I-10 Westbound On-Ramp – The project adds traffic to the intersection already operating at LOS F in the PM peak hour and the MUTCD Peak Hour Volume Warrant for traffic signal installation is met.

8.1.2 FUTURE YEAR (2035) PLUS PROJECT CONDITIONS

- Waterman Avenue & 30th Street – In the AM peak hour the level of service degrades from E to F and in the PM peak hour the project adds traffic to the intersection already operating at LOS E.
- Waterman Avenue & SR-210 Eastbound Ramps – The project adds traffic to the intersection already operating at LOS F in the AM and PM peak hours.
- Waterman Avenue & Baseline Street – In the AM peak hour the level of service degrades from D to E and in the PM peak hour the level of service degrades from D to F
- Waterman Avenue & 9th Street – In the PM peak hour the level of service degrades from D to E
- I-215 Northbound Ramps & 5th Street – In the PM peak hour the level of service degrades from C to D
- I-210 Southbound Ramps & 5th Street – In the AM peak hour the level of service degrades from E to F and the project adds traffic to the intersection already operating at LOS F in the PM peak hour.
- I-210 Northbound Ramps & 5th Street – In the AM peak hour the level of service degrades from D to E and the project adds traffic to the intersection already operating at LOS F in the PM peak hour.
- I-215 Southbound Ramps & 2nd Street – The project adds traffic to the intersection already operating at LOS E in the PM peak hour.
- I-215 Northbound Ramps & 2nd Street – The project adds traffic to the intersection already operating at LOS E in the AM peak hour.
- Waterman Avenue & I-10 Westbound On-Ramp – The project adds traffic to the intersection already operating at LOS F in the PM peak hour and the MUTCD Peak Hour Volume Warrant for traffic signal installation is met.

8.2 RECOMMENDED MITIGATION MEASURES

Improvement measures were developed to minimize the impact of the Project on the study intersections. Mitigation measures were developed in order to bring project operations back to acceptable or pre-project conditions. Implementing the mitigation measures described below, the "with project" scenarios would no longer result in a significant impact. A description of the recommended mitigation measures is provided below. LOS results for mitigation measures are provided in Appendix G.

8.2.1 EXISTING (2015) PLUS PROJECT CONDITIONS

- Waterman Avenue & SR-210 Eastbound Ramps – AM and PM peak hour
    - In order for the intersection to operate at acceptable LOS C, the following improvements would be needed:
        - Add two exclusive eastbound right-turn lanes
        - Add one southbound left-turn lane.
    - The mitigation measures recommended above would reduce the impact to a less-than-significant level. However, given the right-of-way constraints at the intersection, the project sponsor cannot guarantee the implementation of the mitigation measures and therefore the impact is considered **significant and unavoidable.**
- I-210 Southbound Ramps & 5th Street – PM peak hour
    - In order for the intersection to operate at acceptable LOS C, the following improvements would be needed:
        - Optimize signal timing
    - Implementation of this measure would improve the intersection operations to a LOS C and reduce the impact to **less-than-significant** level.
- I-210 Northbound Ramps & 5th Street – PM peak hour
    - In order for the intersection to operate at acceptable LOS C, the following improvements would be needed:
        - Add one eastbound left-turn lane
        - Add one exclusive northbound right-turn lane
    - Implementation of this measure would improve the intersection operations to a LOS C.
    - The mitigation measures recommended above would reduce the impact to a less-than-significant level. However, given the right-of-way constraints at the intersection, the project sponsor cannot guarantee the implementation of the mitigation measures and therefore the impact is considered **significant and unavoidable.**
- I-215 Southbound Ramps & 2nd Street – PM peak hour
    - In order for the intersection to operate at acceptable LOS C, the following improvements would be needed:
        - Optimize signal timing
    - Implementation of this measure would improve the intersection operations to a LOS C and reduce the impact to **less-than-significant** level.
- I-215 Northbound Ramps & 2nd Street – AM peak hour
    - In order for the intersection to operate at acceptable LOS C, the following improvements would be needed:

        - Optimize signal timing
    - Implementation of this measure would improve the intersection operations to a LOS C and reduce the impact to **less-than-significant** level.
- Waterman Avenue & I-10 Westbound On-Ramp – PM peak hour
    - In order for the intersection to operate at acceptable LOS C, the following improvements would be needed:
        - Signalize the intersection with a protected northbound left-turn phase
    - Implementation of this measure would improve the intersection operations to a LOS A and reduce the impact to **less-than-significant** level.

8.2.2 CUMULATIVE YEAR (2035) PLUS PROJECT CONDITIONS

- Waterman Avenue & 30th Street – AM and PM peak hour
    - In order for the intersection to operate at acceptable LOS D, the following improvements would be needed:
        - Add one westbound left-turn lane
        - Add one westbound right-turn lane
        - Add one eastbound right-turn lane with right-turn overlap phase
        - Add an overlap phase for the northbound right-turn
        - Modify signal phasing to split phase in the east/west direction. This requires signal pole modifications in the east/west direction to accommodate new split phase vehicle heads on a longer mast arm
    - Please note that these improvements assume there is no room for capacity enhancements in the north/south direction due to right-of-way constraints at the southbound approach and the bridge at the northbound approach.
    - Given the wide cross section of 30th St., the new turn lanes could be accomplished with restriping of the approach.
    - Implementation of this measure would improve the intersection operations to a LOS D and reduce the impact to **less-than-significant** level.
- Waterman Avenue & SR-210 Eastbound Ramps - AM and PM peak hour
    - In order for the intersection to operate at acceptable LOS C, the following improvements would be needed:
        - Add one exclusive eastbound right-turn lane
        - Add one eastbound left-turn lane
        - Add one exclusive northbound right-turn lane
        - Add one southbound left-turn lane

  - The mitigation measures recommended above would reduce the impact to a less-than-significant level. However, given the right-of-way constraints at the intersection, the project sponsor cannot guarantee the implementation of the mitigation measures and therefore the impact is considered **significant and unavoidable.**
- Waterman Avenue & Baseline Street – AM and PM peak hour
  - In order for the intersection to operate at acceptable LOS D, the following improvements would be needed:
    - Modify the shared through-right lanes to a through lane and an exclusive right-turn lane at the east and west approaches
  - Given the 64' cross section of Baseline Ave, this measure could be completed with restriping of the approaches.
  - Implementation of this measure would improve the intersection operations to a LOS D and reduce the impact to **less-than-significant** level.
- Waterman Avenue & 9th Street – PM peak hour
  - In order for the intersection to operate at acceptable LOS D, the following improvements would be needed:
    - Modify the shared through-right lanes to a through lane and an exclusive right-turn lane at the north and south approaches
  - Given the 68' cross section of Waterman Ave, this measure could be completed with restriping of the approaches.
  - Implementation of this measure would improve the intersection operations to a LOS D and reduce the impact to **less-than-significant** level.
- I-215 Northbound Ramps & 5th Street – PM peak hour
  - In order for the intersection to operate at acceptable LOS C, the following improvements would be needed:
    - Add one exclusive westbound right-turn lane
  - The mitigation measures recommended above would reduce the impact to a less-than-significant level. However, given the right-of-way constraints at the intersection, the project sponsor cannot guarantee the implementation of the mitigation measures and therefore the impact is considered **significant and unavoidable.**
- I-210 Southbound Ramps & 5th Street – AM and PM peak hour
  - In order for the intersection to operate at acceptable LOS C, the following improvements would be needed:
    - Add one eastbound through lane
    - Add one exclusive southbound right-turn lane
    - Add two southbound left-turn lanes

  - The mitigation measures recommended above would reduce the impact to a less-than-significant level. However, given the right-of-way constraints at the intersection, the project sponsor cannot guarantee the implementation of the mitigation measures and therefore the impact is considered **significant and unavoidable.**
- I-210 Northbound Ramps & 5th Street – AM and PM peak hour
  - In order for the intersection to operate at acceptable LOS C, the following improvements would be needed:
    - Add one northbound left-turn lane
    - Add two exclusive northbound right-turn lanes
  - The mitigation measures recommended above would reduce the impact to a less-than-significant level. However, given the right-of-way constraints at the intersection, the project sponsor cannot guarantee the implementation of the mitigation measures and therefore the impact is considered **significant and unavoidable.**
- I-215 Southbound Ramps & 2nd St – PM peak hour
  - In order for the intersection to operate at acceptable LOS C, the following improvements would be needed:
    - Optimize signal timing
  - Implementation of this measure would improve the intersection operations to a LOS C and reduce the impact to **less-than-significant** level.
- I-215 NB Off-Ramp/I-215 NB Ramp & 2nd St – PM peak hour
  - In order for the intersection to operate at acceptable LOS C, the following improvements would be needed:
    - Optimize signal timing
  - Implementation of this measure would improve the intersection operations to a LOS C and reduce the impact to **less-than-significant** level.
- Waterman Ave & I-10 WB On-Ramp – AM peak hour
  - In order for the intersection to operate at acceptable LOS C, the following improvements would be needed:
    - Optimize signal timing
  - Implementation of this measure would improve the intersection operations to a LOS C and reduce the impact to **less-than-significant** level.
- Waterman Avenue & I-10 Westbound On-Ramp – PM peak hour
  - In order for the intersection to operate at acceptable LOS C, the following improvements would be needed:
    - Signalize the intersection with a protected northbound left-turn phase

- Implementation of this measure would improve the intersection operations to a LOS A and reduce the impact to **less-than-significant** level.

8.3 FAIR SHARE CONTRIBUTIONS

The project is responsible for a portion of each mitigation measure proposed under Future Buildout Year (2035) Conditions. Project fair share contributions are calculated by comparing the project's peak hour traffic generated against future growth. Fair share cost estimates were not calculated for locations with significant and unavoidable impacts.

8.3.1 FUTURE PLUS PROJECT

- Waterman Avenue & 30th Street – 24% Fair Share Contribution
  - The estimated cost for the traffic signal upgrade and restriping is between $125,000 and $200,000.
  - The project contributes 209 AM peak hour trips at this location, resulting in a 24% fair share cost of the proposed mitigation equating to $30,000-$48,000.
- Waterman Avenue & SR-210 Eastbound Ramps – 41% Fair Share Contribution
- Waterman Avenue & Baseline Street – 57% Fair Share Contribution
  - The estimated cost for the restriping is $3,000.
  - The project contributes 1,146 PM peak hour trips at this location, resulting in a 57% fair share cost of the proposed mitigation equating to $1,710.
- Waterman Avenue & 9th Street – 50% Fair Share Contribution
  - The estimated cost for the restriping is $3,000.
  - The project contributes 1,111 PM peak hour trips at this location, resulting in a 50% fair share cost of the proposed mitigation equating to $1,500.
- I-215 Northbound Ramps & 5th Street – 35% Fair Share Contribution
- I-210 Southbound Ramps & 5th Street – 34% Fair Share Contribution
- I-210 Northbound Ramps & 5th Street – 35% Fair Share Contribution
- I-215 Southbound Ramps & 2nd Street – 4% Fair Share Contribution
  - The estimated cost to implement signal timing optimization ranges between $5,000 and $10,000.
  - The project contributes 33 PM peak hour trips at this location, resulting in a 4% fair share cost of the proposed mitigation equating to $200-$400.
- I-215 Northbound Ramps & 2nd Street – 16% Fair Share Contribution

  - The estimated cost to implement signal timing optimization ranges between $5,000 and $10,000.
  - The project contributes 39 AM peak hour trips at this location, resulting in a 16% fair share cost of the proposed mitigation equating to $800-$1,600.
- Waterman Avenue & I-10 Westbound On-Ramp – 31% Fair Share Contribution
  - The estimated cost for the traffic signal upgrade is between $90,000 and $125,000.
  - The project contributes 240 PM peak hour trips at this location, resulting in a 31% fair share cost of the proposed mitigation equating to $27,900-$38,750.

APPENDIX A: APPROVED SCOPING AGREEMENT

Scope of Study Form

To be completed by applicant and approved by Development Services prior to start of study

Project Name: Waterman + Baseline Neighborhood Transportation Plan
Project Address: Waterman Ave & Baseline Ave
Project Description: Neighborhood transformation through new and strategic land use framework
Developer's Name: National Community Renaissance on behalf of City of San Bernardino
Address: 9421 Haven Avenue, Rancho Cucamonga, CA 91730
Telephone No. (949) 394-7996 Fax Number:
Email Address: awashburn@nationalcore.org

Trip Generation Rates From: ITE 9th Ed. Other:

Trip Generation For:

Land Use (1)	Many, see attached	Land Use (2)	
ITE Land Use Code	summary	ITE Land Use Code	
Daily Trips	13,092	Daily Trips	
AM Peak Hour Trips		AM Peak Hour Trips	
Inbound	1,488	Inbound	
Outbound	1,344	Outbound	
Total	2,833	Total	
PM Peak Hour Trips		PM Peak Hour Trips	
Inbound	1,306	Inbound	
Outbound	1,224	Outbound	
Total	2,530	Total	

(Use Additional Sheet(s), if necessary)

Pass-by Trips (%), if applicable: N/A %

Land Use (1)		Land Use (2)	
ITE Land Use Code		ITE Land Use Code	
Daily Trips		Daily Trips	
AM Peak Hour Trips		AM Peak Hour Trips	
Inbound		Inbound	
Outbound		Outbound	
Total		Total	
PM Peak Hour Trips:		PM Peak Hour Trips:	
Inbound		Inbound	
Outbound		Outbound	
Total		Total	

Project Opening Year: N/A **Build-out Year**: 2035

Study Intersections: 1 See attached list 6
2 7
3 8
4 9
5 10

(Use Additional Sheet(s) and Map, if necessary)

Ambient Growth Rate: Will use SBTAM to determine trip distribution and ambient growth

Trip Distribution: East % West % North % South %

Preparer's Name: Paul Herrmann
Address: 8141 E. Kaiser Blvd. Suite 110 Anaheim, CA 92808
Telephone No. 714-941-8786 Fax Number: 949-859-3209
Email Address: p.herrmann@fehrandpeers.com
Signature: Date: 9/3/15

Approved By (Development Services Department):
Signature: Date: 9-3-2015
Name: Azzam Jabsheh Title: Traffic engineer

APPENDIX B: EXISTING TRAFFIC COUNTS

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6152-001 **Day:** Wednesday

City: San Bernardino **Date:** 9/9/2015

AM

NS/EW Streets:	Waterman Ave			Waterman Ave			30th St			30th St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	1	1	1.5	1.5	1	2	0	1	2	0	
7:00 AM	65	109	22	4	128	166	0	12	30	30	138	46	750
7:15 AM	79	129	23	3	143	182	3	16	28	38	151	51	846
7:30 AM	61	90	19	3	130	148	0	25	43	56	162	57	794
7:45 AM	50	78	41	5	171	142	3	19	37	54	132	40	772
8:00 AM	54	90	29	6	122	118	1	14	24	48	124	38	668
8:15 AM	62	98	44	3	131	135	1	23	30	53	115	60	755
8:30 AM	46	117	29	4	137	137	2	15	35	50	114	37	723
8:45 AM	56	90	31	1	137	129	0	15	38	47	101	43	688
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	473	801	238	29	1099	1157	10	139	265	376	1037	372	5996
APPROACH %'s :	31.28%	52.98%	15.74%	1.27%	48.10%	50.63%	2.42%	33.57%	64.01%	21.06%	58.10%	20.84%	
PEAK HR START TIME :	700 AM												TOTAL
PEAK HR VOL :	255	406	105	15	572	638	6	72	138	178	583	194	3162
PEAK HR FACTOR :		0.829			0.934			0.794			0.868		0.934

UTURNS			
NB	SB	EB	WB
0	0	0	1
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
NB	SB	EB	WB
0	0	0	1

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6152-001 **Day:** Wednesday

City: San Bernardino **Date:** 9/9/2015

PM

NS/EW Streets:	Waterman Ave			Waterman Ave			30th St			30th St				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	1	2	1	1	1.5	1.5	1	2	0	1	2	0					
4:00 PM	57	175	76	3	102	76	3	67	27	29	159	28	802	0	0	0	0
4:15 PM	98	168	88	2	89	74	5	64	27	18	185	27	845	1	0	0	0
4:30 PM	55	174	72	5	92	93	5	73	21	21	230	67	908	0	0	0	0
4:45 PM	67	212	67	5	109	87	7	51	23	27	140	67	862	0	0	0	0
5:00 PM	89	188	48	9	86	74	4	29	28	30	118	71	774	0	0	0	0
5:15 PM	81	209	49	5	68	71	5	36	32	41	127	81	805	0	0	0	0
5:30 PM	74	207	58	7	115	90	6	44	32	24	123	71	851	0	0	0	0
5:45 PM	68	232	70	7	92	92	1	49	35	44	103	73	866	0	0	0	0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	589	1565	528	43	753	657	36	413	225	234	1185	485	6713	1	0	0	0
APPROACH %'s :	21.96%	58.35%	19.69%	2.96%	51.82%	45.22%	5.34%	61.28%	33.38%	12.29%	62.24%	25.47%					
PEAK HR START TIME :	400 PM												TOTAL				
PEAK HR VOL :	277	729	303	15	392	330	20	255	98	95	714	189	3417				
PEAK HR FACTOR :		0.924			0.917			0.942			0.785		0.941				

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6152-001 **Day:** Wednesday

City: San Bernardino **Date:** 9/9/2015

NOON

NS/EW Streets:	Waterman Ave			Waterman Ave			30th St			30th St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	1	1	1.5	1.5	1	2	0	1	2	0	
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	0 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.000

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Waterman Ave and 30th St , San Bernardino

Date: 9/9/2015

Day: Wednesday

Project #: 15-6152-001

City: San Bernardino

AM Peak Hour	700 AM
NOON Peak Hour	
PM Peak Hour	400 PM

Peak Hour Summary

Southbound Approach (Waterman Ave)

	Lanes 1.5	1.5	1		
AM	638	572	15	606	AM
NOON	0	0	0	0	NOON
PM	330	392	15	938	PM

Eastbound Approach (30th St)

Lanes	AM	NOON	PM
	1476	0	1321
1	6	0	20
2	72	0	255
0	138	0	98

Westbound Approach

Lanes	AM	NOON	PM
0	194	0	189
2	583	0	714
1	178	0	95
	192	0	573

Northbound Approach

				Lanes
AM	888	255	406	105
NOON	0	0	0	0
PM	585	277	729	303
Lanes		1	2	1

CONTROL: Signalized

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
	1225	606	AM
	0	0	NOON
	737	938	PM

West Leg	AM	NOON	PM
	1476	0	1321
	216	0	373

East Leg	AM	NOON	PM
	955	0	998
	192	0	573

	South Leg	
AM	888	766
NOON	0	0
PM	585	1309

Total Volume Per Leg

	North Leg
AM	1831
NOON	0
PM	1675

West Leg	AM	NOON	PM
	1692	0	1694

East Leg	AM	NOON	PM
	1147	0	1571

	South Leg
AM	1654
NOON	0
PM	1894

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6152-002 **Day:** Wednesday

City: San Bernardino **Date:** 9/9/2015

AM

NS/EW Streets:	Waterman Ave			Waterman Ave			SR-210 EB Ramps			SR-210 EB Ramps			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	1	1	2	0	1.3	0.3	0.3	0	0	0	
7:00 AM	0	97	45	106	86	0	93	0	129	0	0	0	556
7:15 AM	0	130	54	119	78	0	107	0	148	0	0	0	636
7:30 AM	0	92	52	139	101	0	80	0	138	0	0	0	602
7:45 AM	0	72	36	131	132	0	95	0	172	0	0	0	638
8:00 AM	0	73	33	104	83	0	96	0	171	0	0	0	560
8:15 AM	0	90	42	118	98	0	117	0	155	0	0	0	620
8:30 AM	0	91	34	115	99	0	103	0	134	0	0	0	576
8:45 AM	0	78	31	117	113	0	98	2	141	0	0	0	580
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	723	327	949	790	0	789	2	1188	0	0	0	4768
APPROACH %'s :	0.00%	68.86%	31.14%	54.57%	45.43%	0.00%	39.87%	0.10%	60.03%	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	367	175	493	394	0	378	0	629	0	0	0	2436
PEAK HR FACTOR :		0.736			0.843			0.943			0.000		0.955

UTURNS			
NB	SB	EB	WB
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6152-002 **Day:** Wednesday

City: San Bernardino **Date:** 9/9/2015

PM

NS/EW Streets:	Waterman Ave			Waterman Ave			SR-210 EB Ramps			SR-210 EB Ramps			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	1	1	2	0	1.3	0.3	0.3	0	0	0	
4:00 PM	0	109	63	52	107	0	206	0	138	0	0	0	675
4:15 PM	0	145	49	48	89	0	200	0	130	0	0	0	661
4:30 PM	0	118	41	58	73	0	183	0	129	0	0	0	602
4:45 PM	0	119	54	70	84	0	226	0	119	0	0	0	672
5:00 PM	0	136	55	88	57	0	190	0	76	0	0	0	602
5:15 PM	0	144	56	91	54	0	195	0	89	0	0	0	629
5:30 PM	0	127	62	105	72	0	218	0	78	0	0	0	662
5:45 PM	0	113	45	99	66	0	251	0	105	0	0	0	679
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	1011	425	611	602	0	1669	0	864	0	0	0	5182
APPROACH %'s :	0.00%	70.40%	29.60%	50.37%	49.63%	0.00%	65.89%	0.00%	34.11%	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	400 PM												TOTAL
PEAK HR VOL :	0	491	207	228	353	0	815	0	516	0	0	0	2610
PEAK HR FACTOR :		0.899			0.914			0.964			0.000		0.967

UTURNS			
NB	SB	EB	WB
0	2	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
NB	SB	EB	WB
0	2	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6152-002 **Day:** Wednesday

City: San Bernardino **Date:** 9/9/2015

NOON

NS/EW Streets:	Waterman Ave			Waterman Ave			SR-210 EB Ramps			SR-210 EB Ramps			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	1	1	2	0	1.3	0.3	0.3	0	0	0	
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	0 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.000

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Waterman Ave and SR-210 EB Ramps , San Bernardino

Date: 9/9/2015

Day: Wednesday

Project #: 15-6152-002

City: San Bernardino

AM Peak Hour	715 AM
NOON Peak Hour	
PM Peak Hour	400 PM

Peak Hour Summary

Southbound Approach (Waterman Ave)

Lanes	0	2	1		
AM	0	394	493	745	AM
NOON	0	0	0	0	NOON
PM	0	353	228	1306	PM

Eastbound Approach (SR-210 EB Ramps)

Lanes	AM	NOON	PM
	0	0	0
1.3	378	0	815
0.3	0	0	0
0.3	629	0	516

Westbound Approach

AM	NOON	PM	Lanes
0	0	0	0
0	0	0	0
0	0	0	0
668	0	435	

CONTROL: Signalized

Northbound Approach

AM	1023	0	367	175
NOON	0	0	0	0
PM	869	0	491	207
Lanes		0	2	1

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		East Leg			West Leg			South Leg	
	AM	NOON	PM	AM	NOON	PM	AM	NOON	PM	
AM	887	745	0	0	0	0	1023	542	AM	
NOON	0	0	0	0	0	0	0	0	NOON	
PM	581	1306	1007	0	1331	668	0	435	869	698

Total Volume Per Leg

	North Leg	East Leg	West Leg	South Leg
AM	1632	668	1007	1565
NOON	0	0	0	0
PM	1887	435	1331	1567

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6152-003 **Day:** Wednesday

City: San Bernardino **Date:** 9/9/2015

AM

NS/EW Streets:	Waterman Ave			Waterman Ave			Highland Ave			Highland Ave				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	1	2	1	1	2	0	1	2	1	1	2	0					
7:00 AM	14	73	14	43	138	9	14	45	29	11	57	15	462	0	0	0	0
7:15 AM	18	87	11	47	140	12	9	49	26	11	62	26	498	0	0	0	0
7:30 AM	11	75	12	39	150	13	16	57	29	37	72	19	530	0	0	0	0
7:45 AM	15	69	18	64	192	16	7	78	30	25	67	13	594	0	0	0	0
8:00 AM	22	57	24	55	155	23	10	81	27	18	71	16	559	0	0	0	0
8:15 AM	20	96	19	53	149	18	10	74	29	22	71	7	568	0	0	0	0
8:30 AM	27	67	22	63	131	21	14	57	46	26	85	21	580	0	0	0	0
8:45 AM	18	95	11	47	134	12	9	49	26	11	62	26	500	0	0	0	0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	145	619	131	411	1189	124	89	490	242	161	547	143	4291	0	0	0	0
APPROACH %'s :	16.20%	69.16%	14.64%	23.84%	68.97%	7.19%	10.84%	59.68%	29.48%	18.92%	64.28%	16.80%					

PEAK HR START TIME :	745 AM												TOTAL
PEAK HR VOL :	84	289	83	235	627	78	41	290	132	91	294	57	2301
PEAK HR FACTOR :		0.844			0.864			0.981			0.837		0.968

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6152-003 **Day:** Wednesday

City: San Bernardino **Date:** 9/9/2015

PM

NS/EW Streets:	Waterman Ave			Waterman Ave			Highland Ave			Highland Ave				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	1	2	1	1	2	0	1	2	1	1	2	0					
4:00 PM	46	147	35	69	109	23	21	105	39	46	150	28	818	0	0	0	0
4:15 PM	40	113	36	70	112	14	16	147	42	32	214	49	885	0	0	0	0
4:30 PM	46	123	38	65	99	16	24	124	38	44	194	54	865	0	0	0	0
4:45 PM	55	104	35	53	108	28	20	132	40	27	143	35	780	0	0	1	0
5:00 PM	40	135	46	27	64	12	28	139	45	33	110	39	718	0	0	0	0
5:15 PM	50	148	38	34	68	11	19	100	39	34	113	23	677	0	0	0	0
5:30 PM	50	130	20	37	81	20	17	125	29	28	83	27	647	0	0	0	0
5:45 PM	46	126	39	45	79	9	18	135	38	25	96	24	680	0	0	0	0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	373	1026	287	400	720	133	163	1007	310	269	1103	279	6070	0	0	1	0
APPROACH %'s :	22.12%	60.85%	17.02%	31.92%	57.46%	10.61%	11.01%	68.04%	20.95%	16.29%	66.81%	16.90%					

PEAK HR START TIME :	400 PM												TOTAL
PEAK HR VOL :	187	487	144	257	428	81	81	508	159	149	701	166	3348
PEAK HR FACTOR :		0.897			0.953			0.912			0.861		0.946

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6152-003 **Day:** Wednesday

City: San Bernardino **Date:** 9/9/2015

NOON

NS/EW Streets:	Waterman Ave			Waterman Ave			Highland Ave			Highland Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	1	1	2	0	1	2	1	1	2	0	
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	0 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.000

UTURNS

NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Waterman Ave and Highland Ave , San Bernardino

Date: 9/9/2015

Day: Wednesday

Project #: 15-6152-003

City: San Bernardino

AM Peak Hour	745 AM
NOON Peak Hour	
PM Peak Hour	400 PM

Peak Hour Summary

Southbound Approach (Waterman Ave)

Lanes	0	2	1		
AM	78	627	235	387	AM
NOON	0	0	0	0	NOON
PM	81	428	257	734	PM

Eastbound Approach (Highland Ave)

	AM	NOON	PM
	456	0	969
1	41	0	81
2	290	0	508
1	132	0	159
Lanes	AM	NOON	PM

Westbound Approach

	AM	NOON	PM	Lanes
	57	0	166	0
	294	0	701	2
	91	0	149	1
	608	0	909	
	AM	NOON	PM	

Northbound Approach

AM	850	84	289	83	AM
NOON	0	0	0	0	NOON
PM	736	187	487	144	PM
		1	2	1	Lanes

CONTROL

Signalized

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
	940	387	AM
	0	0	NOON
	766	734	PM

West Leg	AM	NOON	PM	East Leg	AM	NOON	PM
	456	0	969		442	0	1016
	463	0	748		608	0	909

	South Leg	
AM	850	456
NOON	0	0
PM	736	818

Total Volume Per Leg

North Leg
1327 AM
0 NOON
1500 PM

West Leg AM	NOON	PM	East Leg AM	NOON	PM
919	0	1717	1050	0	1925

	South Leg
AM	1306
NOON	0
PM	1554

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6152-004 **Day:** Wednesday

City: San Bernardino **Date:** 9/9/2015

AM

NS/EW Streets:	I-215 SB Ramps			I-215 SB Ramps			Baseline St			Baseline St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	1.3	0.3	1.3	0	4	0	2	2	0	
7:00 AM	0	0	0	49	0	34	0	88	84	111	93	0	459
7:15 AM	0	0	0	66	1	36	0	99	98	117	104	0	521
7:30 AM	0	0	0	123	10	55	0	131	98	92	99	0	608
7:45 AM	0	0	0	183	20	87	0	132	55	109	131	0	717
8:00 AM	0	0	0	84	2	47	0	114	44	75	127	0	493
8:15 AM	0	0	0	68	0	45	0	121	48	92	128	0	502
8:30 AM	0	0	0	98	4	27	0	121	86	77	101	0	514
8:45 AM	0	0	0	71	2	20	0	120	70	93	113	0	489
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	742	39	351	0	926	583	766	896	0	4303
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	65.55%	3.45%	31.01%	0.00%	61.37%	38.63%	46.09%	53.91%	0.00%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	0	0	456	33	225	0	476	295	393	461	0	2339
PEAK HR FACTOR :	0.000			0.616			0.842			0.890			0.816

UTURNS			
NB	SB	EB	WB
0	0	0	1
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
NB	SB	EB	WB
0	0	0	1

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6152-004 **Day:** Wednesday

City: San Bernardino **Date:** 9/9/2015

PM

NS/EW Streets:	I-215 SB Ramps			I-215 SB Ramps			Baseline St			Baseline St				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	0	0	0	1.3	0.3	1.3	0	4	0	2	2	0					
4:00 PM	0	0	0	48	0	29	0	146	62	114	205	0	604	0	0	0	0
4:15 PM	0	0	0	65	0	33	0	141	79	95	182	0	595	0	0	0	0
4:30 PM	0	0	0	81	1	41	0	120	65	114	178	0	600	0	0	0	0
4:45 PM	0	0	0	75	1	35	0	150	55	136	186	0	638	0	0	0	0
5:00 PM	0	0	0	43	1	47	0	127	64	86	176	0	544	0	0	0	0
5:15 PM	0	0	0	57	0	30	0	123	62	108	175	0	555	0	0	0	0
5:30 PM	0	0	0	55	1	34	0	128	66	123	192	0	599	0	0	0	0
5:45 PM	0	0	0	69	1	33	0	144	74	80	177	0	578	0	0	0	0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	0	0	0	493	5	282	0	1079	527	856	1471	0	4713	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	63.21%	0.64%	36.15%	0.00%	67.19%	32.81%	36.79%	63.21%	0.00%					
PEAK HR START TIME :	400 PM												TOTAL				
PEAK HR VOL :	0	0	0	269	2	138	0	557	261	459	751	0	2437				
PEAK HR FACTOR :	0.000			0.831			0.930			0.939			0.955				

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6152-004 **Day:** Wednesday

City: San Bernardino **Date:** 9/9/2015

NOON

NS/EW Streets:	I-215 SB Ramps			I-215 SB Ramps			Baseline St			Baseline St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	1.3	0.3	1.3	0	4	0	2	2	0	

UTURNS			
NB	SB	EB	WB

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	

NB	SB	EB	WB
0	0	0	0

PEAK HR START TIME :	0 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :		0.000			0.000			0.000			0.000		0.000

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

I-215 SB Ramps and Baseline St , San Bernardino

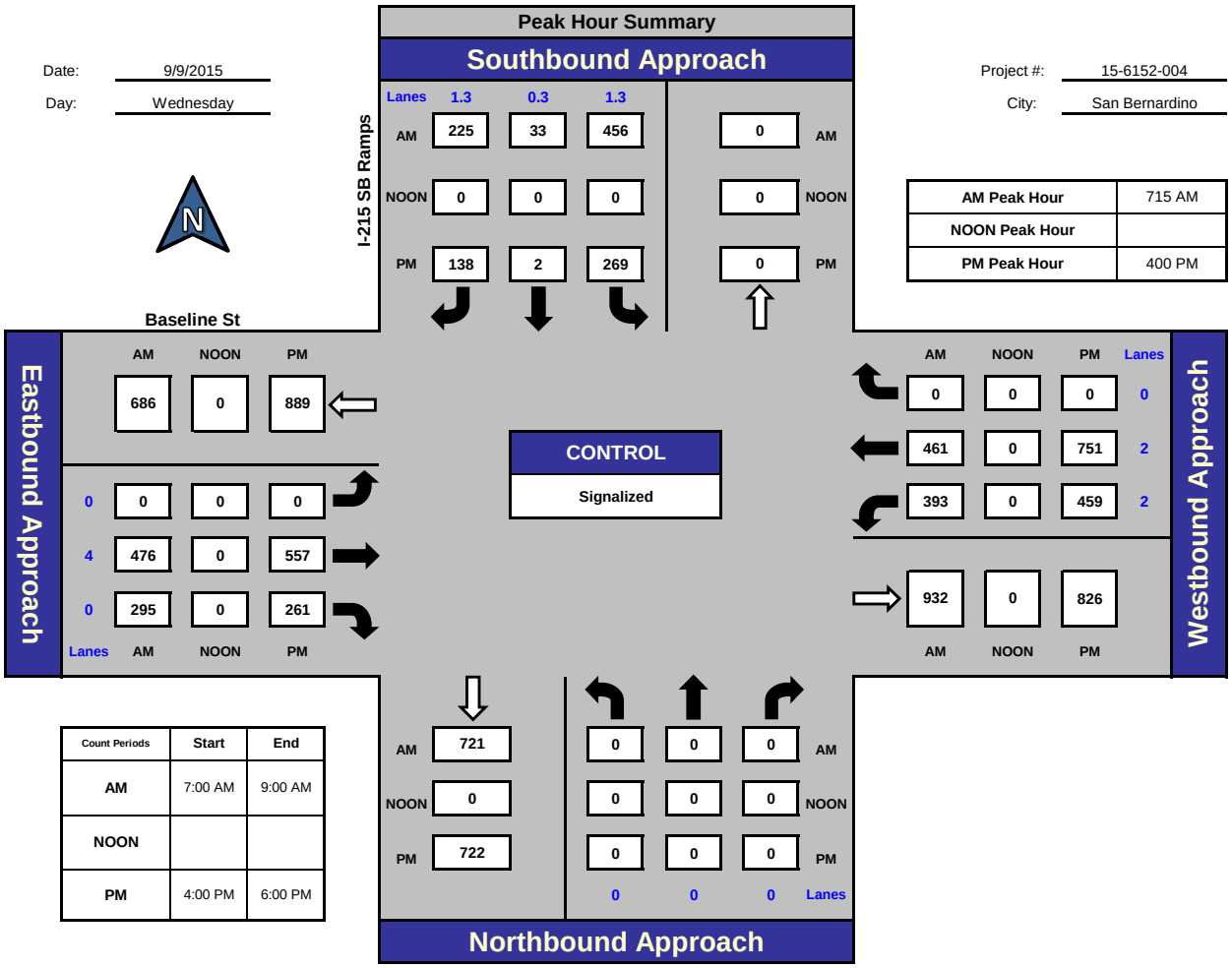
Date: 9/9/2015

Day: Wednesday

Project #: 15-6152-004

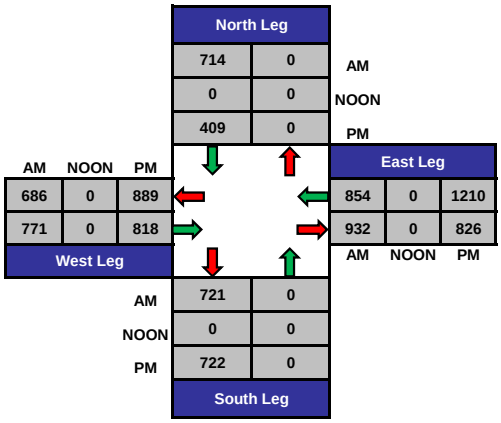
City: San Bernardino

AM Peak Hour	715 AM
NOON Peak Hour	
PM Peak Hour	400 PM

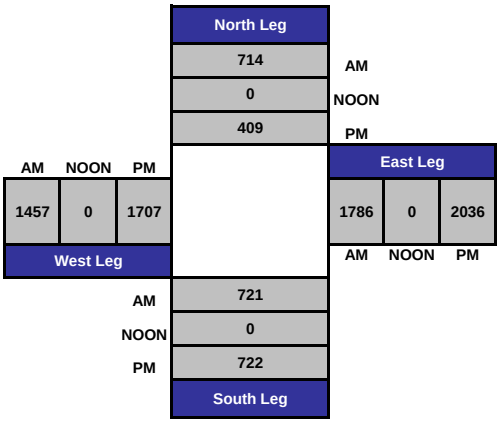


Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6152-005 **Day:** Wednesday

City: San Bernardino **Date:** 9/9/2015

AM

NS/EW Streets:	I-215 NB Ramps			I-215 NB Ramps			Baseline St			Baseline St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1.3	0.3	1.3	0	0	0	2	2	0	0	4	1	
7:00 AM	48	1	77	0	0	0	44	85	0	0	154	49	458
7:15 AM	51	0	89	0	0	0	33	140	0	0	174	37	524
7:30 AM	49	0	99	0	0	0	35	215	0	0	155	41	594
7:45 AM	63	2	143	0	0	0	38	283	0	0	173	49	751
8:00 AM	64	1	135	0	0	0	33	158	0	0	125	46	562
8:15 AM	63	2	95	0	0	0	37	159	0	0	159	45	560
8:30 AM	43	1	95	0	0	0	42	182	0	0	146	47	556
8:45 AM	37	0	113	0	0	0	29	158	0	0	159	49	545
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	418	7	846	0	0	0	291	1380	0	0	1245	363	4550
APPROACH %'s :	32.89%	0.55%	66.56%	#DIV/0!	#DIV/0!	#DIV/0!	17.41%	82.59%	0.00%	0.00%	77.43%	22.57%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	239	5	472	0	0	0	143	815	0	0	612	181	2467
PEAK HR FACTOR :		0.861			0.000			0.746			0.893		0.821

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6152-005 **Day:** Wednesday

City: San Bernardino **Date:** 9/9/2015

PM

NS/EW Streets:	I-215 NB Ramps			I-215 NB Ramps			Baseline St			Baseline St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1.3	0.3	1.3	0	0	0	2	2	0	0	4	1	
4:00 PM	94	4	151	0	0	0	64	138	0	0	211	68	730
4:15 PM	88	2	145	0	0	0	41	174	0	0	193	84	727
4:30 PM	81	2	122	0	0	0	48	151	0	0	220	95	719
4:45 PM	90	3	155	0	0	0	34	186	0	0	218	81	767
5:00 PM	80	3	151	0	0	0	40	132	0	0	184	96	686
5:15 PM	84	2	116	0	0	0	34	149	0	0	204	105	694
5:30 PM	69	4	121	0	0	0	40	141	0	0	225	86	686
5:45 PM	92	1	137	0	0	0	41	161	0	0	191	64	687
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	678	21	1098	0	0	0	342	1232	0	0	1646	679	5696
APPROACH %'s :	37.73%	1.17%	61.10%	#DIV/0!	#DIV/0!	#DIV/0!	21.73%	78.27%	0.00%	0.00%	70.80%	29.20%	
PEAK HR START TIME :	400 PM												TOTAL
PEAK HR VOL :	353	11	573	0	0	0	187	649	0	0	842	328	2943
PEAK HR FACTOR :		0.941			0.000			0.950			0.929		0.959

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6152-005 **Day:** Wednesday

City: San Bernardino **Date:** 9/9/2015

NOON

NS/EW Streets:	I-215 NB Ramps			I-215 NB Ramps			Baseline St			Baseline St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1.3	0.3	1.3	0	0	0	2	2	0	0	4	1	
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	0 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.000

UTURNS

NB	SB	EB	WB
NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

I-215 NB Ramps and Baseline St , San Bernardino

Date: 9/9/2015

Day: Wednesday

Project #: 15-6152-005

City: San Bernardino

AM Peak Hour	730 AM
NOON Peak Hour	
PM Peak Hour	400 PM

Peak Hour Summary

Southbound Approach (I-215 NB Ramps)

	Lanes	0	0	0		
AM		0	0	0	329	AM
NOON		0	0	0	0	NOON
PM		0	0	0	526	PM

Eastbound Approach (Baseline St)

Lanes	AM	NOON	PM
	851	0	1195
2	143	0	187
2	815	0	649
0	0	0	0

Westbound Approach

AM	NOON	PM	Lanes
181	0	328	1
612	0	842	4
0	0	0	0
1287	0	1222	

Northbound Approach

AM	0	239	5	472	AM
NOON	0	0	0	0	NOON
PM	0	353	11	573	PM
		1.3	0.3	1.3	Lanes

CONTROL

Signalized

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
	0	329	AM
	0	0	NOON
	0	526	PM

West Leg AM	NOON	PM		East Leg AM	NOON	PM
851	0	1195		793	0	1170
958	0	836		1287	0	1222

	South Leg	
AM	0	716
NOON	0	0
PM	0	937

Total Volume Per Leg

	North Leg
AM	329
NOON	0
PM	526

West Leg AM	NOON	PM	East Leg AM	NOON	PM
1809	0	2031	2080	0	2392

	South Leg
AM	716
NOON	0
PM	937

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6152-006 **Day:** Wednesday

City: San Bernardino **Date:** 9/9/2015

AM

NS/EW Streets:	E St			E St			Baseline St			Baseline St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	1	2	0	1	2	0	
7:00 AM	4	21	3	13	17	18	15	100	2	2	134	9	338
7:15 AM	4	24	2	22	32	23	16	142	4	5	120	15	409
7:30 AM	2	31	2	24	42	25	21	186	3	5	149	25	515
7:45 AM	3	23	3	18	35	14	21	192	15	3	152	15	494
8:00 AM	3	14	7	7	25	12	19	181	8	5	130	14	425
8:15 AM	5	16	3	13	28	14	11	180	9	3	140	18	440
8:30 AM	2	17	11	8	37	11	24	193	2	9	163	12	489
8:45 AM	6	19	3	12	25	20	17	183	10	8	166	16	485
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	29	165	34	117	241	137	144	1357	53	40	1154	124	3595
APPROACH %'s :	12.72%	72.37%	14.91%	23.64%	48.69%	27.68%	9.27%	87.32%	3.41%	3.03%	87.56%	9.41%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	13	84	15	62	130	65	72	739	35	16	571	72	1874
PEAK HR FACTOR :		0.800			0.706			0.928			0.920		0.910

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6152-006 **Day:** Wednesday

City: San Bernardino **Date:** 9/9/2015

PM

NS/EW Streets:	E St			E St			Baseline St			Baseline St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	1	2	0	1	2	0	
4:00 PM	17	26	12	20	36	30	19	217	16	5	182	17	597
4:15 PM	13	33	10	14	25	10	12	225	8	5	206	10	571
4:30 PM	16	43	13	12	28	20	23	242	9	15	232	17	670
4:45 PM	21	35	7	6	24	19	18	243	17	8	211	13	622
5:00 PM	13	30	12	10	21	14	23	220	10	6	239	14	612
5:15 PM	8	31	14	11	27	11	15	203	7	12	212	9	560
5:30 PM	17	28	9	11	21	12	13	198	10	9	248	6	582
5:45 PM	13	31	13	6	16	12	18	223	13	10	205	15	575
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	118	257	90	90	198	128	141	1771	90	70	1735	101	4789
APPROACH %'s :	25.38%	55.27%	19.35%	21.63%	47.60%	30.77%	7.04%	88.46%	4.50%	3.67%	91.03%	5.30%	
PEAK HR START TIME :	415 PM												TOTAL
PEAK HR VOL :	63	141	42	42	98	63	76	930	44	34	888	54	2475
PEAK HR FACTOR :	0.854			0.846			0.944			0.924			0.924

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6152-006 **Day:** Wednesday

City: San Bernardino **Date:** 9/9/2015

NOON

NS/EW Streets:	E St			E St			Baseline St			Baseline St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	1	2	0	1	2	0	

UTURNS			
NB	SB	EB	WB

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	

NB	SB	EB	WB
0	0	0	0

PEAK HR START TIME :	0 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.000

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

E St and Baseline St , San Bernardino

Date: 9/9/2015

Day: Wednesday

Project #: 15-6152-006

City: San Bernardino

AM Peak Hour	730 AM
NOON Peak Hour	
PM Peak Hour	415 PM

Peak Hour Summary

Southbound Approach (E St)

	Lanes 0	2	1		
AM	65	130	62	228	AM
NOON	0	0	0	0	NOON
PM	63	98	42	271	PM

Eastbound Approach (Baseline St)

Lanes	AM	NOON	PM
	649	0	1014
1	72	0	76
2	739	0	930
0	35	0	44

Westbound Approach

Lanes	AM	NOON	PM
0	72	0	54
2	571	0	888
1	16	0	34
	816	0	1014

Northbound Approach

AM	181	13	84	15	AM
NOON	0	0	0	0	NOON
PM	176	63	141	42	PM
		1	2	0	Lanes

CONTROL

Signalized

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
	257	228	AM
	0	0	NOON
	203	271	PM

West Leg AM	NOON	PM		East Leg AM	NOON	PM
649	0	1014		659	0	976
846	0	1050		816	0	1014

	South Leg	
AM	181	112
NOON	0	0
PM	176	246

Total Volume Per Leg

	North Leg
AM	485
NOON	0
PM	474

West Leg AM	NOON	PM	East Leg AM	NOON	PM
1495	0	2064	1475	0	1990

	South Leg
AM	293
NOON	0
PM	422

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6152-007 **Day:** Wednesday

City: San Bernardino **Date:** 9/9/2015

AM

NS/EW Streets:	Sierra Wy			Sierra Wy			Baseline St			Baseline St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	0	1	1	0	1	2	0	1	2	0	
7:00 AM	8	15	8	6	41	3	10	85	5	11	117	4	313
7:15 AM	7	24	10	5	61	6	7	124	8	17	109	4	382
7:30 AM	6	24	5	10	67	5	10	147	16	7	159	6	462
7:45 AM	4	35	7	1	80	14	12	130	11	13	132	8	447
8:00 AM	9	33	8	7	40	16	7	146	9	6	114	3	398
8:15 AM	8	31	2	5	36	11	10	139	8	10	135	8	403
8:30 AM	10	29	3	8	37	13	10	135	9	9	137	8	408
8:45 AM	8	32	6	11	55	14	18	150	10	10	157	7	478
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	60	223	49	53	417	82	84	1056	76	83	1060	48	3291
APPROACH %'s :	18.07%	67.17%	14.76%	9.60%	75.54%	14.86%	6.91%	86.84%	6.25%	6.97%	89.00%	4.03%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	27	123	22	23	223	46	39	562	44	36	540	25	1710
PEAK HR FACTOR :		0.860			0.768			0.932			0.874		0.925

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6152-007 **Day:** Wednesday

City: San Bernardino **Date:** 9/9/2015

PM

NS/EW Streets:	Sierra Wy			Sierra Wy			Baseline St			Baseline St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	0	1	1	0	1	2	0	1	2	0	
4:00 PM	14	59	9	10	32	11	15	190	11	13	173	10	547
4:15 PM	13	50	14	15	39	12	25	191	6	9	169	11	554
4:30 PM	20	40	13	11	34	19	24	206	9	9	207	13	605
4:45 PM	15	47	12	10	45	19	23	192	4	10	170	14	561
5:00 PM	10	69	11	18	30	17	21	201	11	9	194	13	604
5:15 PM	10	67	10	9	27	26	14	183	5	10	179	5	545
5:30 PM	12	67	7	12	35	18	13	166	6	9	192	5	542
5:45 PM	11	46	14	16	27	11	16	171	9	11	172	12	516
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	105	445	90	101	269	133	151	1500	61	80	1456	83	4474
APPROACH %'s :	16.41%	69.53%	14.06%	20.08%	53.48%	26.44%	8.82%	87.62%	3.56%	4.94%	89.93%	5.13%	
PEAK HR START TIME :	415 PM												TOTAL
PEAK HR VOL :	58	206	50	54	148	67	93	790	30	37	740	51	2324
PEAK HR FACTOR :		0.872			0.909			0.955			0.904		0.960

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6152-007 **Day:** Wednesday

City: San Bernardino **Date:** 9/9/2015

NOON

NS/EW Streets:	Sierra Wy			Sierra Wy			Baseline St			Baseline St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	0	1	1	0	1	2	0	1	2	0	

UTURNS			
NB	SB	EB	WB

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	

NB	SB	EB	WB
0	0	0	0

PEAK HR START TIME :	0 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.000

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Sierra Wy and Baseline St , San Bernardino

Date: 9/9/2015

Day: Wednesday

Project #: 15-6152-007

City: San Bernardino

AM Peak Hour	730 AM
NOON Peak Hour	
PM Peak Hour	415 PM

Peak Hour Summary

Southbound Approach (Sierra Wy)

	Lanes 0	1	1		
AM	46	223	23	187	AM
NOON	0	0	0	0	NOON
PM	67	148	54	350	PM

Eastbound Approach (Baseline St)

Lanes	AM	NOON	PM
	613	0	865
1	39	0	93
2	562	0	790
0	44	0	30

Westbound Approach

Lanes	AM	NOON	PM
0	25	0	51
2	540	0	740
1	36	0	37
	607	0	894

Northbound Approach

AM	303	27	123	22	AM
NOON	0	0	0	0	NOON
PM	215	58	206	50	PM
		1	1	0	Lanes

CONTROL

Signalized

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	AM	NOON	PM
North Leg	292	0	269
	187	0	350
West Leg	613	0	865
	645	0	913
East Leg	601	0	828
	607	0	894
South Leg	303	0	215
	172	0	314

Total Volume Per Leg

	AM	NOON	PM
North Leg	479	0	619
West Leg	1258	0	1778
East Leg	1208	0	1722
South Leg	475	0	529

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6152-008 **Day:** Wednesday

City: San Bernardino **Date:** 9/16/2015

AM

NS/EW Streets:	Waterman Ave			Waterman Ave			Baseline St			Baseline St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	1	1	2	1	1	2	0	1	2	0	
7:00 AM	11	45	12	8	88	21	9	64	19	16	79	14	386
7:15 AM	11	43	13	9	89	28	24	89	11	34	98	12	461
7:30 AM	15	49	14	11	94	24	19	81	36	34	115	13	505
7:45 AM	24	71	17	13	104	18	29	73	29	24	104	12	518
8:00 AM	25	76	21	12	95	24	32	98	27	29	83	14	536
8:15 AM	23	81	20	15	95	28	28	84	20	29	99	14	536
8:30 AM	28	90	26	21	75	29	28	81	24	36	102	19	559
8:45 AM	18	93	24	12	95	27	28	85	25	44	116	20	587
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	155	548	147	101	735	199	197	655	191	246	796	118	4088
APPROACH %'s :	18.24%	64.47%	17.29%	9.76%	71.01%	19.23%	18.89%	62.80%	18.31%	21.21%	68.62%	10.17%	
PEAK HR START TIME :	800 AM												TOTAL
PEAK HR VOL :	94	340	91	60	360	108	116	348	96	138	400	67	2218
PEAK HR FACTOR :		0.911			0.957			0.892			0.840		0.945

UTURNS			
NB	SB	EB	WB
NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6152-008 **Day:** Wednesday

City: San Bernardino **Date:** 9/16/2015

PM

NS/EW Streets:	Waterman Ave			Waterman Ave			Baseline St			Baseline St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	1	1	2	1	1	2	0	1	2	0	
4:00 PM	38	134	22	22	112	49	44	139	41	43	119	22	785
4:15 PM	35	104	35	23	129	44	35	143	38	27	99	21	733
4:30 PM	36	119	29	16	99	38	30	93	30	38	98	14	640
4:45 PM	34	129	32	18	113	34	31	110	31	34	94	11	671
5:00 PM	49	114	40	21	114	51	37	132	31	32	95	7	723
5:15 PM	36	136	43	12	141	27	28	115	36	37	105	19	735
5:30 PM	40	119	46	25	117	33	24	127	38	41	119	13	742
5:45 PM	46	106	34	23	95	36	37	134	21	44	92	13	681
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	314	961	281	160	920	312	266	993	266	296	821	120	5710
APPROACH %'s :	20.18%	61.76%	18.06%	11.49%	66.09%	22.41%	17.44%	65.11%	17.44%	23.93%	66.37%	9.70%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	171	475	163	81	467	147	126	508	126	154	411	52	2881
PEAK HR FACTOR :		0.941			0.934			0.950			0.892		0.971

UTURNS			
NB	SB	EB	WB
NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6152-008 **Day:** Wednesday

City: San Bernardino **Date:** 9/16/2015

NOON

NS/EW Streets:	Waterman Ave			Waterman Ave			Baseline St			Baseline St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	1	1	2	1	1	2	0	1	2	0	

UTURNS			
NB	SB	EB	WB

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	

NB	SB	EB	WB
0	0	0	0

PEAK HR START TIME :	0 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.000

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Waterman Ave and Baseline St , San Bernardino

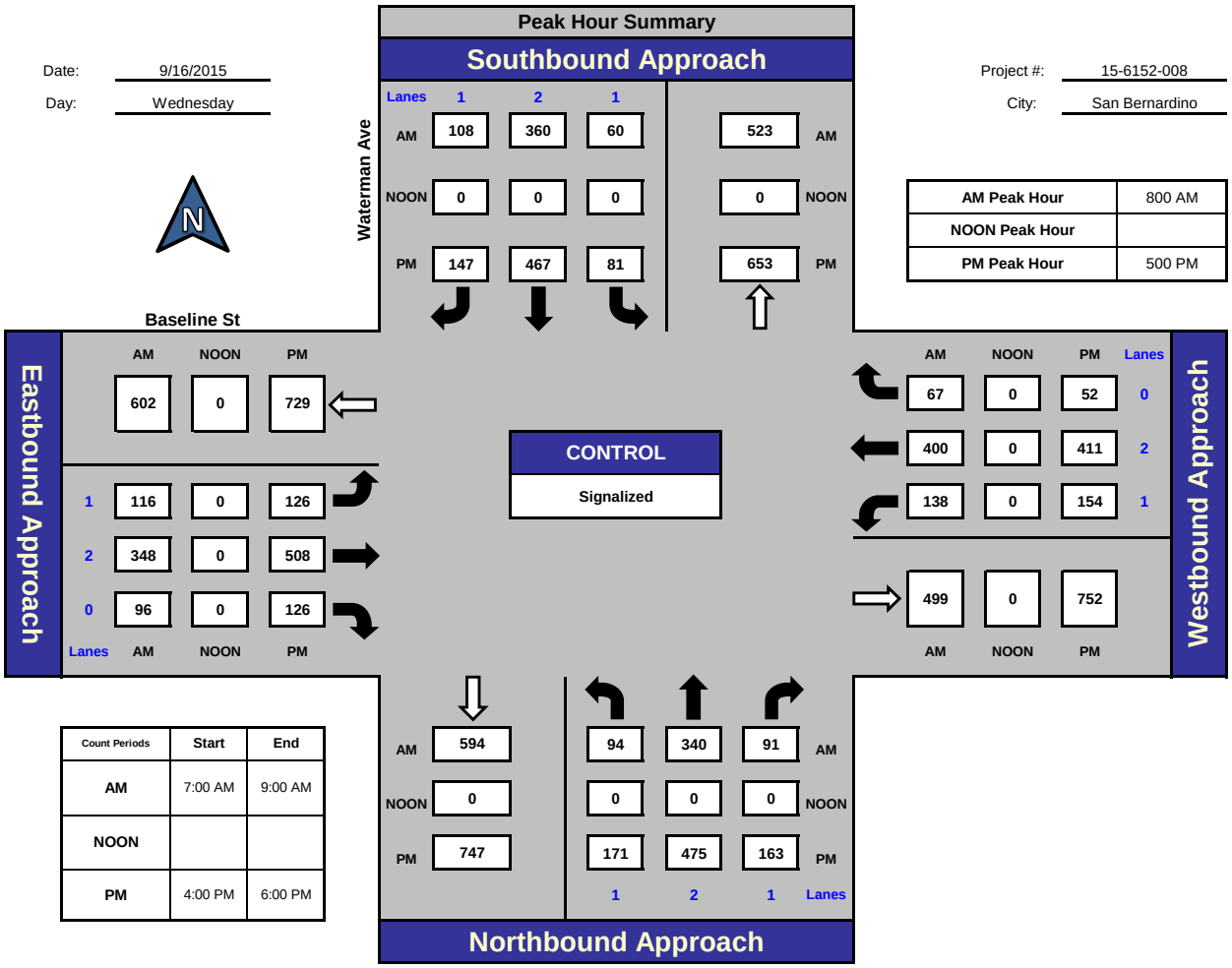
Date: 9/16/2015

Day: Wednesday

Project #: 15-6152-008

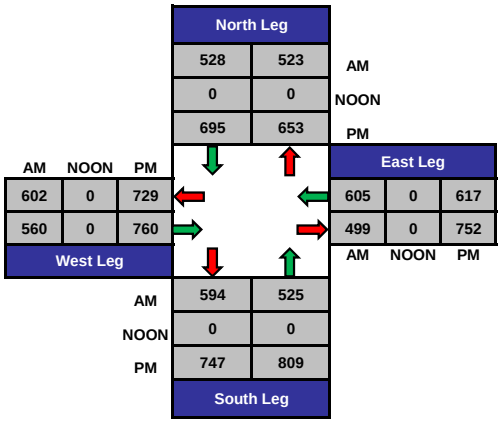
City: San Bernardino

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	500 PM

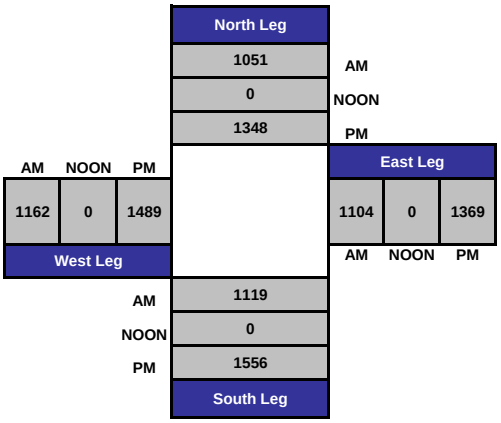


Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6152-009 **Day:** Wednesday

City: San Bernardino **Date:** 9/9/2015

AM

NS/EW Streets:	Tippecanoe Ave			Tippecanoe Ave			Baseline St			Baseline St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	0	0	2	0	0	2	0	1	2	0	
7:00 AM	32	0	33	0	0	1	0	55	42	49	71	1	284
7:15 AM	40	0	46	0	0	0	0	75	65	58	102	0	386
7:30 AM	55	0	30	0	0	0	0	76	44	59	138	0	402
7:45 AM	33	0	18	0	1	0	0	58	51	53	120	0	334
8:00 AM	34	0	25	0	0	1	0	79	48	29	98	0	314
8:15 AM	37	0	37	0	0	0	0	65	33	43	77	0	292
8:30 AM	45	0	39	0	0	1	0	81	54	41	106	1	368
8:45 AM	36	1	28	1	0	2	0	83	32	50	118	0	351
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	312	1	256	1	1	5	0	572	369	382	830	2	2731
APPROACH %'s :	54.83%	0.18%	44.99%	14.29%	14.29%	71.43%	0.00%	60.79%	39.21%	31.47%	68.37%	0.16%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	162	0	119	0	1	1	0	288	208	199	458	0	1436
PEAK HR FACTOR :	0.817			0.500			0.886			0.834			0.893

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6152-009 **Day:** Wednesday

City: San Bernardino **Date:** 9/9/2015

PM

NS/EW Streets:	Tippecanoe Ave			Tippecanoe Ave			Baseline St			Baseline St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	0	0	2	0	0	2	0	1	2	0	
4:00 PM	75	0	65	0	0	1	0	120	24	31	134	0	450
4:15 PM	44	0	46	0	0	2	1	138	51	37	125	1	445
4:30 PM	49	0	55	1	1	2	0	145	41	40	116	1	451
4:45 PM	47	1	61	0	1	3	0	147	47	37	105	2	451
5:00 PM	57	1	49	0	1	3	0	146	37	29	91	0	414
5:15 PM	57	0	67	0	0	0	1	148	31	46	88	0	438
5:30 PM	63	0	61	0	0	2	1	125	41	33	117	0	443
5:45 PM	48	0	49	0	0	1	0	129	38	35	106	0	406
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	440	2	453	1	3	14	3	1098	310	288	882	4	3498
APPROACH %'s :	49.16%	0.22%	50.61%	5.56%	16.67%	77.78%	0.21%	77.82%	21.97%	24.53%	75.13%	0.34%	
PEAK HR START TIME :	400 PM												TOTAL
PEAK HR VOL :	215	1	227	1	2	8	1	550	163	145	480	4	1797
PEAK HR FACTOR :	0.791			0.688			0.920			0.953			0.996

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6152-009 **Day:** Wednesday

City: San Bernardino **Date:** 9/9/2015

NOON

NS/EW Streets:	Tippecanoe Ave			Tippecanoe Ave			Baseline St			Baseline St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	0	0	2	0	0	2	0	1	2	0	
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	0 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.000

UTURNS

NB	SB	EB	WB
NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Tippecanoe Ave and Baseline St , San Bernardino

Date: 9/9/2015

Day: Wednesday

Project #: 15-6152-009

City: San Bernardino

AM Peak Hour	715 AM
NOON Peak Hour	
PM Peak Hour	400 PM

Peak Hour Summary

Southbound Approach (Tippecanoe Ave)

	Lanes 0	2	0		
AM	1	1	0	0	AM
NOON	0	0	0	0	NOON
PM	8	2	1	6	PM

Eastbound Approach (Baseline St)

Lanes	AM	NOON	PM
	621	0	703
0	0	0	1
2	288	0	550
0	208	0	163

Westbound Approach

AM	NOON	PM	Lanes
0	0	4	0
458	0	480	2
199	0	145	1
407	0	778	

Northbound Approach

AM	408	162	0	119	AM
NOON	0	0	0	0	NOON
PM	310	215	1	227	PM
		0	2	0	Lanes

CONTROL

Signalized

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
	2	0	AM
	0	0	NOON
	11	6	PM

West Leg AM	NOON	PM	East Leg AM	NOON	PM
621	0	703	657	0	629
496	0	714	407	0	778

	South Leg	
AM	408	281
NOON	0	0
PM	310	443

Total Volume Per Leg

	North Leg
AM	2
NOON	0
PM	17

West Leg AM	NOON	PM	East Leg AM	NOON	PM
1117	0	1417	1064	0	1407

	South Leg
AM	689
NOON	0
PM	753

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6152-010 **Day:** Wednesday

City: San Bernardino **Date:** 9/9/2015

AM

NS/EW Streets:	Waterman Ave			Waterman Ave			9th St			9th St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	1	2	0	1	2	0	
7:00 AM	7	72	15	17	87	8	11	56	12	25	44	9	363
7:15 AM	12	67	20	13	136	9	9	71	16	32	80	9	474
7:30 AM	18	58	22	25	140	7	18	79	17	38	78	19	519
7:45 AM	15	80	10	13	155	9	24	67	15	31	84	18	521
8:00 AM	20	108	8	12	110	11	18	56	14	20	60	13	450
8:15 AM	12	112	12	14	94	19	15	63	14	25	59	26	465
8:30 AM	15	86	15	17	131	9	18	58	14	33	70	18	484
8:45 AM	12	104	20	14	121	18	21	57	23	43	84	23	540
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	111	687	122	125	974	90	134	507	125	247	559	135	3816
APPROACH %'s :	12.07%	74.67%	13.26%	10.51%	81.92%	7.57%	17.49%	66.19%	16.32%	26.25%	59.40%	14.35%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	65	313	60	63	541	36	69	273	62	121	302	59	1964
PEAK HR FACTOR :	0.805			0.904			0.886			0.893			0.942

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6152-010 **Day:** Wednesday

City: San Bernardino **Date:** 9/9/2015

PM

NS/EW Streets:	Waterman Ave			Waterman Ave			9th St			9th St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	1	2	0	1	2	0	
4:00 PM	23	166	37	17	143	20	27	87	14	36	64	15	649
4:15 PM	21	166	40	15	166	31	33	91	14	26	64	18	685
4:30 PM	23	148	37	23	159	17	31	74	26	31	88	15	672
4:45 PM	21	153	33	25	189	18	35	78	17	45	60	17	691
5:00 PM	15	163	34	18	131	29	29	97	8	35	80	14	653
5:15 PM	28	176	33	17	114	25	28	88	15	28	75	20	647
5:30 PM	27	145	38	22	144	28	35	83	22	35	59	20	658
5:45 PM	12	142	37	17	138	13	27	63	12	23	80	29	593
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	170	1259	289	154	1184	181	245	661	128	259	570	148	5248
APPROACH %'s :	9.90%	73.28%	16.82%	10.14%	77.95%	11.92%	23.69%	63.93%	12.38%	26.51%	58.34%	15.15%	
PEAK HR START TIME :	415 PM												TOTAL
PEAK HR VOL :	80	630	144	81	645	95	128	340	65	137	292	64	2701
PEAK HR FACTOR :		0.941			0.885			0.966			0.920		0.977

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6152-010 **Day:** Wednesday

City: San Bernardino **Date:** 9/9/2015

NOON

NS/EW Streets:	Waterman Ave			Waterman Ave			9th St			9th St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	1	2	0	1	2	0	

UTURNS			
NB	SB	EB	WB

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	

NB	SB	EB	WB
0	0	0	0

PEAK HR START TIME :	0 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.000

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Waterman Ave and 9th St , San Bernardino

Date: 9/9/2015

Day: Wednesday

Project #: 15-6152-010

City: San Bernardino

AM Peak Hour	715 AM
NOON Peak Hour	
PM Peak Hour	415 PM

Peak Hour Summary

Southbound Approach (Waterman Ave)

Lanes	0	2	1		
AM	36	541	63	441	AM
NOON	0	0	0	0	NOON
PM	95	645	81	822	PM

Eastbound Approach (9th St)

Lanes	AM	NOON	PM
	403	0	467
1	69	0	128
2	273	0	340
0	62	0	65

Westbound Approach

Lanes	AM	NOON	PM
0	59	0	64
2	302	0	292
1	121	0	137
	396	0	565

Northbound Approach

				Lanes
AM	724	65	313	60
NOON	0	0	0	0
PM	847	80	630	144

CONTROL: Signalized

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
	640	441	AM
	0	0	NOON
	821	822	PM

West Leg			East Leg		
AM	NOON	PM			
403	0	467	482	0	493
404	0	533	396	0	565
			AM	NOON	PM

	South Leg	
AM	724	438
NOON	0	0
PM	847	854

Total Volume Per Leg

	North Leg
AM	1081
NOON	0
PM	1643

West Leg			East Leg		
AM	NOON	PM			
807	0	1000	878	0	1058
			AM	NOON	PM

	South Leg
AM	1162
NOON	0
PM	1701

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6152-011 **Day:** Wednesday

City: San Bernardino **Date:** 9/9/2015

AM

NS/EW Streets:	I-215 SB Ramps			I-215 SB Ramps			5th St			5th St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	1.3	0.3	1.3	0	4	0	2	2	0	
7:00 AM	0	0	0	124	1	32	0	79	91	56	89	0	472
7:15 AM	0	0	0	191	0	40	0	122	96	72	99	0	620
7:30 AM	0	0	0	192	0	55	0	116	79	72	105	0	619
7:45 AM	0	0	0	186	0	48	0	130	85	64	91	0	604
8:00 AM	0	0	0	164	0	44	0	100	49	43	114	0	514
8:15 AM	0	0	0	112	1	38	0	112	83	62	100	0	508
8:30 AM	0	0	0	115	0	33	0	134	70	63	96	0	511
8:45 AM	0	0	0	125	0	33	0	113	91	67	101	0	530
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	1209	2	323	0	906	644	499	795	0	4378
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	78.81%	0.13%	21.06%	0.00%	58.45%	41.55%	38.56%	61.44%	0.00%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	0	0	733	0	187	0	468	309	251	409	0	2357
PEAK HR FACTOR :	0.000			0.931			0.891			0.932			0.950

UTURNS			
NB	SB	EB	WB
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6152-011 **Day:** Wednesday

City: San Bernardino **Date:** 9/9/2015

PM

NS/EW Streets:	I-215 SB Ramps			I-215 SB Ramps			5th St			5th St				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	0	0	0	1.3	0.3	1.3	0	4	0	2	2	0					
4:00 PM	0	0	0	47	0	29	0	155	67	96	186	0	580	0	0	0	0
4:15 PM	0	0	0	53	0	32	0	117	60	110	183	0	555	0	0	0	0
4:30 PM	0	0	0	43	0	28	0	129	91	134	163	0	588	0	0	0	0
4:45 PM	0	0	0	46	0	35	0	109	75	120	190	0	575	0	0	0	0
5:00 PM	0	0	0	61	0	37	0	110	85	125	177	0	595	0	0	0	0
5:15 PM	0	0	0	39	1	28	0	141	91	149	180	0	629	0	0	0	0
5:30 PM	0	0	0	37	0	32	0	121	82	107	167	0	546	0	0	0	1
5:45 PM	0	0	0	33	0	26	0	119	76	77	176	0	507	0	0	0	0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	0	0	0	359	1	247	0	1001	627	918	1422	0	4575	0	0	0	1
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	59.14%	0.16%	40.69%	0.00%	61.49%	38.51%	39.23%	60.77%	0.00%					
PEAK HR START TIME :	430 PM												TOTAL				
PEAK HR VOL :	0	0	0	189	1	128	0	489	342	528	710	0	2387				
PEAK HR FACTOR :	0.000			0.811			0.895			0.941			0.949				

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6152-011 **Day:** Wednesday

City: San Bernardino **Date:** 9/9/2015

NOON

NS/EW Streets:	I-215 SB Ramps			I-215 SB Ramps			5th St			5th St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	1.3	0.3	1.3	0	4	0	2	2	0	
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	0 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.000

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

I-215 SB Ramps and 5th St , San Bernardino

Date: 9/9/2015

Day: Wednesday

Project #: 15-6152-011

City: San Bernardino

AM Peak Hour	715 AM
NOON Peak Hour	
PM Peak Hour	430 PM

Peak Hour Summary

Southbound Approach (I-215 SB Ramps)

	Lanes 1.3	0.3	1.3		
AM	187	0	733	0	AM
NOON	0	0	0	0	NOON
PM	128	1	189	0	PM

Eastbound Approach (5th St)

Lanes	AM	NOON	PM
	596	0	838
0	0	0	0
4	468	0	489
0	309	0	342

Westbound Approach

Lanes	AM	NOON	PM
0	0	0	0
2	409	0	710
2	251	0	528
	1201	0	678

Northbound Approach

					Lanes
AM	560	0	0	0	AM
NOON	0	0	0	0	NOON
PM	871	0	0	0	PM
		0	0	0	Lanes

CONTROL

Signalized

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	AM	NOON	PM
North Leg	920	0	
	0	0	
	318	0	
West Leg	596	0	838
	777	0	831
South Leg	560	0	
	0	0	
	871	0	
East Leg	660	0	1238
	1201	0	678

Total Volume Per Leg

	AM	NOON	PM
North Leg	920	0	318
West Leg	1373	0	1669
South Leg	560	0	871
East Leg	1861	0	1916

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6152-012 **Day:** Wednesday

City: San Bernardino **Date:** 9/9/2015

AM

NS/EW Streets:	I-215 NB Ramps			I-215 NB Ramps			5th St			5th St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1.3	0.3	1.3	0	0	0	2	2	0	0	4	1	
7:00 AM	53	0	105	0	0	0	36	175	0	0	101	38	508
7:15 AM	69	0	141	0	0	0	38	271	0	0	94	20	633
7:30 AM	51	0	147	0	0	0	30	269	0	0	138	35	670
7:45 AM	47	0	171	0	0	0	31	279	0	0	93	39	660
8:00 AM	58	0	133	0	0	0	36	238	0	0	90	46	601
8:15 AM	61	0	128	0	0	0	32	185	0	0	108	33	547
8:30 AM	39	0	102	0	0	0	40	204	0	0	112	36	533
8:45 AM	54	0	119	0	0	0	26	223	0	0	123	56	601
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	432	0	1046	0	0	0	269	1844	0	0	859	303	4753
APPROACH %'s :	29.23%	0.00%	70.77%	#DIV/0!	#DIV/0!	#DIV/0!	12.73%	87.27%	0.00%	0.00%	73.92%	26.08%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	225	0	592	0	0	0	135	1057	0	0	415	140	2564
PEAK HR FACTOR :		0.937			0.000			0.961			0.802		0.957

UTURNS			
NB	SB	EB	WB
NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6152-012 **Day:** Wednesday

City: San Bernardino **Date:** 9/9/2015

PM

NS/EW Streets:	I-215 NB Ramps			I-215 NB Ramps			5th St			5th St				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	1.3	0.3	1.3	0	0	0	2	2	0	0	4	1					
4:00 PM	79	0	112	0	0	0	54	139	0	0	214	120	718				
4:15 PM	91	0	100	0	0	0	37	125	0	0	191	129	673				
4:30 PM	80	2	92	0	0	0	44	119	0	0	231	141	709				
4:45 PM	75	1	88	0	0	0	30	135	0	0	215	135	679				
5:00 PM	85	0	88	0	0	0	37	128	0	0	230	151	719				
5:15 PM	77	0	94	0	0	0	46	142	0	0	236	184	779				
5:30 PM	76	0	85	0	0	0	52	111	0	0	201	131	656				
5:45 PM	85	0	84	0	0	0	65	94	0	0	172	98	598				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	648	3	743	0	0	0	365	993	0	0	1690	1089	5531	0	0	0	0
APPROACH %'s :	46.48%	0.22%	53.30%	#DIV/0!	#DIV/0!	#DIV/0!	26.88%	73.12%	0.00%	0.00%	60.81%	39.19%					
PEAK HR START TIME :	430 PM												TOTAL				
PEAK HR VOL :	317	3	362	0	0	0	157	524	0	0	912	611	2886				
PEAK HR FACTOR :	0.980			0.000			0.906			0.907			0.926				

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6152-012 **Day:** Wednesday

City: San Bernardino **Date:** 9/9/2015

NOON

NS/EW Streets:	I-215 NB Ramps			I-215 NB Ramps			5th St			5th St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1.3	0.3	1.3	0	0	0	2	2	0	0	4	1	
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	0 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.000

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

I-215 NB Ramps and 5th St , San Bernardino

Date: 9/9/2015

Day: Wednesday

Project #: 15-6152-012

City: San Bernardino

AM Peak Hour	715 AM
NOON Peak Hour	
PM Peak Hour	430 PM

Peak Hour Summary

Southbound Approach (I-215 NB Ramps)

	Left	Thru	Right	
Lanes	0	0	0	
AM	0	0	0	275 AM
NOON	0	0	0	0 NOON
PM	0	0	0	771 PM

Eastbound Approach (5th St)

	AM	NOON	PM
	640	0	1229
2	135	0	157
2	1057	0	524
0	0	0	0
Lanes	AM	NOON	PM

Westbound Approach

	AM	NOON	PM	Lanes
	140	0	611	1
	415	0	912	4
	0	0	0	0
	1649	0	886	
	AM	NOON	PM	

CONTROL

Signalized

Northbound Approach

	Left	Thru	Right	
AM	0	225	0	592 AM
NOON	0	0	0	0 NOON
PM	0	317	3	362 PM
		1.3	0.3	1.3 Lanes

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
	0	275	AM
	0	0	NOON
	0	771	PM

West Leg	AM	NOON	PM
	640	0	1229
	1192	0	681

East Leg	AM	NOON	PM
	555	0	1523
	1649	0	886

South Leg		
AM	0	817
NOON	0	0
PM	0	682

Total Volume Per Leg

North Leg	
275	AM
0	NOON
771	PM

West Leg	AM	NOON	PM
	1832	0	1910

East Leg	AM	NOON	PM
	2204	0	2409

South Leg	
AM	817
NOON	0
PM	682

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6152-013 **Day:** Wednesday

City: San Bernardino **Date:** 9/16/2015

AM

NS/EW Streets:	Sierra Wy			Sierra Wy			5th St			5th St				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	1	2	0	1	2	0	1	2	0	1	2	0					
7:00 AM	4	25	5	10	47	9	1	54	12	4	66	1	238	0	0	0	0
7:15 AM	4	25	2	15	68	9	4	60	29	5	85	3	309	0	0	0	0
7:30 AM	10	20	3	6	79	13	8	63	32	5	81	2	322	0	0	0	0
7:45 AM	10	46	6	14	93	12	8	69	23	11	85	10	387	0	0	0	0
8:00 AM	12	29	6	6	34	8	7	61	23	6	61	9	262	0	0	1	0
8:15 AM	5	39	4	18	41	7	6	77	28	8	67	15	315	0	0	0	0
8:30 AM	11	46	2	12	36	13	5	71	15	5	61	11	288	0	0	0	0
8:45 AM	14	36	5	14	46	10	4	70	16	1	66	12	294	0	0	0	0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	70	266	33	95	444	81	43	525	178	45	572	63	2415	0	0	1	0
APPROACH %'s :	18.97%	72.09%	8.94%	15.32%	71.61%	13.06%	5.76%	70.38%	23.86%	6.62%	84.12%	9.26%					
PEAK HR START TIME :	730 AM												TOTAL				
PEAK HR VOL :	37	134	19	44	247	40	29	270	106	30	294	36	1286				
PEAK HR FACTOR :	0.766			0.695			0.912			0.849			0.831				

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6152-013 **Day:** Wednesday

City: San Bernardino **Date:** 9/16/2015

PM

NS/EW Streets:	Sierra Wy			Sierra Wy			5th St			5th St				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	1	2	0	1	2	0	1	2	0	1	2	0					
4:00 PM	18	53	7	11	45	18	11	114	14	2	85	11	389	0	0	0	0
4:15 PM	16	53	8	12	41	11	11	118	17	3	77	8	375	0	0	0	0
4:30 PM	20	63	8	11	46	12	13	122	16	3	78	6	398	0	0	0	0
4:45 PM	25	61	8	12	30	10	11	113	9	1	60	8	348	0	0	0	0
5:00 PM	41	75	13	11	23	8	31	166	17	2	96	12	495	0	0	0	0
5:15 PM	11	55	9	7	39	5	12	114	22	2	82	14	372	0	0	0	0
5:30 PM	19	61	7	11	40	6	8	121	11	2	82	9	377	0	0	0	0
5:45 PM	14	36	2	11	35	3	19	94	10	1	56	13	294	0	0	0	0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	164	457	62	86	299	73	116	962	116	16	616	81	3048	0	0	0	0
APPROACH %'s :	24.01%	66.91%	9.08%	18.78%	65.28%	15.94%	9.72%	80.57%	9.72%	2.24%	86.40%	11.36%					

PEAK HR START TIME :	415 PM												TOTAL
PEAK HR VOL :	102	252	37	46	140	41	66	519	59	9	311	34	1616
PEAK HR FACTOR :		0.758			0.822			0.752			0.805		0.816

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6152-013 **Day:** Wednesday

City: San Bernardino **Date:** 9/16/2015

NOON

NS/EW Streets:	Sierra Wy			Sierra Wy			5th St			5th St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	1	2	0	1	2	0	

UTURNS			
NB	SB	EB	WB

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	

NB	SB	EB	WB
0	0	0	0

PEAK HR START TIME :	0 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.000

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Sierra Wy and 5th St , San Bernardino

Date: 9/16/2015

Day: Wednesday

Project #: 15-6152-013

City: San Bernardino

AM Peak Hour	730 AM
NOON Peak Hour	
PM Peak Hour	415 PM

Peak Hour Summary

Southbound Approach (Sierra Wy)

	Lanes 0	2	1		
AM	40	247	44	199	AM
NOON	0	0	0	0	NOON
PM	41	140	46	352	PM

Eastbound Approach (5th St)

Lanes	AM	NOON	PM
	371	0	454
1	29	0	66
2	270	0	519
0	106	0	59

Westbound Approach

Lanes	AM	NOON	PM
0	36	0	34
2	294	0	311
1	30	0	9
	333	0	602

Northbound Approach

	1	2	0	Lanes
AM	383	37	134	19	AM
NOON	0	0	0	0	NOON
PM	208	102	252	37	PM

CONTROL

Signalized

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
	331	199	AM
	0	0	NOON
	227	352	PM

West Leg AM	NOON	PM		East Leg AM	NOON	PM
371	0	454		360	0	354
405	0	644		333	0	602

	South Leg	
AM	383	190
NOON	0	0
PM	208	391

Total Volume Per Leg

	North Leg
AM	530
NOON	0
PM	579

West Leg AM	NOON	PM		East Leg AM	NOON	PM
776	0	1098		693	0	956

	South Leg
AM	573
NOON	0
PM	599

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6152-014 **Day:** Wednesday

City: San Bernardino **Date:** 9/9/2015

AM

NS/EW Streets:	Waterman Ave			Waterman Ave			5th St			5th St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	1	1	3	0	1	2	0	1	2	1	
7:00 AM	24	101	11	1	103	26	22	39	19	8	37	3	394
7:15 AM	12	96	16	3	166	32	16	31	27	24	64	1	488
7:30 AM	7	94	3	6	170	31	11	34	25	10	60	4	455
7:45 AM	15	95	9	5	172	29	18	36	29	14	58	4	484
8:00 AM	23	138	9	6	123	20	23	35	28	9	39	9	462
8:15 AM	20	130	16	3	104	22	23	32	33	17	44	5	449
8:30 AM	26	123	9	9	133	29	25	34	20	14	32	7	461
8:45 AM	18	147	12	6	149	21	30	37	32	14	33	6	505
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	145	924	85	39	1120	210	168	278	213	110	367	39	3698
APPROACH %'s :	12.56%	80.07%	7.37%	2.85%	81.81%	15.34%	25.49%	42.19%	32.32%	21.32%	71.12%	7.56%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	57	423	37	20	631	112	68	136	109	57	221	18	1889
PEAK HR FACTOR :		0.760			0.921			0.910			0.831		0.968

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6152-014 **Day:** Wednesday

City: San Bernardino **Date:** 9/9/2015

PM

NS/EW Streets:	Waterman Ave			Waterman Ave			5th St			5th St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	1	1	3	0	1	2	0	1	2	1	
4:00 PM	27	207	17	6	157	21	38	49	39	20	34	12	627
4:15 PM	15	186	16	5	185	31	44	69	33	7	35	9	635
4:30 PM	27	192	22	9	164	27	38	78	20	16	43	8	644
4:45 PM	17	163	18	11	186	32	23	75	23	3	34	11	596
5:00 PM	20	185	27	8	149	32	27	105	34	9	39	8	643
5:15 PM	21	190	27	5	136	26	35	91	14	13	35	4	597
5:30 PM	25	167	13	6	156	28	27	79	17	5	36	7	566
5:45 PM	31	148	14	12	136	21	26	46	23	8	24	10	499
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	183	1438	154	62	1269	218	258	592	203	81	280	69	4807
APPROACH %'s :	10.31%	81.01%	8.68%	4.00%	81.92%	14.07%	24.50%	56.22%	19.28%	18.84%	65.12%	16.05%	
PEAK HR START TIME :	415 PM												TOTAL
PEAK HR VOL :	79	726	83	33	684	122	132	327	110	35	151	36	2518
PEAK HR FACTOR :		0.921			0.916			0.857			0.828		0.977

UTURNS			
NB	SB	EB	WB
NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6152-014 **Day:** Wednesday

City: San Bernardino **Date:** 9/9/2015

NOON

NS/EW Streets:	Waterman Ave			Waterman Ave			5th St			5th St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	1	1	3	0	1	2	0	1	2	1	
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	0 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.000

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Waterman Ave and 5th St , San Bernardino

Date: 9/9/2015

Day: Wednesday

Project #: 15-6152-014

City: San Bernardino

AM Peak Hour	715 AM
NOON Peak Hour	
PM Peak Hour	415 PM

Peak Hour Summary

Southbound Approach (Waterman Ave)

	Lanes 0	3	1		
AM	112	631	20	509	AM
NOON	0	0	0	0	NOON
PM	122	684	33	894	PM

Eastbound Approach (5th St)

Lanes	AM	NOON	PM
	390	0	352
1	68	0	132
2	136	0	327
0	109	0	110

Westbound Approach

Lanes	AM	NOON	PM
1	18	0	36
2	221	0	151
1	57	0	35
	193	0	443

Northbound Approach

	1	2	1	Lanes
AM	797	57	423	37	AM
NOON	0	0	0	0	NOON
PM	829	79	726	83	PM

CONTROL: Signalized

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
	763	509	AM
	0	0	NOON
	839	894	PM

West Leg AM	NOON	PM	East Leg AM	NOON	PM
390	0	352	296	0	222
313	0	569	193	0	443

	South Leg	
AM	797	517
NOON	0	0
PM	829	888

Total Volume Per Leg

	North Leg
AM	1272
NOON	0
PM	1733

West Leg AM	NOON	PM	East Leg AM	NOON	PM
703	0	921	489	0	665

	South Leg
AM	1314
NOON	0
PM	1717

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6152-015 **Day:** Wednesday

City: San Bernardino **Date:** 9/9/2015

AM

NS/EW Streets:	Tippecanoe Ave			Tippecanoe Ave			5th St			5th St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	1	1	1	1	1	1	
7:00 AM	6	80	3	5	107	11	14	31	16	7	25	2	307
7:15 AM	20	85	7	9	160	18	16	36	17	11	60	1	440
7:30 AM	10	84	4	7	128	18	5	14	12	6	55	6	349
7:45 AM	4	50	9	5	127	10	5	20	15	9	55	6	315
8:00 AM	14	66	3	3	78	9	6	27	6	3	38	6	259
8:15 AM	2	68	6	5	80	13	11	23	6	3	47	7	271
8:30 AM	10	67	5	14	86	10	12	26	6	1	28	8	273
8:45 AM	3	63	2	13	102	14	4	32	7	5	27	1	273
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	69	563	39	61	868	103	73	209	85	45	335	37	2487
APPROACH %'s :	10.28%	83.90%	5.81%	5.91%	84.11%	9.98%	19.89%	56.95%	23.16%	10.79%	80.34%	8.87%	
PEAK HR START TIME :	700 AM												TOTAL
PEAK HR VOL :	40	299	23	26	522	57	40	101	60	33	195	15	1411
PEAK HR FACTOR :		0.808			0.809			0.728			0.844		0.802

UTURNS			
NB	SB	EB	WB
NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6152-015 **Day:** Wednesday

City: San Bernardino **Date:** 9/9/2015

PM

NS/EW Streets:	Tippecanoe Ave			Tippecanoe Ave			5th St			5th St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	1	1	1	1	1	1	
4:00 PM	12	130	6	6	75	11	12	49	5	6	34	5	351
4:15 PM	11	93	9	9	79	14	14	63	11	6	29	4	342
4:30 PM	13	108	10	8	88	13	14	77	12	5	32	3	383
4:45 PM	14	112	17	8	105	14	16	73	12	7	23	4	405
5:00 PM	16	137	19	10	73	6	10	112	9	4	26	6	428
5:15 PM	14	115	8	4	82	2	15	97	2	4	27	4	374
5:30 PM	19	132	7	4	82	6	11	80	16	5	26	7	395
5:45 PM	13	75	5	10	79	5	10	46	10	2	15	2	272
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	112	902	81	59	663	71	102	597	77	39	212	35	2950
APPROACH %'s :	10.23%	82.37%	7.40%	7.44%	83.61%	8.95%	13.14%	76.93%	9.92%	13.64%	74.13%	12.24%	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	63	496	51	26	342	28	52	362	39	20	102	21	1602
PEAK HR FACTOR :		0.887			0.780			0.865			0.941		0.936

UTURNS			
NB	SB	EB	WB
NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6152-015 **Day:** Wednesday

City: San Bernardino **Date:** 9/9/2015

NOON

NS/EW Streets:	Tippecanoe Ave			Tippecanoe Ave			5th St			5th St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	1	1	1	1	1	1	
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	0 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.000

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Tippecanoe Ave and 5th St , San Bernardino

Date: 9/9/2015

Day: Wednesday

Project #: 15-6152-015

City: San Bernardino

AM Peak Hour	700 AM
NOON Peak Hour	
PM Peak Hour	445 PM

Peak Hour Summary

Southbound Approach (Tippecanoe Ave)

	Lanes 0	2	1		
AM	57	522	26	354	AM
NOON	0	0	0	0	NOON
PM	28	342	26	569	PM

Eastbound Approach (5th St)

Lanes	AM	NOON	PM
	292	0	193
1	40	0	52
1	101	0	362
1	60	0	39

Westbound Approach

AM	NOON	PM	Lanes
15	0	21	1
195	0	102	1
33	0	20	1
150	0	439	

Northbound Approach

AM	615	40	299	23	AM
NOON	0	0	0	0	NOON
PM	401	63	496	51	PM
		1	2	0	Lanes

CONTROL

Signalized

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
	605	354	AM
	0	0	NOON
	396	569	PM

West Leg AM	NOON	PM	East Leg AM	NOON	PM
292	0	193	243	0	143
201	0	453	150	0	439

	South Leg	
AM	615	362
NOON	0	0
PM	401	610

Total Volume Per Leg

	North Leg
AM	959
NOON	0
PM	965

West Leg AM	NOON	PM	East Leg AM	NOON	PM
493	0	646	393	0	582

	South Leg
AM	977
NOON	0
PM	1011

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6168-016 **Day:** Wednesday

City: San Bernardino **Date:** 9/9/2015

AM

NS/EW Streets:	I-210 SB Ramps			I-210 SB Ramps			5th St			5th St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	0.5	0.5	1	0	2	1	2	2	0	
7:00 AM	0	0	0	40	0	53	0	54	98	191	194	0	630
7:15 AM	0	0	0	37	1	51	0	62	93	171	220	0	635
7:30 AM	0	0	0	49	0	34	0	82	93	197	229	0	684
7:45 AM	0	0	0	41	3	41	0	59	80	170	195	0	589
8:00 AM	0	0	0	37	1	32	0	41	91	128	180	0	510
8:15 AM	0	0	0	39	0	19	0	67	61	119	157	0	462
8:30 AM	0	0	0	34	0	22	0	58	69	123	147	0	453
8:45 AM	0	0	0	40	1	22	0	57	59	123	93	0	395
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	317	6	274	0	480	644	1222	1415	0	4358
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	53.10%	1.01%	45.90%	0.00%	42.70%	57.30%	46.34%	53.66%	0.00%	
PEAK HR START TIME :	700 AM												TOTAL
PEAK HR VOL :	0	0	0	167	4	179	0	257	364	729	838	0	2538
PEAK HR FACTOR :	0.000			0.941			0.887			0.920			0.928

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6168-016 **Day:** Wednesday

City: San Bernardino **Date:** 9/9/2015

PM

NS/EW Streets:	I-210 SB Ramps			I-210 SB Ramps			5th St			5th St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	0.5	0.5	1	0	2	1	2	2	0	
4:00 PM	0	0	0	44	0	23	0	83	98	75	116	0	439
4:15 PM	0	0	0	48	1	20	0	139	77	64	134	0	483
4:30 PM	0	0	0	54	0	16	0	137	127	96	108	0	538
4:45 PM	0	0	0	104	0	34	0	160	108	72	107	0	585
5:00 PM	0	0	0	95	1	26	0	172	123	76	93	0	586
5:15 PM	0	0	0	105	3	43	0	170	119	85	125	0	650
5:30 PM	0	0	0	65	0	19	0	159	67	84	143	0	537
5:45 PM	0	0	0	62	0	23	0	119	89	92	115	0	500
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	577	5	204	0	1139	808	644	941	0	4318
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	73.41%	0.64%	25.95%	0.00%	58.50%	41.50%	40.63%	59.37%	0.00%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	0	0	0	358	4	119	0	639	477	329	433	0	2359
PEAK HR FACTOR :	0.000			0.796			0.946			0.907			0.907

UTURNS

NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6168-016 **Day:** Wednesday

City: San Bernardino **Date:** 9/9/2015

NOON

NS/EW Streets:	I-210 SB Ramps			I-210 SB Ramps			5th St			5th St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	0.5	0.5	1	0	2	1	2	2	0	
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	0 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.000

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

I-210 SB Ramps and 5th St , San Bernardino

Date: 9/9/2015

Day: Wednesday

Project #: 15-6168-016

City: San Bernardino

AM Peak Hour	700 AM
NOON Peak Hour	
PM Peak Hour	430 PM

Peak Hour Summary

Southbound Approach (I-210 SB Ramps)

	Lanes 1	0.5	0.5		
AM	179	4	167	0	AM
NOON	0	0	0	0	NOON
PM	119	4	358	0	PM

Eastbound Approach (5th St)

Lanes	AM	NOON	PM
	1017	0	552
0	0	0	0
2	257	0	639
1	364	0	477

Westbound Approach

AM	NOON	PM	Lanes
0	0	0	0
838	0	433	2
729	0	329	2
424	0	997	

CONTROL: Signalized

Northbound Approach

AM	1097	0	0	0	AM
NOON	0	0	0	0	NOON
PM	810	0	0	0	PM
		0	0	0	Lanes

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
	350	0	AM
	0	0	NOON
	481	0	PM

West Leg AM	NOON	PM	East Leg AM	NOON	PM
1017	0	552	1567	0	762
621	0	1116	424	0	997

	South Leg	
AM	1097	0
NOON	0	0
PM	810	0

Total Volume Per Leg

	North Leg
AM	350
NOON	0
PM	481

West Leg AM	NOON	PM	East Leg AM	NOON	PM
1638	0	1668	1991	0	1759

	South Leg
AM	1097
NOON	0
PM	810

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6168-017 **Day:** Wednesday

City: San Bernardino **Date:** 9/9/2015

AM

NS/EW Streets:	I-210 NB Ramps			I-210 NB Ramps			5th St			5th St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0.5	0.5	1	0	0	0	1	2	0	0	3	0	
7:00 AM	89	1	73	0	0	0	17	81	0	0	301	60	622
7:15 AM	97	1	71	0	0	0	19	76	0	0	285	58	607
7:30 AM	95	1	76	0	0	0	17	118	0	0	338	64	709
7:45 AM	75	1	60	0	0	0	19	77	0	0	284	72	588
8:00 AM	97	0	71	0	0	0	11	71	0	0	211	68	529
8:15 AM	82	0	71	0	0	0	16	86	0	0	202	53	510
8:30 AM	42	1	72	0	0	0	17	78	0	0	222	53	485
8:45 AM	41	0	64	0	0	0	18	75	0	0	180	71	449
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	618	5	558	0	0	0	134	662	0	0	2023	499	4499
APPROACH %'s :	52.33%	0.42%	47.25%	#DIV/0!	#DIV/0!	#DIV/0!	16.83%	83.17%	0.00%	0.00%	80.21%	19.79%	
PEAK HR START TIME :	700 AM												TOTAL
PEAK HR VOL :	356	4	280	0	0	0	72	352	0	0	1208	254	2526
PEAK HR FACTOR :		0.930			0.000			0.785			0.909		0.891

UTURNS

NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6168-017 **Day:** Wednesday

City: San Bernardino **Date:** 9/9/2015

PM

NS/EW Streets:	I-210 NB Ramps			I-210 NB Ramps			5th St			5th St				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	0.5	0.5	1	0	0	0	1	2	0	0	3	0					
4:00 PM	70	0	130	0	0	0	29	101	0	0	119	54	503				
4:15 PM	80	0	139	0	0	0	21	160	0	0	123	58	581				
4:30 PM	51	0	158	0	0	0	38	161	0	0	146	57	611				
4:45 PM	53	0	134	0	0	0	37	225	0	0	126	45	620				
5:00 PM	60	0	138	0	0	0	34	237	0	0	114	52	635				
5:15 PM	76	0	162	0	0	0	25	248	0	0	128	48	687				
5:30 PM	79	1	171	0	0	0	29	201	0	0	150	70	701				
5:45 PM	62	0	155	0	0	0	30	147	0	0	143	46	583				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	531	1	1187	0	0	0	243	1480	0	0	1049	430	4921	0	0	0	0
APPROACH %'s :	30.89%	0.06%	69.05%	#DIV/0!	#DIV/0!	#DIV/0!	14.10%	85.90%	0.00%	0.00%	70.93%	29.07%					
PEAK HR START TIME :	445 PM												TOTAL				
PEAK HR VOL :	268	1	605	0	0	0	125	911	0	0	518	215	2643				
PEAK HR FACTOR :	0.871			0.000			0.949			0.833			0.943				

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6168-017 **Day:** Wednesday

City: San Bernardino **Date:** 9/9/2015

NOON

NS/EW Streets:	I-210 NB Ramps			I-210 NB Ramps			5th St			5th St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0.5	0.5	1	0	0	0	1	2	0	0	3	0	
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	0 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.000

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

I-210 NB Ramps and 5th St , San Bernardino

Date: 9/9/2015

Day: Wednesday

Project #: 15-6168-017

City: San Bernardino

AM Peak Hour	700 AM
NOON Peak Hour	
PM Peak Hour	445 PM

Peak Hour Summary

Southbound Approach (I-210 NB Ramps)

	Lanes 0	0	0		
AM	0	0	0	330	AM
NOON	0	0	0	0	NOON
PM	0	0	0	341	PM

Eastbound Approach (5th St)

	AM	NOON	PM
	1564	0	786
1	72	0	125
2	352	0	911
0	0	0	0
Lanes	AM	NOON	PM

Westbound Approach

	AM	NOON	PM	Lanes
	254	0	215	0
	1208	0	518	3
	0	0	0	0
	632	0	1516	
	AM	NOON	PM	

CONTROL

Signalized

Northbound Approach

AM	0	356	4	280	AM
NOON	0	0	0	0	NOON
PM	0	268	1	605	PM
		0.5	0.5	1	Lanes

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
	0	330	AM
	0	0	NOON
	0	341	PM

West Leg	AM	NOON	PM
	1564	0	786
	424	0	1036

East Leg	AM	NOON	PM
	1462	0	733
	632	0	1516

South Leg		
AM	0	640
NOON	0	0
PM	0	874

Total Volume Per Leg

North Leg	
330	AM
0	NOON
341	PM

West Leg	AM	NOON	PM
	1988	0	1822

East Leg	AM	NOON	PM
	2094	0	2249

South Leg	
AM	640
NOON	0
PM	874

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6152-018 **Day:** Wednesday

City: San Bernardino **Date:** 9/9/2015

AM

NS/EW Streets:	I-215 SB Off Ramp			I-215 SB Off Ramp			3rd St			3rd St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	0.5	2.5	1	0	2	0	1	2	0	
7:00 AM	0	0	0	51	96	23	0	20	3	6	25	0	224
7:15 AM	0	0	0	110	106	19	0	24	0	5	15	0	279
7:30 AM	0	0	0	96	165	40	0	15	3	6	17	0	342
7:45 AM	0	0	0	126	168	39	0	22	3	13	27	0	398
8:00 AM	0	0	0	61	64	23	0	21	3	10	17	0	199
8:15 AM	0	0	0	62	62	22	0	21	1	8	12	0	188
8:30 AM	0	0	0	46	53	12	0	32	6	10	19	0	178
8:45 AM	0	0	0	37	87	21	0	16	5	12	16	0	194
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	589	801	199	0	171	24	70	148	0	2002
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	37.07%	50.41%	12.52%	0.00%	87.69%	12.31%	32.11%	67.89%	0.00%	
PEAK HR START TIME :	700 AM												TOTAL
PEAK HR VOL :	0	0	0	383	535	121	0	81	9	30	84	0	1243
PEAK HR FACTOR :	0.000			0.780			0.900			0.713			0.781

UTURNS			
NB	SB	EB	WB
NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6152-018 **Day:** Wednesday

City: San Bernardino **Date:** 9/9/2015

PM

NS/EW Streets:	I-215 SB Off Ramp			I-215 SB Off Ramp			3rd St			3rd St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	0.5	2.5	1	0	2	0	1	2	0	
4:00 PM	0	0	0	20	41	17	0	37	6	37	12	0	170
4:15 PM	0	0	0	22	48	17	0	19	2	32	13	0	153
4:30 PM	0	0	0	17	53	15	0	16	6	53	24	0	184
4:45 PM	0	0	0	27	59	19	0	26	2	50	17	0	200
5:00 PM	0	0	0	9	46	15	0	35	15	66	31	0	217
5:15 PM	0	0	0	22	35	21	0	47	11	30	27	0	193
5:30 PM	0	0	0	14	49	18	0	16	9	16	15	0	137
5:45 PM	0	0	0	14	40	12	0	49	11	15	18	0	159
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	145	371	134	0	245	62	299	157	0	1413
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	22.31%	57.08%	20.62%	0.00%	79.80%	20.20%	65.57%	34.43%	0.00%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	0	0	0	75	193	70	0	124	34	199	99	0	794
PEAK HR FACTOR :	0.000			0.805			0.681			0.768			0.915

UTURNS			
NB	SB	EB	WB
NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6152-018 **Day:** Wednesday

City: San Bernardino **Date:** 9/9/2015

NOON

NS/EW Streets:	I-215 SB Off Ramp			I-215 SB Off Ramp			3rd St			3rd St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	0.5	2.5	1	0	2	0	1	2	0	
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	0 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.000

UTURNS			
NB	SB	EB	WB
NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

I-215 SB Off Ramp and 3rd St , San Bernardino

Date: 9/9/2015

Day: Wednesday

Project #: 15-6152-018

City: San Bernardino

AM Peak Hour	700 AM
NOON Peak Hour	
PM Peak Hour	430 PM

Peak Hour Summary

Southbound Approach — I-215 SB Off Ramp

	Lanes 1	2.5	0.5		
AM	121	535	383	0	AM
NOON	0	0	0	0	NOON
PM	70	193	75	0	PM

Eastbound Approach — 3rd St

Lanes	AM	NOON	PM
	205	0	169
0	0	0	0
2	81	0	124
0	9	0	34

Westbound Approach

AM	NOON	PM	Lanes
0	0	0	0
84	0	99	2
30	0	199	1
464	0	199	

CONTROL: Signalized

Northbound Approach

AM	574	0	0	0	AM
NOON	0	0	0	0	NOON
PM	426	0	0	0	PM
		0	0	0	Lanes

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
	1039	0	AM
	0	0	NOON
	338	0	PM

West Leg AM	NOON	PM		East Leg AM	NOON	PM
205	0	169		114	0	298
90	0	158		464	0	199

	South Leg	
AM	574	0
NOON	0	0
PM	426	0

Total Volume Per Leg

	North Leg
AM	1039
NOON	0
PM	338

West Leg AM	NOON	PM	East Leg AM	NOON	PM
295	0	327	578	0	497

	South Leg
AM	574
NOON	0
PM	426

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6152-019 **Day:** Wednesday

City: San Bernardino **Date:** 9/9/2015

AM

NS/EW Streets:	I-215 NB On Ramp			I-215 NB On Ramp			3rd St			3rd St				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	0.5	1	0.5	0	0	0	1	2	0	0	2.5	1.5					
7:00 AM	9	31	25	0	0	0	11	59	0	0	23	7	165	0	0	0	0
7:15 AM	5	47	21	0	0	0	15	121	0	0	14	13	236	0	0	0	0
7:30 AM	7	53	34	0	0	0	5	104	0	0	16	11	230	0	0	0	0
7:45 AM	6	47	38	0	0	0	8	133	0	0	33	11	276	0	0	0	0
8:00 AM	8	52	26	0	0	0	7	81	0	0	22	7	203	0	0	0	0
8:15 AM	3	44	16	0	0	0	14	70	0	0	14	5	166	0	0	0	0
8:30 AM	2	58	23	0	0	0	15	62	0	0	28	6	194	0	0	0	0
8:45 AM	4	47	9	0	0	0	9	44	0	0	23	9	145	0	0	0	0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	44	379	192	0	0	0	84	674	0	0	173	69	1615	0	0	0	0
APPROACH %'s :	7.15%	61.63%	31.22%	#DIV/0!	#DIV/0!	#DIV/0!	11.08%	88.92%	0.00%	0.00%	71.49%	28.51%					

PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	26	199	119	0	0	0	35	439	0	0	85	42	945
PEAK HR FACTOR :		0.915			0.000			0.840			0.722		0.856

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6152-019 **Day:** Wednesday

City: San Bernardino **Date:** 9/9/2015

PM

NS/EW Streets:	I-215 NB On Ramp			I-215 NB On Ramp			3rd St			3rd St				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	0.5	1	0.5	0	0	0	1	2	0	0	2.5	1.5					
4:00 PM	4	107	9	0	0	0	22	34	0	0	48	38	262	0	0	0	0
4:15 PM	0	104	13	0	0	0	15	27	0	0	41	40	240	0	0	0	0
4:30 PM	3	133	9	0	0	0	9	23	0	0	81	54	312	0	0	0	0
4:45 PM	4	115	13	0	0	0	12	39	0	0	56	43	282	0	0	0	0
5:00 PM	1	141	19	0	0	0	26	21	0	0	96	96	400	0	0	1	0
5:15 PM	8	100	36	0	0	0	27	41	0	0	48	47	307	0	0	0	0
5:30 PM	4	103	10	0	0	0	8	23	0	0	28	47	223	0	0	0	0
5:45 PM	4	102	11	0	0	0	39	25	0	0	31	28	240	0	0	0	0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	28	905	120	0	0	0	158	233	0	0	429	393	2266	0	0	1	0
APPROACH %'s :	2.66%	85.94%	11.40%	#DIV/0!	#DIV/0!	#DIV/0!	40.41%	59.59%	0.00%	0.00%	52.19%	47.81%					
PEAK HR START TIME :	430 PM												TOTAL				
PEAK HR VOL :	16	489	77	0	0	0	74	124	0	0	281	240	1301				
PEAK HR FACTOR :		0.904			0.000			0.728			0.678		0.813				

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6152-019 **Day:** Wednesday

City: San Bernardino **Date:** 9/9/2015

NOON

NS/EW Streets:	I-215 NB On Ramp			I-215 NB On Ramp			3rd St			3rd St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0.5	1	0.5	0	0	0	1	2	0	0	2.5	1.5	
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	0 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.000

UTURNS

NB	SB	EB	WB
NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

I-215 NB On Ramp and 3rd St , San Bernardino

Date: 9/9/2015

Day: Wednesday

Project #: 15-6152-019

City: San Bernardino

AM Peak Hour	715 AM
NOON Peak Hour	
PM Peak Hour	430 PM

Peak Hour Summary

Southbound Approach (I-215 NB On Ramp)

	Left	Thru	Right	
Lanes	0	0	0	
AM	0	0	0	276 AM
NOON	0	0	0	0 NOON
PM	0	0	0	803 PM

Eastbound Approach (3rd St)

	AM	NOON	PM
	111	0	297
1	35	0	74
2	439	0	124
0	0	0	0
Lanes	AM	NOON	PM

Westbound Approach

	AM	NOON	PM	Lanes
	42	0	240	1.5
	85	0	281	2.5
	0	0	0	0
	558	0	201	
	AM	NOON	PM	

Northbound Approach

	Left	Thru	Right	
AM	0	26	199	119 AM
NOON	0	0	0	0 NOON
PM	0	16	489	77 PM
Lanes		0.5	1	0.5 Lanes

CONTROL: Signalized

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
	0	276	AM
	0	0	NOON
	0	803	PM

West Leg	AM	NOON	PM
	111	0	297
	474	0	198

East Leg	AM	NOON	PM
	127	0	521
	558	0	201

	South Leg	
AM	0	344
NOON	0	0
PM	0	582

Total Volume Per Leg

North Leg	
276	AM
0	NOON
803	PM

West Leg	AM	NOON	PM
	585	0	495

East Leg	AM	NOON	PM
	685	0	722

	South Leg
AM	344
NOON	0
PM	582

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6152-020 **Day:** Wednesday

City: San Bernardino **Date:** 9/9/2015

AM

NS/EW Streets:	I-215 SB On Ramp			I-215 SB On Ramp			2nd St			2nd St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	1.3	0.3	1.3	0	3	1	2	2	0	
7:00 AM	0	0	0	81	11	13	0	86	14	64	49	0	318
7:15 AM	0	0	0	87	11	13	0	89	15	65	62	0	342
7:30 AM	0	0	0	100	23	45	0	112	23	74	74	0	451
7:45 AM	0	0	0	126	24	41	0	115	20	39	74	0	439
8:00 AM	0	0	0	56	12	8	0	101	18	52	77	0	324
8:15 AM	0	0	0	54	10	9	0	88	21	51	64	0	297
8:30 AM	0	0	0	41	14	15	0	94	21	70	66	0	321
8:45 AM	0	0	0	74	13	17	0	87	23	78	89	0	381
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	619	118	161	0	772	155	493	555	0	2873
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	68.93%	13.14%	17.93%	0.00%	83.28%	16.72%	47.04%	52.96%	0.00%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	0	0	369	70	107	0	417	76	230	287	0	1556
PEAK HR FACTOR :	0.000			0.715			0.913			0.873			0.863

UTURNS			
NB	SB	EB	WB
NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6152-020 **Day:** Wednesday

City: San Bernardino **Date:** 9/9/2015

PM

NS/EW Streets:	I-215 SB On Ramp			I-215 SB On Ramp			2nd St			2nd St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	1.3	0.3	1.3	0	3	1	2	2	0	
4:00 PM	0	0	0	28	44	12	0	128	36	166	114	0	528
4:15 PM	0	0	0	28	32	17	0	99	22	135	109	0	442
4:30 PM	0	0	0	36	61	17	0	101	33	186	103	0	537
4:45 PM	0	0	0	44	48	14	0	81	25	145	122	0	479
5:00 PM	0	0	0	32	81	16	0	132	43	207	136	0	647
5:15 PM	0	0	0	27	41	10	0	109	39	162	115	0	503
5:30 PM	0	0	0	32	28	16	0	103	25	131	103	0	438
5:45 PM	0	0	0	23	21	10	0	111	20	106	71	0	362
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	250	356	112	0	864	243	1238	873	0	3936
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	34.82%	49.58%	15.60%	0.00%	78.05%	21.95%	58.65%	41.35%	0.00%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	0	0	0	139	231	57	0	423	140	700	476	0	2166
PEAK HR FACTOR :	0.000			0.828			0.804			0.857			0.837

UTURNS			
NB	SB	EB	WB
NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6152-020 **Day:** Wednesday

City: San Bernardino **Date:** 9/9/2015

NOON

NS/EW Streets:	I-215 SB On Ramp			I-215 SB On Ramp			2nd St			2nd St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	1.3	0.3	1.3	0	3	1	2	2	0	
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	0 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.000

UTURNS			
NB	SB	EB	WB
NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

I-215 SB On Ramp and 2nd St , San Bernardino

Date: 9/9/2015

Day: Wednesday

Project #: 15-6152-020

City: San Bernardino

AM Peak Hour	715 AM
NOON Peak Hour	
PM Peak Hour	430 PM

Peak Hour Summary

Southbound Approach (I-215 SB On Ramp)

	Lanes 1.3	0.3	1.3		
AM	107	70	369	0	AM
NOON	0	0	0	0	NOON
PM	57	231	139	0	PM

Eastbound Approach (2nd St)

Lanes	AM	NOON	PM
	394	0	533
0	0	0	0
3	417	0	423
1	76	0	140

Westbound Approach

	AM	NOON	PM	Lanes
	0	0	0	0
	287	0	476	2
	230	0	700	2
	786	0	562	

Northbound Approach

AM	376	0	0	0	AM
NOON	0	0	0	0	NOON
PM	1071	0	0	0	PM
Lanes		0	0	0	Lanes

CONTROL

Signalized

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
	546	0	AM
	0	0	NOON
	427	0	PM

West Leg AM	NOON	PM	East Leg AM	NOON	PM
394	0	533	517	0	1176
493	0	563	786	0	562

	South Leg	
AM	376	0
NOON	0	0
PM	1071	0

Total Volume Per Leg

	North Leg
AM	546
NOON	0
PM	427

West Leg AM	NOON	PM	East Leg AM	NOON	PM
887	0	1096	1303	0	1738

	South Leg
AM	376
NOON	0
PM	1071

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6152-021 **Day:** Wednesday

City: San Bernardino **Date:** 9/9/2015

AM

NS/EW Streets:	I-215 NB Off Ramp			I-215 NB Off Ramp			2nd St			2nd St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1.3	0.3	1.3	0	0	0	2	2	0	0	4	1	
7:00 AM	24	35	171	0	0	0	18	145	0	0	93	18	504
7:15 AM	24	30	256	0	0	0	14	159	0	0	104	26	613
7:30 AM	24	35	289	0	0	0	27	190	0	0	123	29	717
7:45 AM	20	41	311	0	0	0	27	219	0	0	90	23	731
8:00 AM	42	33	269	0	0	0	25	129	0	0	87	24	609
8:15 AM	29	18	216	0	0	0	25	119	0	0	86	29	522
8:30 AM	36	14	209	0	0	0	25	113	0	0	109	39	545
8:45 AM	41	12	167	0	0	0	13	144	0	0	118	34	529
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	240	218	1888	0	0	0	174	1218	0	0	810	222	4770
APPROACH %'s :	10.23%	9.29%	80.48%	#DIV/0!	#DIV/0!	#DIV/0!	12.50%	87.50%	0.00%	0.00%	78.49%	21.51%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	110	139	1125	0	0	0	93	697	0	0	404	102	2670
PEAK HR FACTOR :		0.923			0.000			0.803			0.832		0.913

UTURNS

NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6152-021 **Day:** Wednesday

City: San Bernardino **Date:** 9/9/2015

PM

NS/EW Streets:	I-215 NB Off Ramp			I-215 NB Off Ramp			2nd St			2nd St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1.3	0.3	1.3	0	0	0	2	2	0	0	4	1	
4:00 PM	49	6	108	0	0	0	35	121	0	0	220	69	608
4:15 PM	38	12	95	0	0	0	23	91	0	0	198	74	531
4:30 PM	37	10	94	0	0	0	34	110	0	0	261	98	644
4:45 PM	38	14	98	0	0	0	30	102	0	0	226	88	596
5:00 PM	38	6	89	0	0	0	40	130	0	0	309	129	741
5:15 PM	33	10	93	0	0	0	35	100	0	0	251	79	601
5:30 PM	36	11	85	0	0	0	25	108	0	0	191	82	538
5:45 PM	25	18	86	0	0	0	30	102	0	0	160	65	486
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	294	87	748	0	0	0	252	864	0	0	1816	684	4745
APPROACH %'s :	26.04%	7.71%	66.25%	#DIV/0!	#DIV/0!	#DIV/0!	22.58%	77.42%	0.00%	0.00%	72.64%	27.36%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	146	40	374	0	0	0	139	442	0	0	1047	394	2582
PEAK HR FACTOR :		0.933			0.000			0.854			0.822		0.871

UTURNS

NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6152-021 **Day:** Wednesday

City: San Bernardino **Date:** 9/9/2015

NOON

NS/EW Streets:	I-215 NB Off Ramp			I-215 NB Off Ramp			2nd St			2nd St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1.3	0.3	1.3	0	0	0	2	2	0	0	4	1	
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	0 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.000

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

I-215 NB Off Ramp and 2nd St , San Bernardino

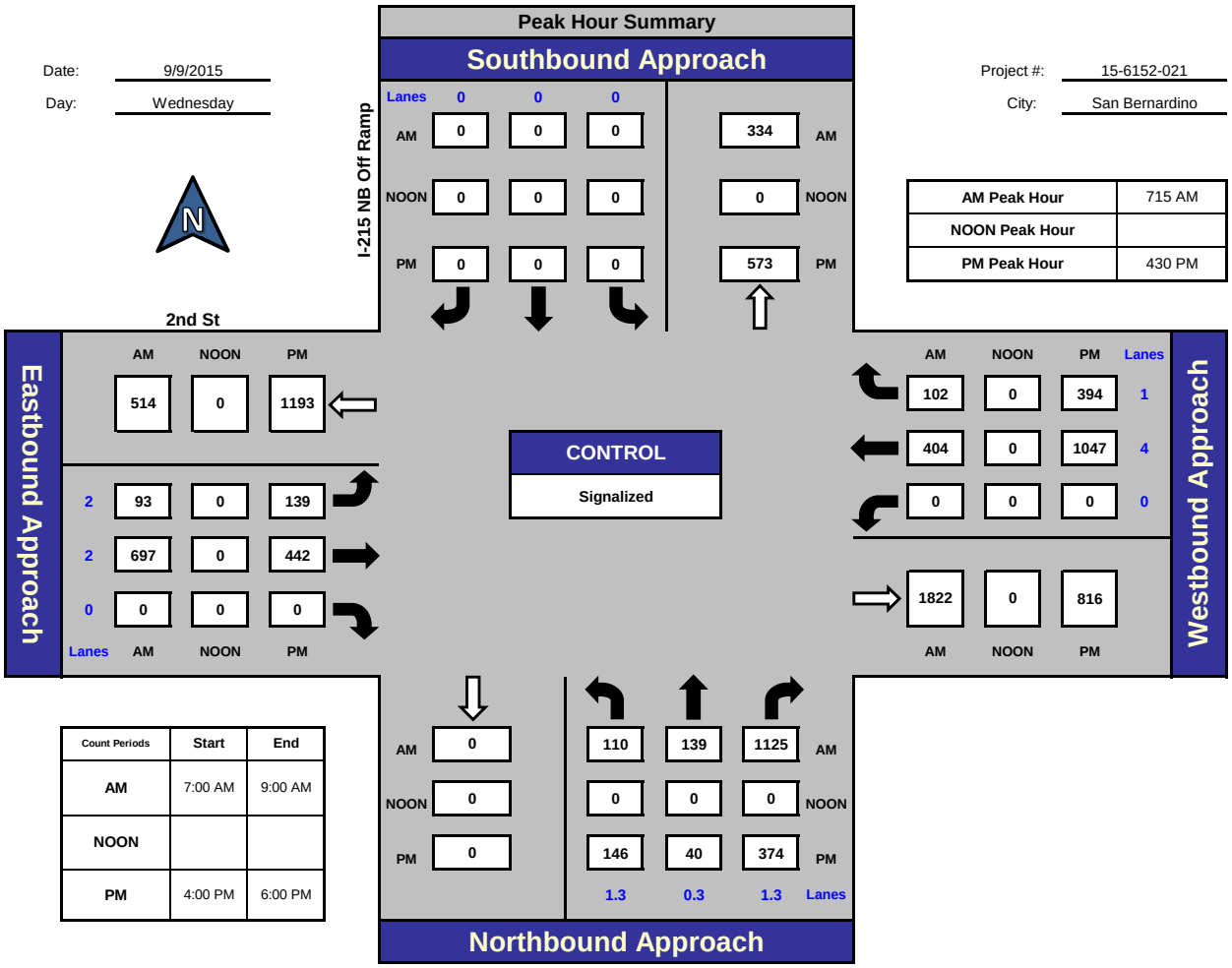
Date: 9/9/2015

Day: Wednesday

Project #: 15-6152-021

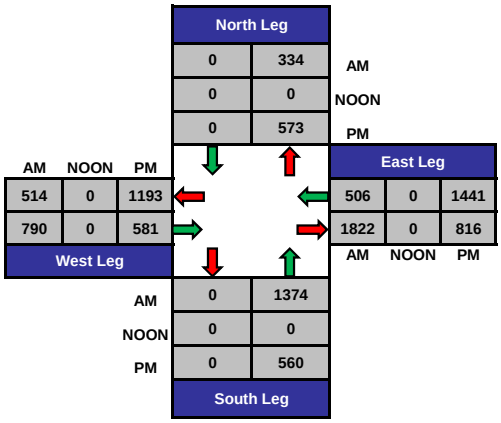
City: San Bernardino

AM Peak Hour	715 AM
NOON Peak Hour	
PM Peak Hour	430 PM

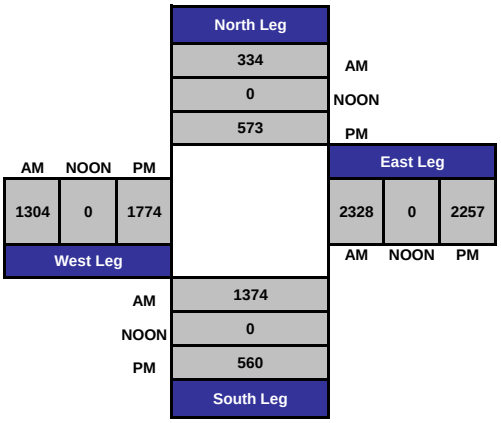


Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6152-022 **Day:** Wednesday

City: San Bernardino **Date:** 9/9/2015

AM

NS/EW Streets:	Waterman Ave			Waterman Ave			2nd St			2nd St				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	1	3	0	0	3	0	2	0	1	0	1	0					
7:00 AM	12	104	0	0	83	31	43	0	18	0	0	0	291	0	0	0	0
7:15 AM	11	111	0	0	174	22	69	0	11	0	0	0	398	0	0	0	0
7:30 AM	11	110	0	0	165	34	40	0	27	0	0	0	387	0	0	0	0
7:45 AM	24	128	0	0	189	34	38	0	13	0	0	0	426	0	0	0	0
8:00 AM	14	144	0	0	134	23	51	0	18	0	0	0	384	0	0	0	0
8:15 AM	21	138	0	0	135	28	41	0	14	0	0	0	377	0	0	0	0
8:30 AM	10	140	0	0	139	36	55	0	7	0	0	0	387	0	0	0	0
8:45 AM	11	139	0	0	170	34	38	0	14	0	0	0	406	0	0	0	0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	114	1014	0	0	1189	242	375	0	122	0	0	0	3056	0	0	0	0
APPROACH %'s :	10.11%	89.89%	0.00%	0.00%	83.09%	16.91%	75.45%	0.00%	24.55%	#DIV/0!	#DIV/0!	#DIV/0!					
PEAK HR START TIME :	715 AM												TOTAL				
PEAK HR VOL :	60	493	0	0	662	113	198	0	69	0	0	0	1595				
PEAK HR FACTOR :		0.875			0.869			0.834			0.000		0.936				

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6152-022 **Day:** Wednesday

City: San Bernardino **Date:** 9/9/2015

PM

NS/EW Streets:	Waterman Ave			Waterman Ave			2nd St			2nd St				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	1	3	0	0	3	0	2	0	1	0	1	0					
4:00 PM	20	184	0	0	183	53	72	0	22	0	0	0	534	0	0	0	0
4:15 PM	13	160	0	0	202	34	53	0	26	0	0	0	488	0	0	0	0
4:30 PM	26	192	0	0	202	37	54	0	22	0	0	0	533	0	0	0	0
4:45 PM	13	162	0	1	203	29	63	0	31	0	0	0	502	0	1	0	0
5:00 PM	29	196	0	0	198	33	68	0	29	0	0	0	553	0	0	0	0
5:15 PM	19	199	0	0	171	34	48	0	19	0	0	0	490	0	0	0	0
5:30 PM	20	169	0	0	180	28	42	0	25	0	0	0	464	0	0	0	0
5:45 PM	8	152	0	0	153	29	53	0	17	0	0	0	412	0	0	0	0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	148	1414	0	1	1492	277	453	0	191	0	0	0	3976	0	1	0	0
APPROACH %'s :	9.48%	90.52%	0.00%	0.06%	84.29%	15.65%	70.34%	0.00%	29.66%	#DIV/0!	#DIV/0!	#DIV/0!					
PEAK HR START TIME :	430 PM												TOTAL				
PEAK HR VOL :	87	749	0	1	774	133	233	0	101	0	0	0	2078				
PEAK HR FACTOR :	0.929			0.950			0.861			0.000			0.939				

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6152-022 **Day:** Wednesday

City: San Bernardino **Date:** 9/9/2015

NOON

NS/EW Streets:	Waterman Ave			Waterman Ave			2nd St			2nd St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	3	0	0	3	0	2	0	1	0	1	0	
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	0 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.000

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Waterman Ave and 2nd St , San Bernardino

Date: 9/9/2015

Day: Wednesday

Project #: 15-6152-022

City: San Bernardino

AM Peak Hour	715 AM
NOON Peak Hour	
PM Peak Hour	430 PM

Peak Hour Summary

Southbound Approach (Waterman Ave)

	Left	Thru	Right		
Lanes	0	3	0		
AM	113	662	0	691	AM
NOON	0	0	0	0	NOON
PM	133	774	1	982	PM

Eastbound Approach (2nd St)

	AM	NOON	PM
	173	0	220
2	198	0	233
0	0	0	0
1	69	0	101
Lanes	AM	NOON	PM

Westbound Approach

	AM	NOON	PM	Lanes
	0	0	0	0
	0	0	0	1
	0	0	0	0
	0	0	1	
	AM	NOON	PM	

CONTROL

Signalized

Northbound Approach

	Left	Thru	Right	
AM	731	60	493	0	AM
NOON	0	0	0	0	NOON
PM	875	87	749	0	PM
		1	3	0	Lanes

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
	775	691	AM
	0	0	NOON
	908	982	PM

West Leg			East Leg		
AM	NOON	PM			
173	0	220	0	0	0
267	0	334	0	0	1
			AM	NOON	PM

	South Leg	
AM	731	553
NOON	0	0
PM	875	836

Total Volume Per Leg

	North Leg
	1466 AM
	0 NOON
	1890 PM

West Leg			East Leg		
AM	NOON	PM			
440	0	554	0	0	1
			AM	NOON	PM

	South Leg
AM	1284
NOON	0
PM	1711

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6152-023 **Day:** Wednesday

City: San Bernardino **Date:** 9/9/2015

AM

NS/EW Streets:	Waterman Ave			Waterman Ave			I-10 WB On Ramp			I-10 WB On Ramp			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	0	3	1	0	0	0	0	0	0	
7:00 AM	47	329	0	0	115	22	0	0	0	0	0	0	513
7:15 AM	54	376	0	0	157	32	0	0	0	0	0	0	619
7:30 AM	69	462	0	0	121	32	0	0	0	0	0	0	684
7:45 AM	61	465	0	0	198	33	0	0	0	0	0	0	757
8:00 AM	57	438	0	0	178	44	0	0	0	0	0	0	717
8:15 AM	70	375	0	0	199	40	0	0	0	0	0	0	684
8:30 AM	50	377	0	0	160	52	0	0	0	0	0	0	639
8:45 AM	56	372	0	0	145	46	0	0	0	0	0	0	619
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	464	3194	0	0	1273	301	0	0	0	0	0	0	5232
APPROACH %'s :	12.68%	87.32%	0.00%	0.00%	80.88%	19.12%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	257	1740	0	0	696	149	0	0	0	0	0	0	2842
PEAK HR FACTOR :		0.940			0.884			0.000			0.000		0.939

UTURNS			
NB	SB	EB	WB
1	0	0	0
2	0	0	0
1	0	0	0
0	0	0	0
3	0	0	0
3	0	0	0
0	0	0	0
1	0	0	0
NB	SB	EB	WB
11	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6152-023 **Day:** Wednesday

City: San Bernardino **Date:** 9/9/2015

PM

NS/EW Streets:	Waterman Ave			Waterman Ave			I-10 WB On Ramp			I-10 WB On Ramp			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	0	3	1	0	0	0	0	0	0	
4:00 PM	89	261	0	0	297	122	0	0	0	0	0	0	769
4:15 PM	98	288	0	0	229	79	0	0	0	0	0	0	694
4:30 PM	99	306	0	0	336	114	0	0	0	0	0	0	855
4:45 PM	98	333	0	0	335	104	0	0	0	0	0	0	870
5:00 PM	73	356	0	0	373	212	0	0	0	0	0	0	1014
5:15 PM	100	337	0	0	328	174	0	0	0	0	0	0	939
5:30 PM	110	305	0	0	296	122	0	0	0	0	0	0	833
5:45 PM	88	292	0	0	252	89	0	0	0	0	0	0	721
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	755	2478	0	0	2446	1016	0	0	0	0	0	0	6695
APPROACH %'s :	23.35%	76.65%	0.00%	0.00%	70.65%	29.35%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	370	1332	0	0	1372	604	0	0	0	0	0	0	3678
PEAK HR FACTOR :		0.974			0.844			0.000			0.000		0.907

UTURNS			
NB	SB	EB	WB
1	0	0	0
1	0	0	0
1	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
1	0	0	0
NB	SB	EB	WB
4	0	0	0

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 15-6152-023 **Day:** Wednesday

City: San Bernardino **Date:** 9/9/2015

NOON

NS/EW Streets:	Waterman Ave			Waterman Ave			I-10 WB On Ramp			I-10 WB On Ramp			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	0	3	1	0	0	0	0	0	0	
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	0 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000			0.000			0.000			0.000			0.000

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No Control

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Waterman Ave and I-10 WB On Ramp , San Bernardino

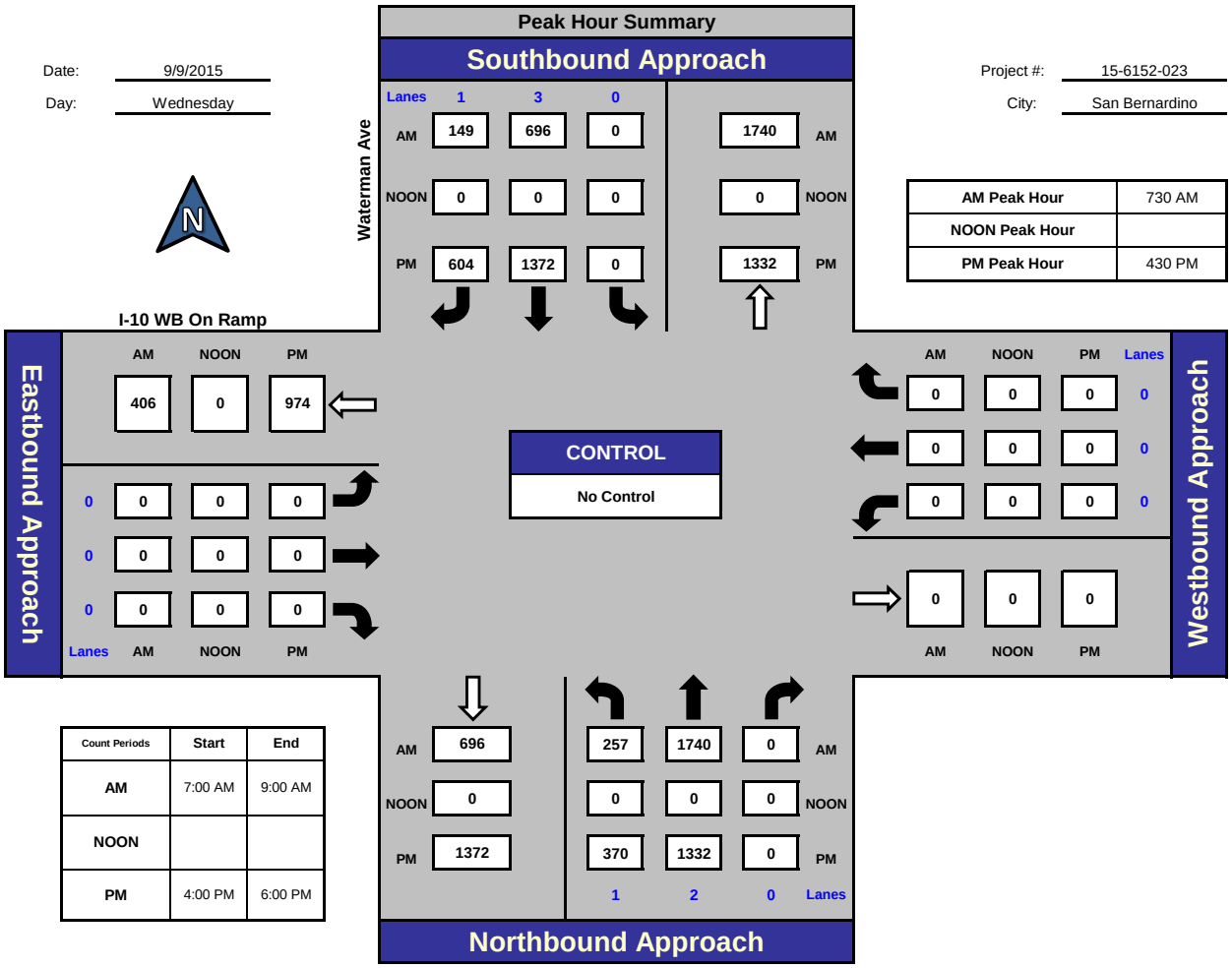
Date: 9/9/2015

Day: Wednesday

Project #: 15-6152-023

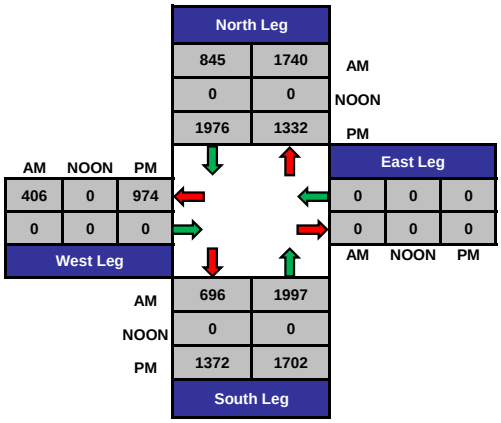
City: San Bernardino

AM Peak Hour	730 AM
NOON Peak Hour	
PM Peak Hour	430 PM

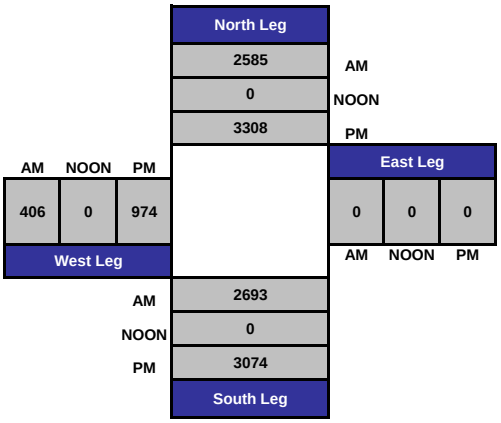


Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



APPENDIX C: EXISTING (2015) LEVEL OF SERVICE AND SYNCHRO WORKSHEETS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	6	72	138	178	583	194	255	406	105	15	572	638
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1765	1765	1765	1765
Adj Flow Rate, veh/h	6	77	148	191	627	209	274	437	45	16	500	673
Adj No. of Lanes	1	2	0	1	2	0	1	2	1	1	1	2
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	91	447	400	295	659	220	467	1602	717	168	529	900
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.28	0.48	0.48	0.10	0.30	0.30
Sat Flow, veh/h	654	1676	1500	1151	2473	823	1681	3353	1500	1681	1765	3000
Grp Volume(v), veh/h	6	77	148	191	425	411	274	437	45	16	500	673
Grp Sat Flow(s),veh/h/ln	654	1676	1500	1151	1676	1619	1681	1676	1500	1681	1765	1500
Q Serve(g_s), s	0.8	3.2	7.2	14.6	22.4	22.5	12.7	7.0	1.5	0.8	24.9	18.2
Cycle Q Clear(g_c), s	23.3	3.2	7.2	21.8	22.4	22.5	12.7	7.0	1.5	0.8	24.9	18.2
Prop In Lane	1.00		1.00	1.00		0.51	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	91	447	400	295	447	432	467	1602	717	168	529	900
V/C Ratio(X)	0.07	0.17	0.37	0.65	0.95	0.95	0.59	0.27	0.06	0.10	0.94	0.75
Avail Cap(c_a), veh/h	91	447	400	295	447	432	467	1602	717	168	529	900
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.75	0.75	0.75	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.9	25.4	26.8	35.7	32.4	32.4	28.0	14.1	12.7	36.8	30.8	28.4
Incr Delay (d2), s/veh	1.4	0.8	2.6	10.6	31.8	32.8	4.0	0.3	0.1	1.1	27.5	5.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.6	3.3	5.5	14.3	14.0	6.4	3.3	0.6	0.4	16.1	8.2
LnGrp Delay(d),s/veh	45.3	26.2	29.5	46.3	64.2	65.2	32.0	14.4	12.8	37.9	58.3	34.1
LnGrp LOS	D	C	C	D	E	E	C	B	B	D	E	C
Approach Vol, veh/h		231			1027			756			1189	
Approach Delay, s/veh		28.8			61.3			20.7			44.3	
Approach LOS		C			E			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	13.0	48.0		29.0	29.0	32.0		29.0
Change Period (Y+Rc), s	4.0	5.0		5.0	4.0	5.0		5.0
Max Green Setting (Gmax), s	9.0	41.0		24.0	25.0	27.0		24.0
Max Q Clear Time (g_c+I1), s	2.8	9.0		25.3	14.7	26.9		24.5
Green Ext Time (p_c), s	0.0	11.0		0.0	0.6	0.1		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	43.1
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	378	0	629	0	0	0	0	367	175	493	394	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800				0	1765	1765	1765	1765	0
Adj Flow Rate, veh/h	398	0	662				0	386	83	519	415	0
Adj No. of Lanes	1	1	0				0	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	532	0	474				0	723	324	546	1950	0
Arrive On Green	0.32	0.00	0.32				0.00	0.22	0.22	0.33	0.58	0.00
Sat Flow, veh/h	1681	0	1500				0	3441	1500	1681	3441	0
Grp Volume(v), veh/h	398	0	662				0	386	83	519	415	0
Grp Sat Flow(s),veh/h/ln	1681	0	1500				0	1676	1500	1681	1676	0
Q Serve(g_s), s	20.8	0.0	31.0				0.0	10.0	4.5	29.6	5.8	0.0
Cycle Q Clear(g_c), s	20.8	0.0	31.0				0.0	10.0	4.5	29.6	5.8	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	532	0	474				0	723	324	546	1950	0
V/C Ratio(X)	0.75	0.00	1.40				0.00	0.53	0.26	0.95	0.21	0.00
Avail Cap(c_a), veh/h	532	0	474				0	723	324	566	1950	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.36	0.36	0.00
Uniform Delay (d), s/veh	30.0	0.0	33.5				0.0	34.1	31.9	32.3	9.8	0.0
Incr Delay (d2), s/veh	6.2	0.0	190.3				0.0	2.8	1.9	12.5	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.5	0.0	37.9				0.0	4.9	2.0	15.6	2.7	0.0
LnGrp Delay(d),s/veh	36.2	0.0	223.8				0.0	36.9	33.8	44.8	9.9	0.0
LnGrp LOS	D		F					D	C	D	A	
Approach Vol, veh/h		1060						469			934	
Approach Delay, s/veh		153.4						36.3			29.3	
Approach LOS		F						D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	35.9	26.1		36.0		62.0		
Change Period (Y+Rc), s	4.0	5.0		5.0		5.0		
Max Green Setting (Gmax), s	33.0	20.0		31.0		49.0		
Max Q Clear Time (g_c+I1), s	31.6	12.0		33.0		7.8		
Green Ext Time (p_c), s	0.3	3.2		0.0		6.1		

Intersection Summary	
HCM 2010 Ctrl Delay	84.0
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	41	290	132	91	294	57	84	289	83	235	627	78
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1765	1765	1765	1800	1765	1765	1765	1765	1765	1800
Adj Flow Rate, veh/h	42	299	23	94	303	59	87	298	27	242	646	80
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	68	508	227	132	533	102	721	472	211	937	810	100
Arrive On Green	0.04	0.15	0.15	0.08	0.19	0.18	0.43	0.14	0.14	0.56	0.27	0.26
Sat Flow, veh/h	1681	3353	1500	1681	2806	540	1681	3353	1500	1681	3004	372
Grp Volume(v), veh/h	42	299	23	94	179	183	87	298	27	242	360	366
Grp Sat Flow(s),veh/h/ln	1681	1676	1500	1681	1676	1669	1681	1676	1500	1681	1676	1699
Q Serve(g_s), s	2.8	9.3	0.6	6.1	10.9	11.2	3.5	9.4	1.4	8.3	22.4	22.5
Cycle Q Clear(g_c), s	2.8	9.3	0.6	6.1	10.9	11.2	3.5	9.4	1.4	8.3	22.4	22.5
Prop In Lane	1.00		1.00	1.00		0.32	1.00		1.00	1.00		0.22
Lane Grp Cap(c), veh/h	68	508	227	132	318	317	721	472	211	937	452	458
V/C Ratio(X)	0.62	0.59	0.10	0.71	0.56	0.58	0.12	0.63	0.13	0.26	0.80	0.80
Avail Cap(c_a), veh/h	240	958	429	240	479	477	721	1347	603	937	674	683
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.96	0.96	0.96	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.9	44.3	6.2	50.4	41.2	41.4	19.3	45.4	27.3	12.8	38.1	38.2
Incr Delay (d2), s/veh	9.0	1.1	0.2	6.9	1.6	1.7	0.1	6.0	1.2	0.1	13.6	13.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	4.4	0.2	3.1	5.2	5.3	1.6	4.7	0.7	3.9	12.1	12.3
LnGrp Delay(d),s/veh	61.9	45.3	6.4	57.3	42.7	43.1	19.3	51.4	28.4	13.0	51.7	51.8
LnGrp LOS	E	D	A	E	D	D	B	D	C	B	D	D
Approach Vol, veh/h		364			456			412			968	
Approach Delay, s/veh		44.8			45.9			43.1			42.0	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	64.4	17.8	10.8	19.0	50.0	32.2	6.5	23.3
Change Period (Y+Rc), s	3.0	5.0	3.0	5.0	3.0	5.0	3.0	5.0
Max Green Setting (Gmax), s	10.0	42.0	15.0	29.0	10.0	42.0	15.0	29.0
Max Q Clear Time (g_c+I1), s	10.3	11.4	8.1	11.3	5.5	24.5	4.8	13.2
Green Ext Time (p_c), s	0.0	1.4	0.1	2.7	0.1	2.7	0.1	2.6

Intersection Summary	
HCM 2010 Ctrl Delay	43.5
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	476	295	393	461	0	0	0	0	456	33	225
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1765	1800	1765	1765	0				1765	1765	1765
Adj Flow Rate, veh/h	0	580	360	479	562	0				592	0	57
Adj No. of Lanes	0	4	0	2	2	0				2	0	1
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82				0.82	0.82	0.82
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1657	546	621	2073	0				757	0	338
Arrive On Green	0.00	0.36	0.36	0.19	0.62	0.00				0.23	0.00	0.23
Sat Flow, veh/h	0	4800	1500	3261	3441	0				3361	0	1500
Grp Volume(v), veh/h	0	580	360	479	562	0				592	0	57
Grp Sat Flow(s),veh/h/ln	0	1518	1500	1630	1676	0				1681	0	1500
Q Serve(g_s), s	0.0	5.1	11.0	7.7	4.2	0.0				9.1	0.0	1.7
Cycle Q Clear(g_c), s	0.0	5.1	11.0	7.7	4.2	0.0				9.1	0.0	1.7
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1657	546	621	2073	0				757	0	338
V/C Ratio(X)	0.00	0.35	0.66	0.77	0.27	0.00				0.78	0.00	0.17
Avail Cap(c_a), veh/h	0	2900	956	1484	2136	0				2141	0	956
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	12.7	14.6	21.1	4.8	0.0				20.0	0.0	17.1
Incr Delay (d2), s/veh	0.0	0.0	0.5	0.8	0.0	0.0				0.7	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.1	4.6	3.5	2.0	0.0				4.3	0.0	0.7
LnGrp Delay(d),s/veh	0.0	12.8	15.1	21.9	4.8	0.0				20.7	0.0	17.2
LnGrp LOS		B	B	C	A					C		B
Approach Vol, veh/h		940			1041						649	
Approach Delay, s/veh		13.7			12.7						20.4	
Approach LOS		B			B						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	14.0	24.1		16.9		38.1		
Change Period (Y+Rc), s	3.5	4.1		4.5		4.1		
Max Green Setting (Gmax), s	25.0	35.0		35.0		35.0		
Max Q Clear Time (g_c+I1), s	9.7	13.0		11.1		6.2		
Green Ext Time (p_c), s	0.8	7.0		1.3		7.5		

Intersection Summary	
HCM 2010 Ctrl Delay	14.9
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	143	815	0	0	612	181	239	5	472	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1765	1765	0	0	1765	1765	1765	1765	1765			
Adj Flow Rate, veh/h	174	994	0	0	746	32	196	0	579			
Adj No. of Lanes	2	2	0	0	4	1	1	0	2			
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	330	1810	0	0	2171	537	439	0	784			
Arrive On Green	0.10	0.54	0.00	0.00	0.36	0.36	0.26	0.00	0.26			
Sat Flow, veh/h	3261	3441	0	0	6318	1500	1681	0	3000			
Grp Volume(v), veh/h	174	994	0	0	746	32	196	0	579			
Grp Sat Flow(s),veh/h/ln	1630	1676	0	0	1518	1500	1681	0	1500			
Q Serve(g_s), s	2.2	8.4	0.0	0.0	3.9	0.6	4.2	0.0	7.6			
Cycle Q Clear(g_c), s	2.2	8.4	0.0	0.0	3.9	0.6	4.2	0.0	7.6			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	330	1810	0	0	2171	537	439	0	784			
V/C Ratio(X)	0.53	0.55	0.00	0.00	0.34	0.06	0.45	0.00	0.74			
Avail Cap(c_a), veh/h	1884	2712	0	0	5050	1248	1359	0	2427			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	18.5	6.5	0.0	0.0	10.2	9.1	13.4	0.0	14.6			
Incr Delay (d2), s/veh	0.5	0.1	0.0	0.0	0.0	0.0	0.3	0.0	0.5			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.0	3.9	0.0	0.0	1.6	0.3	2.0	0.0	3.2			
LnGrp Delay(d),s/veh	18.9	6.6	0.0	0.0	10.2	9.1	13.6	0.0	15.1			
LnGrp LOS	B	A			B	A	B		B			
Approach Vol, veh/h		1168			778			775				
Approach Delay, s/veh		8.4			10.2			14.8				
Approach LOS		A			B			B				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		27.5			7.9	19.6		15.8
Change Period (Y+Rc), s		4.1			3.5	4.1		4.5
Max Green Setting (Gmax), s		35.0			25.0	36.0		35.0
Max Q Clear Time (g_c+I1), s		10.4			4.2	5.9		9.6
Green Ext Time (p_c), s		9.0			0.3	9.6		1.7

Intersection Summary	
HCM 2010 Ctrl Delay	10.7
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	72	739	35	16	571	72	13	84	15	62	130	65
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	79	812	38	18	627	79	14	92	16	68	143	71
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	685	2390	112	575	2042	257	175	422	72	228	325	154
Arrive On Green	0.10	0.73	0.72	0.05	0.68	0.67	0.15	0.15	0.14	0.15	0.15	0.14
Sat Flow, veh/h	1681	3262	153	1681	2998	377	1163	2868	487	1280	2212	1045
Grp Volume(v), veh/h	79	417	433	18	350	356	14	53	55	68	107	107
Grp Sat Flow(s),veh/h/ln	1681	1676	1738	1681	1676	1698	1163	1676	1679	1280	1676	1580
Q Serve(g_s), s	0.9	8.3	8.4	0.3	7.9	8.0	1.0	2.6	2.7	4.7	5.4	5.9
Cycle Q Clear(g_c), s	0.9	8.3	8.4	0.3	7.9	8.0	6.9	2.6	2.7	7.4	5.4	5.9
Prop In Lane	1.00		0.09	1.00		0.22	1.00		0.29	1.00		0.66
Lane Grp Cap(c), veh/h	685	1228	1273	575	1142	1157	175	247	247	228	247	232
V/C Ratio(X)	0.12	0.34	0.34	0.03	0.31	0.31	0.08	0.21	0.22	0.30	0.43	0.46
Avail Cap(c_a), veh/h	754	1228	1273	731	1142	1157	375	535	536	448	535	504
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	2.6	4.5	4.5	3.7	6.0	6.1	39.9	35.3	35.5	38.6	36.5	37.0
Incr Delay (d2), s/veh	0.1	0.8	0.7	0.0	0.7	0.7	0.2	0.4	0.5	0.7	1.2	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	4.1	4.2	0.1	3.8	3.9	0.3	1.2	1.3	1.7	2.6	2.7
LnGrp Delay(d),s/veh	2.7	5.2	5.2	3.7	6.7	6.8	40.1	35.7	35.9	39.3	37.7	38.4
LnGrp LOS	A	A	A	A	A	A	D	D	D	D	D	D
Approach Vol, veh/h		929			724			122			282	
Approach Delay, s/veh		5.0			6.7			36.3			38.4	
Approach LOS		A			A			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.9	66.0		16.1	7.0	70.9		16.1
Change Period (Y+Rc), s	4.0	5.0		5.3	4.0	5.0		5.3
Max Green Setting (Gmax), s	11.7	41.0		27.0	11.7	41.0		27.0
Max Q Clear Time (g_c+I1), s	2.9	10.0		8.9	2.3	10.4		9.4
Green Ext Time (p_c), s	0.1	7.3		1.5	0.0	7.3		1.4

Intersection Summary	
HCM 2010 Ctrl Delay	12.0
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	39	562	44	36	540	25	27	123	22	23	223	46
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1765	1765	1765	1800	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	42	604	18	39	581	27	29	132	24	25	240	49
Adj No. of Lanes	1	1	1	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	481	1015	862	373	1876	87	262	436	79	372	427	87
Arrive On Green	0.57	0.57	0.57	0.57	0.57	0.57	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	809	1765	1500	799	3263	151	1086	1454	264	1226	1423	291
Grp Volume(v), veh/h	42	604	18	39	298	310	29	0	156	25	0	289
Grp Sat Flow(s),veh/h/ln	809	1765	1500	799	1676	1738	1086	0	1718	1226	0	1713
Q Serve(g_s), s	2.3	17.7	0.4	2.7	7.4	7.4	1.8	0.0	5.6	1.3	0.0	11.4
Cycle Q Clear(g_c), s	9.6	17.7	0.4	20.3	7.4	7.4	13.2	0.0	5.6	6.9	0.0	11.4
Prop In Lane	1.00		1.00	1.00		0.09	1.00		0.15	1.00		0.17
Lane Grp Cap(c), veh/h	481	1015	863	373	964	999	262	0	515	372	0	514
V/C Ratio(X)	0.09	0.60	0.02	0.10	0.31	0.31	0.11	0.00	0.30	0.07	0.00	0.56
Avail Cap(c_a), veh/h	481	1015	863	373	964	999	262	0	515	372	0	514
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.83	0.83	0.83	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.3	11.0	7.3	17.6	8.8	8.8	29.1	0.0	21.6	24.2	0.0	23.6
Incr Delay (d2), s/veh	0.4	2.6	0.0	0.1	0.1	0.1	0.9	0.0	1.5	0.3	0.0	4.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	9.3	0.2	0.6	3.4	3.6	0.6	0.0	2.9	0.5	0.0	6.0
LnGrp Delay(d),s/veh	11.6	13.6	7.4	17.7	8.9	8.9	30.0	0.0	23.1	24.6	0.0	28.0
LnGrp LOS	B	B	A	B	A	A	C		C	C		C
Approach Vol, veh/h		664			647			185			314	
Approach Delay, s/veh		13.3			9.5			24.1			27.7	
Approach LOS		B			A			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		51.0		29.0		51.0		29.0
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0
Max Green Setting (Gmax), s		46.0		24.0		46.0		24.0
Max Q Clear Time (g_c+I1), s		19.7		13.4		22.3		15.2
Green Ext Time (p_c), s		9.0		2.0		8.6		1.8

Intersection Summary	
HCM 2010 Ctrl Delay	15.5
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	116	348	96	138	400	67	94	340	91	60	360	108
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1765	1765	1765	1765
Adj Flow Rate, veh/h	123	370	102	147	426	71	100	362	24	64	383	26
Adj No. of Lanes	1	2	0	1	2	0	1	2	1	1	2	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	220	529	144	223	589	98	461	1700	760	130	1039	465
Arrive On Green	0.13	0.20	0.19	0.13	0.20	0.19	0.09	0.17	0.17	0.08	0.31	0.31
Sat Flow, veh/h	1681	2606	710	1681	2880	477	1681	3353	1500	1681	3353	1500
Grp Volume(v), veh/h	123	236	236	147	247	250	100	362	24	64	383	26
Grp Sat Flow(s),veh/h/ln	1681	1676	1639	1681	1676	1681	1681	1676	1500	1681	1676	1500
Q Serve(g_s), s	6.9	13.1	13.4	8.3	13.7	13.9	5.5	9.3	1.3	3.7	8.9	1.2
Cycle Q Clear(g_c), s	6.9	13.1	13.4	8.3	13.7	13.9	5.5	9.3	1.3	3.7	8.9	1.2
Prop In Lane	1.00		0.43	1.00		0.28	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	220	341	333	223	343	344	461	1700	760	130	1039	465
V/C Ratio(X)	0.56	0.69	0.71	0.66	0.72	0.73	0.22	0.21	0.03	0.49	0.37	0.06
Avail Cap(c_a), veh/h	269	520	508	269	520	521	461	1700	760	235	1039	465
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	0.59	0.59	0.59	0.96	0.96	0.96	1.00	1.00	1.00	0.91	0.91	0.91
Uniform Delay (d), s/veh	40.7	37.0	37.3	41.2	37.1	37.3	35.5	24.4	21.1	44.2	26.9	24.2
Incr Delay (d2), s/veh	1.3	1.5	1.6	4.3	2.7	2.8	0.2	0.1	0.0	2.6	0.9	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	6.2	6.2	4.1	6.6	6.7	2.6	4.4	0.6	1.8	4.2	0.5
LnGrp Delay(d),s/veh	42.1	38.5	38.9	45.5	39.8	40.1	35.7	24.5	21.1	46.8	27.8	24.4
LnGrp LOS	D	D	D	D	D	D	D	C	C	D	C	C
Approach Vol, veh/h		595			644			486			473	
Approach Delay, s/veh		39.4			41.2			26.6			30.2	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.2	22.3	29.4	33.0	15.1	22.5	9.7	52.7
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	13.0	28.0	11.0	28.0	13.0	28.0	11.0	28.0
Max Q Clear Time (g_c+I1), s	10.3	15.4	7.5	10.9	8.9	15.9	5.7	11.3
Green Ext Time (p_c), s	0.1	1.9	0.2	1.6	1.0	1.5	0.1	1.9

Intersection Summary	
HCM 2010 Ctrl Delay	35.1
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	288	208	199	458	0	162	0	119	0	1	1
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1765	1800	1765	1765	1800	1800	1765	1765	1765	1765	1800
Adj Flow Rate, veh/h	0	324	234	224	515	0	182	0	12	0	1	1
Adj No. of Lanes	0	2	0	1	2	0	0	1	1	1	1	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	0	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	1005	710	255	2452	0	301	0	236	80	128	128
Arrive On Green	0.00	0.53	0.53	0.30	1.00	0.00	0.16	0.00	0.16	0.00	0.16	0.16
Sat Flow, veh/h	0	1967	1328	1681	3441	0	1400	0	1500	1397	811	811
Grp Volume(v), veh/h	0	288	270	224	515	0	182	0	12	0	0	2
Grp Sat Flow(s),veh/h/ln	0	1676	1530	1681	1676	0	1400	0	1500	1397	0	1622
Q Serve(g_s), s	0.0	8.7	9.0	11.4	0.0	0.0	11.3	0.0	0.6	0.0	0.0	0.1
Cycle Q Clear(g_c), s	0.0	8.7	9.0	11.4	0.0	0.0	11.4	0.0	0.6	0.0	0.0	0.1
Prop In Lane	0.00		0.87	1.00		0.00	1.00		1.00	1.00		0.50
Lane Grp Cap(c), veh/h	0	897	819	255	2452	0	301	0	236	80	0	256
V/C Ratio(X)	0.00	0.32	0.33	0.88	0.21	0.00	0.61	0.00	0.05	0.00	0.00	0.01
Avail Cap(c_a), veh/h	0	897	819	373	2452	0	564	0	517	325	0	541
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.91	0.91	0.00	1.00	0.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	11.8	11.8	30.5	0.0	0.0	36.8	0.0	32.2	0.0	0.0	32.0
Incr Delay (d2), s/veh	0.0	0.9	1.1	13.8	0.0	0.0	2.0	0.0	0.1	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.2	4.0	6.2	0.0	0.0	4.6	0.0	0.3	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	12.7	12.9	44.3	0.0	0.0	38.7	0.0	32.3	0.0	0.0	32.0
LnGrp LOS		B	B	D	A		D		C			C
Approach Vol, veh/h		558			739			194			2	
Approach Delay, s/veh		12.8			13.5			38.3			32.0	
Approach LOS		B			B			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		8
Phs Duration (G+Y+Rc), s	17.7	53.1		19.2		70.8		19.2
Change Period (Y+Rc), s	4.0	5.0		5.0		5.0		5.0
Max Green Setting (Gmax), s	20.0	25.0		30.0		49.0		31.0
Max Q Clear Time (g_c+I1), s	13.4	11.0		2.1		2.0		13.4
Green Ext Time (p_c), s	0.3	5.6		1.0		8.1		0.8

Intersection Summary	
HCM 2010 Ctrl Delay	16.5
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	69	273	62	121	302	59	65	313	60	63	541	36
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	73	290	66	129	321	63	69	333	64	67	576	38
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	142	471	105	204	589	114	136	1181	224	374	1857	122
Arrive On Green	0.08	0.17	0.16	0.12	0.21	0.20	0.08	0.42	0.41	0.44	1.00	1.00
Sat Flow, veh/h	1681	2723	610	1681	2802	543	1681	2812	534	1681	3194	210
Grp Volume(v), veh/h	73	177	179	129	191	193	69	197	200	67	302	312
Grp Sat Flow(s),veh/h/ln	1681	1676	1657	1681	1676	1669	1681	1676	1670	1681	1676	1728
Q Serve(g_s), s	4.2	9.8	10.0	7.3	10.1	10.4	3.9	7.7	7.9	2.4	0.0	0.0
Cycle Q Clear(g_c), s	4.2	9.8	10.0	7.3	10.1	10.4	3.9	7.7	7.9	2.4	0.0	0.0
Prop In Lane	1.00		0.37	1.00		0.33	1.00		0.32	1.00		0.12
Lane Grp Cap(c), veh/h	142	290	286	204	352	351	136	704	702	374	975	1004
V/C Ratio(X)	0.52	0.61	0.63	0.63	0.54	0.55	0.51	0.28	0.29	0.18	0.31	0.31
Avail Cap(c_a), veh/h	269	414	409	269	414	412	235	704	702	374	975	1004
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.8	38.2	38.5	41.8	35.2	35.4	44.0	19.1	19.2	22.2	0.0	0.0
Incr Delay (d2), s/veh	2.9	2.1	2.2	3.2	1.3	1.4	2.8	1.0	1.0	0.2	0.8	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	4.7	4.8	3.6	4.8	4.9	1.9	3.7	3.8	1.1	0.2	0.2
LnGrp Delay(d),s/veh	46.7	40.3	40.8	45.0	36.5	36.8	46.9	20.0	20.2	22.5	0.8	0.8
LnGrp LOS	D	D	D	D	D	D	D	C	C	C	A	A
Approach Vol, veh/h		429			513			466			681	
Approach Delay, s/veh		41.6			38.7			24.1			2.9	
Approach LOS		D			D			C			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.2	19.6	8.1	60.1	8.4	23.3	24.2	44.0
Change Period (Y+Rc), s	3.0	5.3	3.0	5.0	3.0	5.3	5.0	* 5
Max Green Setting (Gmax), s	13.0	21.7	11.0	38.0	13.0	21.7	10.0	* 39
Max Q Clear Time (g_c+I1), s	9.3	12.0	5.9	2.0	6.2	12.4	4.4	9.9
Green Ext Time (p_c), s	0.1	2.2	0.1	2.8	0.1	2.2	0.1	1.5

Intersection Summary	
HCM 2010 Ctrl Delay	24.4
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	468	309	251	409	0	0	0	0	733	0	187
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1765	1800	1765	1765	0				1765	1765	1765
Adj Flow Rate, veh/h	0	493	325	264	431	0				793	0	46
Adj No. of Lanes	0	4	0	2	2	0				2	0	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1832	604	379	1928	0				942	0	420
Arrive On Green	0.00	0.40	0.40	0.12	0.57	0.00				0.28	0.00	0.28
Sat Flow, veh/h	0	4800	1500	3261	3441	0				3361	0	1500
Grp Volume(v), veh/h	0	493	325	264	431	0				793	0	46
Grp Sat Flow(s),veh/h/ln	0	1518	1500	1630	1676	0				1681	0	1500
Q Serve(g_s), s	0.0	4.5	10.3	4.8	3.9	0.0				13.8	0.0	1.4
Cycle Q Clear(g_c), s	0.0	4.5	10.3	4.8	3.9	0.0				13.8	0.0	1.4
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1832	604	379	1928	0				942	0	420
V/C Ratio(X)	0.00	0.27	0.54	0.70	0.22	0.00				0.84	0.00	0.11
Avail Cap(c_a), veh/h	0	1832	604	1837	1928	0				1894	0	845
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	12.4	14.2	26.4	6.4	0.0				21.1	0.0	16.6
Incr Delay (d2), s/veh	0.0	0.4	3.4	0.9	0.3	0.0				0.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.9	4.8	2.2	1.9	0.0				6.5	0.0	0.6
LnGrp Delay(d),s/veh	0.0	12.8	17.6	27.3	6.7	0.0				21.9	0.0	16.6
LnGrp LOS		B	B	C	A					C		B
Approach Vol, veh/h		818			695						839	
Approach Delay, s/veh		14.7			14.5						21.6	
Approach LOS		B			B						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	10.7	29.5		21.9		40.2		
Change Period (Y+Rc), s	3.5	4.5		4.5		4.5		
Max Green Setting (Gmax), s	35.0	25.0		35.0		25.0		
Max Q Clear Time (g_c+I1), s	6.8	12.3		15.8		5.9		
Green Ext Time (p_c), s	0.5	4.5		1.6		5.3		

Intersection Summary	
HCM 2010 Ctrl Delay	17.1
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	135	1057	0	0	415	140	225	0	592	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1765	1765	0	0	1765	1765	1765	1765	1765			
Adj Flow Rate, veh/h	141	1101	0	0	432	60	156	0	630			
Adj No. of Lanes	2	2	0	0	4	1	1	0	2			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	324	1607	0	0	1770	437	472	0	842			
Arrive On Green	0.10	0.48	0.00	0.00	0.29	0.29	0.28	0.00	0.28			
Sat Flow, veh/h	3261	3441	0	0	6318	1500	1681	0	3000			
Grp Volume(v), veh/h	141	1101	0	0	432	60	156	0	630			
Grp Sat Flow(s),veh/h/ln	1630	1676	0	0	1518	1500	1681	0	1500			
Q Serve(g_s), s	1.6	10.1	0.0	0.0	2.1	1.2	2.9	0.0	7.6			
Cycle Q Clear(g_c), s	1.6	10.1	0.0	0.0	2.1	1.2	2.9	0.0	7.6			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	324	1607	0	0	1770	437	472	0	842			
V/C Ratio(X)	0.43	0.69	0.00	0.00	0.24	0.14	0.33	0.00	0.75			
Avail Cap(c_a), veh/h	1647	2117	0	0	3832	947	1040	0	1856			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	16.8	8.0	0.0	0.0	10.7	10.4	11.3	0.0	13.0			
Incr Delay (d2), s/veh	0.3	0.3	0.0	0.0	0.0	0.1	0.2	0.0	0.5			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.7	4.7	0.0	0.0	0.9	0.5	1.4	0.0	3.1			
LnGrp Delay(d),s/veh	17.1	8.3	0.0	0.0	10.7	10.4	11.4	0.0	13.5			
LnGrp LOS	B	A			B	B	B		B			
Approach Vol, veh/h		1242			492			786				
Approach Delay, s/veh		9.3			10.7			13.1				
Approach LOS		A			B			B				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		23.5			7.4	16.0		16.1
Change Period (Y+Rc), s		4.5			3.5	4.5		5.0
Max Green Setting (Gmax), s		25.0			20.0	25.0		24.5
Max Q Clear Time (g_c+I1), s		12.1			3.6	4.1		9.6
Green Ext Time (p_c), s		6.0			0.2	7.4		1.5

Intersection Summary	
HCM 2010 Ctrl Delay	10.7
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	29	270	106	30	294	36	37	134	19	44	247	40
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	35	325	128	36	354	43	45	161	23	53	298	48
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	218	573	222	191	730	88	704	1909	269	828	1874	299
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	0.65	0.65	0.65	0.65	0.65	0.65
Sat Flow, veh/h	983	2365	914	934	3014	363	1031	2953	415	1195	2898	462
Grp Volume(v), veh/h	35	229	224	36	196	201	45	90	94	53	171	175
Grp Sat Flow(s),veh/h/ln	983	1676	1603	934	1676	1701	1031	1676	1691	1195	1676	1683
Q Serve(g_s), s	2.9	10.8	11.1	3.2	9.0	9.2	1.6	1.8	1.9	1.6	3.6	3.7
Cycle Q Clear(g_c), s	12.0	10.8	11.1	14.3	9.0	9.2	5.3	1.8	1.9	3.4	3.6	3.7
Prop In Lane	1.00		0.57	1.00		0.21	1.00		0.25	1.00		0.27
Lane Grp Cap(c), veh/h	218	406	388	191	406	412	704	1084	1094	828	1084	1088
V/C Ratio(X)	0.16	0.56	0.58	0.19	0.48	0.49	0.06	0.08	0.09	0.06	0.16	0.16
Avail Cap(c_a), veh/h	439	782	748	401	782	794	704	1084	1094	828	1084	1088
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.76	0.76	0.76	0.94	0.94	0.94	1.00	1.00	1.00	0.95	0.95	0.95
Uniform Delay (d), s/veh	34.5	29.9	30.0	36.3	29.3	29.3	7.3	5.9	5.9	6.6	6.3	6.3
Incr Delay (d2), s/veh	0.3	0.9	1.0	0.4	0.8	0.8	0.2	0.2	0.2	0.1	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	5.1	5.0	0.8	4.3	4.4	0.5	0.9	0.9	0.5	1.8	1.8
LnGrp Delay(d),s/veh	34.7	30.8	31.1	36.8	30.1	30.2	7.5	6.1	6.1	6.7	6.6	6.6
LnGrp LOS	C	C	C	D	C	C	A	A	A	A	A	A
Approach Vol, veh/h		488			433			229			399	
Approach Delay, s/veh		31.2			30.7			6.4			6.6	
Approach LOS		C			C			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		63.2		26.8		63.2		26.8
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0
Max Green Setting (Gmax), s		38.0		42.0		38.0		42.0
Max Q Clear Time (g_c+I1), s		7.3		14.0		5.7		16.3
Green Ext Time (p_c), s		3.5		5.6		3.5		5.5

Intersection Summary	
HCM 2010 Ctrl Delay	21.1
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	68	136	109	57	221	18	57	423	37	20	631	112
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1765	1765	1765	1765	1765	1765	1800
Adj Flow Rate, veh/h	70	140	112	59	228	5	59	436	16	21	651	115
Adj No. of Lanes	1	2	0	1	2	1	1	2	1	1	3	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	253	286	213	227	498	223	92	2274	1017	42	2677	467
Arrive On Green	0.02	0.05	0.05	0.05	0.15	0.15	0.06	0.68	0.68	0.03	0.65	0.65
Sat Flow, veh/h	1681	1834	1366	1681	3353	1500	1681	3353	1500	1681	4129	720
Grp Volume(v), veh/h	70	127	125	59	228	5	59	436	16	21	505	261
Grp Sat Flow(s),veh/h/ln	1681	1676	1524	1681	1676	1500	1681	1676	1500	1681	1606	1638
Q Serve(g_s), s	3.2	6.6	7.2	2.7	5.6	0.3	3.1	4.3	0.3	1.1	5.9	6.0
Cycle Q Clear(g_c), s	3.2	6.6	7.2	2.7	5.6	0.3	3.1	4.3	0.3	1.1	5.9	6.0
Prop In Lane	1.00		0.90	1.00		1.00	1.00		1.00	1.00		0.44
Lane Grp Cap(c), veh/h	253	262	238	227	498	223	92	2274	1017	42	2082	1062
V/C Ratio(X)	0.28	0.49	0.53	0.26	0.46	0.02	0.64	0.19	0.02	0.49	0.24	0.25
Avail Cap(c_a), veh/h	340	577	525	327	1155	517	168	2274	1017	168	2082	1062
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.84	0.84	0.84	0.68	0.68	0.68	1.00	1.00	1.00	0.93	0.93	0.93
Uniform Delay (d), s/veh	32.1	39.2	39.6	31.8	35.0	32.7	41.6	5.4	4.7	43.3	6.6	6.6
Incr Delay (d2), s/veh	0.5	1.2	1.5	0.4	0.4	0.0	7.1	0.2	0.0	8.0	0.3	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	3.2	3.1	1.3	2.6	0.1	1.6	2.1	0.1	0.6	2.7	2.8
LnGrp Delay(d),s/veh	32.6	40.3	41.1	32.2	35.5	32.8	48.8	5.5	4.7	51.3	6.9	7.1
LnGrp LOS	C	D	D	C	D	C	D	A	A	D	A	A
Approach Vol, veh/h		322			292			511			787	
Approach Delay, s/veh		38.9			34.7			10.5			8.1	
Approach LOS		D			C			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.3	63.0	7.3	15.4	7.0	60.4	6.6	16.0
Change Period (Y+Rc), s	3.0	6.0	3.0	5.0	3.0	6.0	3.0	5.0
Max Green Setting (Gmax), s	8.0	28.0	9.0	28.0	8.0	28.0	9.0	28.0
Max Q Clear Time (g_c+I1), s	3.1	6.3	5.2	7.6	5.1	8.0	4.7	9.2
Green Ext Time (p_c), s	0.0	5.7	0.0	1.9	0.0	5.6	0.0	1.8

Intersection Summary	
HCM 2010 Ctrl Delay	18.0
HCM 2010 LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	40	101	60	33	195	15	40	299	23	26	522	57
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1765	1765	1765	1765	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	50	126	0	41	244	0	50	374	29	32	652	71
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	164	357	303	257	357	303	497	2096	162	686	2027	221
Arrive On Green	0.20	0.20	0.00	0.20	0.20	0.00	0.66	0.66	0.66	0.66	0.66	0.66
Sat Flow, veh/h	1131	1765	1500	1260	1765	1500	727	3155	244	978	3051	332
Grp Volume(v), veh/h	50	126	0	41	244	0	50	198	205	32	358	365
Grp Sat Flow(s),veh/h/ln	1131	1765	1500	1260	1765	1500	727	1676	1722	978	1676	1706
Q Serve(g_s), s	3.9	5.5	0.0	2.6	11.5	0.0	2.8	4.0	4.1	1.2	8.2	8.2
Cycle Q Clear(g_c), s	15.4	5.5	0.0	8.1	11.5	0.0	11.1	4.0	4.1	5.2	8.2	8.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.14	1.00		0.19
Lane Grp Cap(c), veh/h	164	357	303	257	357	303	497	1114	1144	686	1114	1134
V/C Ratio(X)	0.31	0.35	0.00	0.16	0.68	0.00	0.10	0.18	0.18	0.05	0.32	0.32
Avail Cap(c_a), veh/h	425	765	650	549	765	650	497	1114	1144	686	1114	1134
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.96	0.96	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.4	30.8	0.0	34.3	33.2	0.0	8.8	5.7	5.7	6.7	6.4	6.4
Incr Delay (d2), s/veh	1.0	0.6	0.0	0.1	0.9	0.0	0.4	0.3	0.3	0.1	0.8	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	2.8	0.0	0.9	5.7	0.0	0.6	2.0	2.0	0.3	4.0	4.1
LnGrp Delay(d),s/veh	41.4	31.4	0.0	34.4	34.1	0.0	9.2	6.1	6.1	6.9	7.2	7.2
LnGrp LOS	D	C		C	C		A	A	A	A	A	A
Approach Vol, veh/h		176			285			453			755	
Approach Delay, s/veh		34.2			34.2			6.4			7.2	
Approach LOS		C			C			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		65.8		24.2		65.8		24.2
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0
Max Green Setting (Gmax), s		39.0		39.0		39.0		39.0
Max Q Clear Time (g_c+I1), s		13.1		17.4		10.2		13.5
Green Ext Time (p_c), s		2.8		0.8		2.8		0.8

Intersection Summary	
HCM 2010 Ctrl Delay	14.4
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	257	364	729	838	0	0	0	0	167	4	179
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1765	1765	1765	1765	0				1800	1765	1765
Adj Flow Rate, veh/h	0	279	396	792	911	0				182	4	195
Adj No. of Lanes	0	2	1	2	2	0				0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1525	682	761	2456	0				257	6	235
Arrive On Green	0.00	0.45	0.45	0.47	1.00	0.00				0.16	0.16	0.16
Sat Flow, veh/h	0	3441	1500	3261	3441	0				1646	36	1500
Grp Volume(v), veh/h	0	279	396	792	911	0				186	0	195
Grp Sat Flow(s),veh/h/ln	0	1676	1500	1630	1676	0				1682	0	1500
Q Serve(g_s), s	0.0	4.5	17.6	21.0	0.0	0.0				9.4	0.0	11.3
Cycle Q Clear(g_c), s	0.0	4.5	17.6	21.0	0.0	0.0				9.4	0.0	11.3
Prop In Lane	0.00		1.00	1.00		0.00				0.98		1.00
Lane Grp Cap(c), veh/h	0	1525	682	761	2456	0				263	0	235
V/C Ratio(X)	0.00	0.18	0.58	1.04	0.37	0.00				0.71	0.00	0.83
Avail Cap(c_a), veh/h	0	1525	682	761	2456	0				411	0	367
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.84	0.84	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	14.6	18.2	24.0	0.0	0.0				36.0	0.0	36.8
Incr Delay (d2), s/veh	0.0	0.3	3.6	41.1	0.4	0.0				1.3	0.0	4.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.1	7.9	13.6	0.1	0.0				4.5	0.0	5.0
LnGrp Delay(d),s/veh	0.0	14.9	21.8	65.1	0.4	0.0				37.3	0.0	41.7
LnGrp LOS		B	C	F	A					D		D
Approach Vol, veh/h		675			1703						381	
Approach Delay, s/veh		18.9			30.4						39.6	
Approach LOS		B			C						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	25.0	45.9		19.1		70.9		
Change Period (Y+Rc), s	4.0	5.0		5.0		5.0		
Max Green Setting (Gmax), s	21.0	33.0		22.0		58.0		
Max Q Clear Time (g_c+I1), s	23.0	19.6		13.3		2.0		
Green Ext Time (p_c), s	0.0	5.0		0.7		6.6		

Intersection Summary	
HCM 2010 Ctrl Delay	28.9
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	72	352	0	0	1208	254	356	4	280	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1765	1765	0	0	1765	1765	1800	1765	1765			
Adj Flow Rate, veh/h	78	383	0	0	1313	276	387	4	304			
Adj No. of Lanes	1	2	0	0	3	1	0	1	1			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	99	2138	0	0	2522	785	418	4	377			
Arrive On Green	0.04	0.43	0.00	0.00	0.52	0.52	0.25	0.25	0.25			
Sat Flow, veh/h	1681	3441	0	0	4976	1500	1664	17	1500			
Grp Volume(v), veh/h	78	383	0	0	1313	276	391	0	304			
Grp Sat Flow(s),veh/h/ln	1681	1676	0	0	1606	1500	1681	0	1500			
Q Serve(g_s), s	4.1	6.4	0.0	0.0	16.1	9.7	20.4	0.0	17.1			
Cycle Q Clear(g_c), s	4.1	6.4	0.0	0.0	16.1	9.7	20.4	0.0	17.1			
Prop In Lane	1.00		0.00	0.00		1.00	0.99		1.00			
Lane Grp Cap(c), veh/h	99	2138	0	0	2522	785	422	0	377			
V/C Ratio(X)	0.79	0.18	0.00	0.00	0.52	0.35	0.93	0.00	0.81			
Avail Cap(c_a), veh/h	187	2138	0	0	2522	785	430	0	383			
HCM Platoon Ratio	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.98	0.98	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	42.7	11.2	0.0	0.0	14.0	12.5	32.9	0.0	31.7			
Incr Delay (d2), s/veh	5.1	0.2	0.0	0.0	0.8	1.2	25.3	0.0	11.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	2.1	3.0	0.0	0.0	7.2	4.3	12.4	0.0	8.2			
LnGrp Delay(d),s/veh	47.8	11.3	0.0	0.0	14.8	13.8	58.2	0.0	42.6			
LnGrp LOS	D	B			B	B	E		D			
Approach Vol, veh/h		461			1589			695				
Approach Delay, s/veh		17.5			14.6			51.4				
Approach LOS		B			B			D				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		62.4			10.3	52.1		27.6
Change Period (Y+Rc), s		5.0			5.0	5.0		5.0
Max Green Setting (Gmax), s		57.0			10.0	42.0		23.0
Max Q Clear Time (g_c+I1), s		8.4			6.1	18.1		22.4
Green Ext Time (p_c), s		12.7			0.0	10.4		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	24.4
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	81	9	30	84	0	0	0	0	383	535	121
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1765	1800	1765	1765	0				1800	1765	1765
Adj Flow Rate, veh/h	0	104	12	38	108	0				491	686	27
Adj No. of Lanes	0	2	0	1	2	0				0	3	1
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78				0.78	0.78	0.78
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	480	55	332	1491	0				601	1149	536
Arrive On Green	0.00	0.16	0.16	0.20	0.44	0.00				0.36	0.36	0.36
Sat Flow, veh/h	0	3123	345	1681	3441	0				1681	3212	1500
Grp Volume(v), veh/h	0	57	59	38	108	0				491	686	27
Grp Sat Flow(s),veh/h/ln	0	1676	1704	1681	1676	0				1681	1606	1500
Q Serve(g_s), s	0.0	1.5	1.5	0.9	0.9	0.0				13.4	8.8	0.6
Cycle Q Clear(g_c), s	0.0	1.5	1.5	0.9	0.9	0.0				13.4	8.8	0.6
Prop In Lane	0.00		0.20	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	265	269	332	1491	0				601	1149	536
V/C Ratio(X)	0.00	0.21	0.22	0.11	0.07	0.00				0.82	0.60	0.05
Avail Cap(c_a), veh/h	0	862	876	664	2121	0				664	1270	593
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	18.6	18.6	16.7	8.1	0.0				14.7	13.3	10.6
Incr Delay (d2), s/veh	0.0	0.3	0.3	0.1	0.0	0.0				6.9	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.7	0.7	0.4	0.4	0.0				7.3	4.0	0.3
LnGrp Delay(d),s/veh	0.0	18.9	18.9	16.7	8.1	0.0				21.7	13.8	10.7
LnGrp LOS		B	B	B	A					C	B	B
Approach Vol, veh/h		116			146						1204	
Approach Delay, s/veh		18.9			10.3						16.9	
Approach LOS		B			B						B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	14.5	13.0		23.1		27.5		
Change Period (Y+Rc), s	4.5	5.0		5.0		5.0		
Max Green Setting (Gmax), s	20.0	26.0		20.0		32.0		
Max Q Clear Time (g_c+I1), s	2.9	3.5		15.4		2.9		
Green Ext Time (p_c), s	0.0	1.0		2.7		1.0		

Intersection Summary	
HCM 2010 Ctrl Delay	16.4
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	35	439	0	0	85	42	26	199	119	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1765	1765	0	0	1765	1765	1800	1765	1800			
Adj Flow Rate, veh/h	41	510	0	0	99	23	30	231	138			
Adj No. of Lanes	1	2	0	0	3	1	0	2	0			
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86			
Percent Heavy Veh, %	2	2	0	0	2	2	0	2	0			
Cap, veh/h	81	1463	0	0	1429	405	63	491	306			
Arrive On Green	0.05	0.44	0.00	0.00	0.27	0.27	0.26	0.26	0.26			
Sat Flow, veh/h	1681	3441	0	0	5294	1500	243	1888	1179			
Grp Volume(v), veh/h	41	510	0	0	99	23	217	0	182			
Grp Sat Flow(s),veh/h/ln	1681	1676	0	0	1765	1500	1753	0	1557			
Q Serve(g_s), s	0.7	3.0	0.0	0.0	0.4	0.3	3.1	0.0	2.9			
Cycle Q Clear(g_c), s	0.7	3.0	0.0	0.0	0.4	0.3	3.1	0.0	2.9			
Prop In Lane	1.00		0.00	0.00		1.00	0.14		0.76			
Lane Grp Cap(c), veh/h	81	1463	0	0	1429	405	455	0	405			
V/C Ratio(X)	0.50	0.35	0.00	0.00	0.07	0.06	0.48	0.00	0.45			
Avail Cap(c_a), veh/h	1418	3960	0	0	6253	1772	2070	0	1839			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	13.8	5.6	0.0	0.0	8.0	8.0	9.3	0.0	9.2			
Incr Delay (d2), s/veh	1.8	0.1	0.0	0.0	0.0	0.0	0.3	0.0	0.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.4	1.4	0.0	0.0	0.2	0.1	1.5	0.0	1.2			
LnGrp Delay(d),s/veh	15.6	5.6	0.0	0.0	8.1	8.0	9.5	0.0	9.5			
LnGrp LOS	B	A			A	A	A		A			
Approach Vol, veh/h		551			122			399				
Approach Delay, s/veh		6.3			8.1			9.5				
Approach LOS		A			A			A				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		17.4			4.9	12.5		12.2
Change Period (Y+Rc), s		4.5			3.5	4.5		4.5
Max Green Setting (Gmax), s		35.0			25.0	35.0		35.0
Max Q Clear Time (g_c+I1), s		5.0			2.7	2.4		5.1
Green Ext Time (p_c), s		2.8			0.0	2.8		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	7.7
HCM 2010 LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	417	76	230	287	0	0	0	0	369	70	107
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1765	1765	1765	1765	0				1765	1765	1765
Adj Flow Rate, veh/h	0	485	25	267	334	0				487	0	22
Adj No. of Lanes	0	3	1	2	2	0				2	0	1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86				0.86	0.86	0.86
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1886	587	699	2199	0				720	0	321
Arrive On Green	0.00	0.39	0.39	0.21	0.66	0.00				0.21	0.00	0.21
Sat Flow, veh/h	0	4976	1500	3261	3441	0				3361	0	1500
Grp Volume(v), veh/h	0	485	25	267	334	0				487	0	22
Grp Sat Flow(s),veh/h/ln	0	1606	1500	1630	1676	0				1681	0	1500
Q Serve(g_s), s	0.0	4.8	0.7	4.9	2.7	0.0				9.3	0.0	0.8
Cycle Q Clear(g_c), s	0.0	4.8	0.7	4.9	2.7	0.0				9.3	0.0	0.8
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1886	587	699	2199	0				720	0	321
V/C Ratio(X)	0.00	0.26	0.04	0.38	0.15	0.00				0.68	0.00	0.07
Avail Cap(c_a), veh/h	0	1886	587	699	2199	0				720	0	321
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.99	0.99	0.00				0.69	0.00	0.69
Uniform Delay (d), s/veh	0.0	14.4	13.2	23.5	4.6	0.0				25.3	0.0	21.9
Incr Delay (d2), s/veh	0.0	0.3	0.1	1.6	0.0	0.0				3.5	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.2	0.3	2.3	1.2	0.0				4.7	0.0	0.4
LnGrp Delay(d),s/veh	0.0	14.7	13.3	25.1	4.6	0.0				28.8	0.0	22.2
LnGrp LOS		B	B	C	A					C		C
Approach Vol, veh/h		510			601						509	
Approach Delay, s/veh		14.7			13.7						28.5	
Approach LOS		B			B						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	18.5	31.5		20.0		50.0		
Change Period (Y+Rc), s	3.5	4.1		5.0		4.1		
Max Green Setting (Gmax), s	15.0	27.0		15.0		35.0		
Max Q Clear Time (g_c+I1), s	6.9	6.8		11.3		4.7		
Green Ext Time (p_c), s	0.0	4.7		0.5		5.2		

Intersection Summary	
HCM 2010 Ctrl Delay	18.7
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	93	697	0	0	404	102	110	139	1125	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1765	1765	0	0	1765	1765	1765	1765	1765			
Adj Flow Rate, veh/h	102	766	0	0	444	34	121	0	1194			
Adj No. of Lanes	2	2	0	0	4	1	1	0	2			
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	479	1898	0	0	2232	551	494	0	882			
Arrive On Green	0.15	0.57	0.00	0.00	0.37	0.37	0.29	0.00	0.29			
Sat Flow, veh/h	3261	3441	0	0	6318	1500	1681	0	3000			
Grp Volume(v), veh/h	102	766	0	0	444	34	121	0	1194			
Grp Sat Flow(s),veh/h/ln	1630	1676	0	0	1518	1500	1681	0	1500			
Q Serve(g_s), s	1.9	8.7	0.0	0.0	3.4	1.0	3.7	0.0	20.0			
Cycle Q Clear(g_c), s	1.9	8.7	0.0	0.0	3.4	1.0	3.7	0.0	20.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	479	1898	0	0	2232	551	494	0	882			
V/C Ratio(X)	0.21	0.40	0.00	0.00	0.20	0.06	0.24	0.00	1.35			
Avail Cap(c_a), veh/h	479	1898	0	0	2232	551	494	0	882			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.90	0.90	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	25.5	8.3	0.0	0.0	14.7	13.9	18.3	0.0	24.0			
Incr Delay (d2), s/veh	0.9	0.6	0.0	0.0	0.2	0.2	1.2	0.0	166.4			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.9	4.1	0.0	0.0	1.4	0.4	1.9	0.0	28.6			
LnGrp Delay(d),s/veh	26.4	8.9	0.0	0.0	14.9	14.1	19.4	0.0	190.4			
LnGrp LOS	C	A			B	B	B		F			
Approach Vol, veh/h		868			478			1315				
Approach Delay, s/veh		10.9			14.8			174.7				
Approach LOS		B			B			F				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		43.0			13.5	29.5		25.0
Change Period (Y+Rc), s		4.5			3.5	4.5		5.0
Max Green Setting (Gmax), s		30.0			10.0	25.0		20.0
Max Q Clear Time (g_c+I1), s		10.7			3.9	5.4		22.0
Green Ext Time (p_c), s		5.9			0.1	6.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	92.5
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	198	0	69	0	0	0	60	493	0	0	662	113
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	0	1765				1765	1765	0	0	1765	1800
Adj Flow Rate, veh/h	211	0	73				64	524	0	0	704	120
Adj No. of Lanes	2	0	1				1	3	0	0	3	0
Peak Hour Factor	0.94	0.94	0.94				0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	0	2				2	2	0	0	2	2
Cap, veh/h	310	0	143				565	3770	0	0	3001	506
Arrive On Green	0.10	0.00	0.10				0.03	0.78	0.00	0.00	0.72	0.72
Sat Flow, veh/h	3261	0	1500				1681	4976	0	0	4311	701
Grp Volume(v), veh/h	211	0	73				64	524	0	0	543	281
Grp Sat Flow(s),veh/h/ln	1630	0	1500				1681	1606	0	0	1606	1641
Q Serve(g_s), s	5.6	0.0	4.2				0.8	2.4	0.0	0.0	5.1	5.2
Cycle Q Clear(g_c), s	5.6	0.0	4.2				0.8	2.4	0.0	0.0	5.1	5.2
Prop In Lane	1.00		1.00				1.00		0.00	0.00		0.43
Lane Grp Cap(c), veh/h	310	0	143				565	3770	0	0	2321	1186
V/C Ratio(X)	0.68	0.00	0.51				0.11	0.14	0.00	0.00	0.23	0.24
Avail Cap(c_a), veh/h	1196	0	550				726	3770	0	0	2321	1186
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.48	0.00	0.48				1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	39.4	0.0	38.7				2.8	2.4	0.0	0.0	4.2	4.2
Incr Delay (d2), s/veh	1.3	0.0	1.4				0.1	0.1	0.0	0.0	0.2	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.0	3.5				0.4	1.0	0.0	0.0	2.3	2.4
LnGrp Delay(d),s/veh	40.7	0.0	40.1				2.8	2.5	0.0	0.0	4.4	4.6
LnGrp LOS	D		D				A	A			A	A
Approach Vol, veh/h		284						588			824	
Approach Delay, s/veh		40.5						2.5			4.5	
Approach LOS		D						A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		76.4		13.6	5.4	71.0		
Change Period (Y+Rc), s		6.0		5.0	3.0	6.0		
Max Green Setting (Gmax), s		46.0		33.0	11.0	30.0		
Max Q Clear Time (g_c+I1), s		4.4		7.6	2.8	7.2		
Green Ext Time (p_c), s		11.3		0.9	0.1	9.3		

Intersection Summary	
HCM 2010 Ctrl Delay	9.8
HCM 2010 LOS	A

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	0	0	257	1740	696	149
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	Yield
Storage Length	0	-	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	273	1851	740	159

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2212	370	740	0	-	0
Stage 1	740	-	-	-	-	-
Stage 2	1472	-	-	-	-	-
Critical Hdwy	6.29	7.14	5.34	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.67	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	52	536	522	-	-	-
Stage 1	357	-	-	-	-	-
Stage 2	174	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	25	536	522	-	-	-
Mov Cap-2 Maneuver	25	-	-	-	-	-
Stage 1	357	-	-	-	-	-
Stage 2	83	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	2.5	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	522	-	-	-	-
HCM Lane V/C Ratio	0.524	-	-	-	-
HCM Control Delay (s)	19.2	-	0	-	-
HCM Lane LOS	C	-	A	-	-
HCM 95th %tile Q(veh)	3	-	-	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	27	328	124	278	651	263	450	787	245	14	390	362
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	28	345	131	293	685	277	474	828	192	15	499	235
Adj No. of Lanes	1	2	0	1	2	0	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	72	656	245	201	640	259	656	1699	760	213	857	364
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.37	0.48	0.48	0.12	0.23	0.23
Sat Flow, veh/h	581	2523	943	914	2461	995	1774	3539	1583	1774	3725	1583
Grp Volume(v), veh/h	28	240	236	293	492	470	474	828	192	15	499	235
Grp Sat Flow(s),veh/h/ln	581	1770	1696	914	1770	1687	1774	1770	1583	1774	1863	1583
Q Serve(g_s), s	0.0	11.6	11.9	14.1	26.0	26.0	23.0	15.9	7.2	0.8	11.9	13.4
Cycle Q Clear(g_c), s	26.0	11.6	11.9	26.0	26.0	26.0	23.0	15.9	7.2	0.8	11.9	13.4
Prop In Lane	1.00		0.56	1.00		0.59	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	72	460	441	201	460	439	656	1699	760	213	857	364
V/C Ratio(X)	0.39	0.52	0.53	1.46	1.07	1.07	0.72	0.49	0.25	0.07	0.58	0.65
Avail Cap(c_a), veh/h	72	460	441	201	460	439	656	1699	760	213	857	364
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.09	0.09	0.09	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.0	31.7	31.8	45.5	37.0	37.0	27.1	17.6	15.4	39.1	34.2	34.8
Incr Delay (d2), s/veh	15.1	4.2	4.6	232.9	62.0	63.0	0.6	0.1	0.1	0.6	2.9	8.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	6.2	6.1	18.5	20.6	19.7	11.3	7.7	3.2	0.4	6.4	6.7
LnGrp Delay(d),s/veh	65.1	35.9	36.4	278.4	99.0	100.0	27.7	17.7	15.5	39.7	37.1	43.3
LnGrp LOS	E	D	D	F	F	F	C	B	B	D	D	D
Approach Vol, veh/h		504			1255			1494			749	
Approach Delay, s/veh		37.7			141.3			20.6			39.1	
Approach LOS		D			F			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	16.0	53.0		31.0	41.0	28.0		31.0
Change Period (Y+Rc), s	4.0	5.0		5.0	4.0	5.0		5.0
Max Green Setting (Gmax), s	12.0	46.0		26.0	37.0	23.0		24.0
Max Q Clear Time (g_c+I1), s	2.8	17.9		28.0	25.0	15.4		28.0
Green Ext Time (p_c), s	0.0	12.3		0.0	1.2	5.3		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	64.1
HCM 2010 LOS	E

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	819	0	638	0	0	0	0	953	301	229	448	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	767	133	672				0	1003	216	241	472	0
Adj No. of Lanes	1	1	0				0	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	561	85	429				0	1265	566	325	2059	0
Arrive On Green	0.32	0.32	0.32				0.00	0.36	0.36	0.18	0.58	0.00
Sat Flow, veh/h	1774	268	1355				0	3632	1583	1774	3632	0
Grp Volume(v), veh/h	767	0	805				0	1003	216	241	472	0
Grp Sat Flow(s),veh/h/ln	1774	0	1624				0	1770	1583	1774	1770	0
Q Serve(g_s), s	31.0	0.0	31.0				0.0	24.9	9.9	12.6	6.3	0.0
Cycle Q Clear(g_c), s	31.0	0.0	31.0				0.0	24.9	9.9	12.6	6.3	0.0
Prop In Lane	1.00		0.83				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	561	0	514				0	1265	566	325	2059	0
V/C Ratio(X)	1.37	0.00	1.57				0.00	0.79	0.38	0.74	0.23	0.00
Avail Cap(c_a), veh/h	561	0	514				0	1265	566	597	2059	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.09	0.09	0.00
Uniform Delay (d), s/veh	33.5	0.0	33.5				0.0	28.2	23.4	37.8	9.9	0.0
Incr Delay (d2), s/veh	176.2	0.0	264.7				0.0	5.2	1.9	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	42.6	0.0	51.6				0.0	13.0	4.6	6.2	3.1	0.0
LnGrp Delay(d),s/veh	209.7	0.0	298.2				0.0	33.4	25.4	38.1	9.9	0.0
LnGrp LOS	F		F					C	C	D	A	
Approach Vol, veh/h		1572						1219			713	
Approach Delay, s/veh		255.0						32.0			19.5	
Approach LOS		F						C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	22.0	40.0		36.0		62.0		
Change Period (Y+Rc), s	4.0	5.0		5.0		5.0		
Max Green Setting (Gmax), s	33.0	20.0		31.0		49.0		
Max Q Clear Time (g_c+I1), s	14.6	26.9		33.0		8.3		
Green Ext Time (p_c), s	0.6	0.0		0.0		14.7		

Intersection Summary	
HCM 2010 Ctrl Delay	129.5
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	37	601	138	117	617	82	211	810	86	154	665	280
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	39	633	29	123	649	86	222	853	31	162	700	295
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	66	840	376	166	925	122	455	1062	475	527	828	349
Arrive On Green	0.04	0.24	0.24	0.09	0.29	0.29	0.26	0.30	0.30	0.30	0.34	0.33
Sat Flow, veh/h	1774	3539	1583	1774	3143	416	1774	3539	1583	1774	2428	1023
Grp Volume(v), veh/h	39	633	29	123	365	370	222	853	31	162	510	485
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1789	1774	1770	1583	1774	1770	1682
Q Serve(g_s), s	2.4	18.6	0.9	7.6	20.5	20.6	11.9	24.9	1.2	7.9	29.9	29.9
Cycle Q Clear(g_c), s	2.4	18.6	0.9	7.6	20.5	20.6	11.9	24.9	1.2	7.9	29.9	29.9
Prop In Lane	1.00		1.00	1.00		0.23	1.00		1.00	1.00		0.61
Lane Grp Cap(c), veh/h	66	840	376	166	521	526	455	1062	475	527	603	574
V/C Ratio(X)	0.59	0.75	0.08	0.74	0.70	0.70	0.49	0.80	0.07	0.31	0.85	0.85
Avail Cap(c_a), veh/h	253	1011	452	253	521	526	455	1422	636	527	711	676
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.71	0.71	0.71	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.1	39.7	9.9	49.4	35.1	35.3	35.4	36.1	15.3	30.4	34.2	34.5
Incr Delay (d2), s/veh	8.3	2.6	0.1	6.3	4.2	4.2	0.6	4.7	0.2	0.3	13.6	14.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	9.4	0.4	4.0	10.6	10.8	5.9	12.8	0.5	3.9	16.9	16.2
LnGrp Delay(d),s/veh	61.4	42.3	10.0	55.7	39.3	39.5	36.0	40.8	15.4	30.8	47.8	48.7
LnGrp LOS	E	D	B	E	D	D	D	D	B	C	D	D
Approach Vol, veh/h		701			858			1106			1157	
Approach Delay, s/veh		42.0			41.7			39.1			45.8	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	35.3	35.6	12.5	28.6	30.7	40.2	6.1	35.0
Change Period (Y+Rc), s	3.0	5.0	3.0	5.0	3.0	5.0	3.0	5.0
Max Green Setting (Gmax), s	10.0	42.0	15.0	29.0	10.0	42.0	15.0	29.0
Max Q Clear Time (g_c+I1), s	9.9	26.9	9.6	20.6	13.9	31.9	4.4	22.6
Green Ext Time (p_c), s	0.0	3.7	0.2	3.0	0.0	3.2	0.0	3.4

Intersection Summary	
HCM 2010 Ctrl Delay	42.3
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	622	305	380	576	0	0	0	0	676	8	260
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1900	1863	1863	0				1863	1863	1863
Adj Flow Rate, veh/h	0	655	321	400	606	0				744	0	65
Adj No. of Lanes	0	4	0	2	2	0				2	0	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1670	550	552	2032	0				936	0	418
Arrive On Green	0.00	0.35	0.35	0.16	0.57	0.00				0.26	0.00	0.26
Sat Flow, veh/h	0	5067	1583	3442	3632	0				3548	0	1583
Grp Volume(v), veh/h	0	655	321	400	606	0				744	0	65
Grp Sat Flow(s),veh/h/ln	0	1602	1583	1721	1770	0				1774	0	1583
Q Serve(g_s), s	0.0	5.5	8.8	5.9	4.7	0.0				10.4	0.0	1.7
Cycle Q Clear(g_c), s	0.0	5.5	8.8	5.9	4.7	0.0				10.4	0.0	1.7
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1670	550	552	2032	0				936	0	418
V/C Ratio(X)	0.00	0.39	0.58	0.72	0.30	0.00				0.79	0.00	0.16
Avail Cap(c_a), veh/h	0	3172	1045	1623	2336	0				2342	0	1045
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	13.1	14.2	21.1	5.8	0.0				18.2	0.0	15.0
Incr Delay (d2), s/veh	0.0	0.1	0.4	0.7	0.0	0.0				0.6	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.4	3.9	2.8	2.3	0.0				5.1	0.0	0.7
LnGrp Delay(d),s/veh	0.0	13.1	14.5	21.8	5.8	0.0				18.8	0.0	15.0
LnGrp LOS		B	B	C	A					B		B
Approach Vol, veh/h		976			1006						809	
Approach Delay, s/veh		13.6			12.2						18.5	
Approach LOS		B			B						B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	12.0	22.5		18.5		34.5		
Change Period (Y+Rc), s	3.5	4.1		4.5		4.1		
Max Green Setting (Gmax), s	25.0	35.0		35.0		35.0		
Max Q Clear Time (g_c+I1), s	7.9	10.8		12.4		6.7		
Green Ext Time (p_c), s	0.7	7.6		1.6		8.0		

Intersection Summary	
HCM 2010 Ctrl Delay	14.5
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	219	979	0	0	712	404	372	11	611	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1863	1863	1863			
Adj Flow Rate, veh/h	231	1031	0	0	749	262	595	0	347			
Adj No. of Lanes	2	2	0	0	4	1	2	0	1			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	369	1942	0	0	2380	588	991	0	442			
Arrive On Green	0.11	0.55	0.00	0.00	0.37	0.37	0.28	0.00	0.28			
Sat Flow, veh/h	3442	3632	0	0	6669	1583	3548	0	1583			
Grp Volume(v), veh/h	231	1031	0	0	749	262	595	0	347			
Grp Sat Flow(s),veh/h/ln	1721	1770	0	0	1602	1583	1774	0	1583			
Q Serve(g_s), s	3.2	9.3	0.0	0.0	4.2	6.2	7.3	0.0	10.1			
Cycle Q Clear(g_c), s	3.2	9.3	0.0	0.0	4.2	6.2	7.3	0.0	10.1			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	369	1942	0	0	2380	588	991	0	442			
V/C Ratio(X)	0.63	0.53	0.00	0.00	0.31	0.45	0.60	0.00	0.78			
Avail Cap(c_a), veh/h	1722	2478	0	0	4616	1140	2485	0	1109			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	21.4	7.2	0.0	0.0	11.2	11.8	15.6	0.0	16.6			
Incr Delay (d2), s/veh	0.7	0.1	0.0	0.0	0.0	0.2	0.2	0.0	1.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.5	4.5	0.0	0.0	1.8	2.7	3.6	0.0	4.5			
LnGrp Delay(d),s/veh	22.0	7.3	0.0	0.0	11.2	12.0	15.8	0.0	17.8			
LnGrp LOS	C	A			B	B	B		B			
Approach Vol, veh/h		1262			1011			942				
Approach Delay, s/veh		10.0			11.4			16.5				
Approach LOS		A			B			B				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		31.5			8.9	22.7		18.5
Change Period (Y+Rc), s		4.1			3.5	4.1		4.5
Max Green Setting (Gmax), s		35.0			25.0	36.0		35.0
Max Q Clear Time (g_c+I1), s		11.3			5.2	8.2		12.1
Green Ext Time (p_c), s		9.8			0.4	10.3		1.8

Intersection Summary	
HCM 2010 Ctrl Delay	12.4
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	35	1125	58	93	775	162	163	365	109	58	171	87
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	37	1184	61	98	816	171	172	384	115	61	180	92
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	440	1877	97	386	1653	346	320	768	227	224	657	322
Arrive On Green	0.08	0.55	0.54	0.10	0.57	0.56	0.29	0.29	0.27	0.29	0.29	0.27
Sat Flow, veh/h	1774	3425	176	1774	2914	611	1103	2694	797	895	2305	1128
Grp Volume(v), veh/h	37	611	634	98	496	491	172	251	248	61	136	136
Grp Sat Flow(s),veh/h/ln	1774	1770	1832	1774	1770	1755	1103	1770	1722	895	1770	1664
Q Serve(g_s), s	0.8	22.4	22.5	1.9	15.8	15.9	13.5	11.1	11.4	5.7	5.6	6.0
Cycle Q Clear(g_c), s	0.8	22.4	22.5	1.9	15.8	15.9	19.5	11.1	11.4	17.1	5.6	6.0
Prop In Lane	1.00		0.10	1.00		0.35	1.00		0.46	1.00		0.68
Lane Grp Cap(c), veh/h	440	970	1004	386	1004	996	320	504	491	224	504	474
V/C Ratio(X)	0.08	0.63	0.63	0.25	0.49	0.49	0.54	0.50	0.51	0.27	0.27	0.29
Avail Cap(c_a), veh/h	555	970	1004	468	1004	996	358	565	550	254	565	531
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.1	14.7	14.7	9.9	12.2	12.3	33.8	28.0	28.3	35.2	26.0	26.4
Incr Delay (d2), s/veh	0.1	3.1	3.0	0.3	1.7	1.7	1.4	0.8	0.8	0.7	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	11.7	12.1	0.9	8.2	8.2	4.2	5.5	5.5	1.5	2.8	2.8
LnGrp Delay(d),s/veh	8.2	17.8	17.7	10.2	14.0	14.1	35.2	28.7	29.1	35.9	26.3	26.8
LnGrp LOS	A	B	B	B	B	B	D	C	C	D	C	C
Approach Vol, veh/h		1282			1085			671			333	
Approach Delay, s/veh		17.5			13.7			30.5			28.3	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.6	55.3		29.1	11.4	53.5		29.1
Change Period (Y+Rc), s	4.0	5.0		5.3	4.0	5.0		5.3
Max Green Setting (Gmax), s	11.7	41.0		27.0	11.7	41.0		27.0
Max Q Clear Time (g_c+I1), s	2.8	17.9		21.5	3.9	24.5		19.1
Green Ext Time (p_c), s	0.0	11.3		2.3	0.1	9.4		2.9

Intersection Summary	
HCM 2010 Ctrl Delay	19.9
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	33	1011	65	58	795	103	79	300	54	41	120	65
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	35	1064	40	61	837	108	83	316	57	43	126	68
Adj No. of Lanes	1	1	1	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	339	1071	910	95	1813	234	342	461	83	209	342	184
Arrive On Green	0.57	0.57	0.57	0.57	0.57	0.57	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	591	1863	1583	509	3154	407	1184	1537	277	1005	1139	615
Grp Volume(v), veh/h	35	1064	40	61	470	475	83	0	373	43	0	194
Grp Sat Flow(s),veh/h/ln	591	1863	1583	509	1770	1791	1184	0	1814	1005	0	1754
Q Serve(g_s), s	2.9	45.3	0.9	0.7	12.3	12.3	4.7	0.0	14.5	3.2	0.0	7.0
Cycle Q Clear(g_c), s	15.2	45.3	0.9	46.0	12.3	12.3	11.7	0.0	14.5	17.6	0.0	7.0
Prop In Lane	1.00		1.00	1.00		0.23	1.00		0.15	1.00		0.35
Lane Grp Cap(c), veh/h	339	1071	910	95	1018	1030	342	0	544	209	0	526
V/C Ratio(X)	0.10	0.99	0.04	0.65	0.46	0.46	0.24	0.00	0.69	0.21	0.00	0.37
Avail Cap(c_a), veh/h	339	1071	910	95	1018	1030	342	0	544	209	0	526
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.13	0.13	0.13	0.89	0.00	0.89	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.2	16.8	7.4	40.0	9.8	9.8	26.6	0.0	24.7	32.4	0.0	22.0
Incr Delay (d2), s/veh	0.6	26.0	0.1	2.0	0.0	0.0	1.5	0.0	6.2	2.2	0.0	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	30.5	0.4	1.4	5.9	6.0	1.7	0.0	8.2	1.0	0.0	3.6
LnGrp Delay(d),s/veh	14.8	42.8	7.5	41.9	9.9	9.9	28.1	0.0	30.8	34.7	0.0	24.0
LnGrp LOS	B	D	A	D	A	A	C		C	C		C
Approach Vol, veh/h		1139			1006			456			237	
Approach Delay, s/veh		40.7			11.8			30.3			26.0	
Approach LOS		D			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		51.0		29.0		51.0		29.0
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0
Max Green Setting (Gmax), s		46.0		24.0		46.0		24.0
Max Q Clear Time (g_c+I1), s		47.3		19.6		48.0		16.5
Green Ext Time (p_c), s		0.0		1.5		0.0		2.3

Intersection Summary	
HCM 2010 Ctrl Delay	27.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	60	661	297	371	631	203	426	667	403	114	705	218
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	63	696	313	391	664	214	448	702	351	120	742	141
Adj No. of Lanes	1	2	0	1	2	0	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	134	713	320	302	1040	335	231	1026	459	231	1027	459
Arrive On Green	0.08	0.30	0.29	0.17	0.39	0.38	0.22	0.48	0.48	0.13	0.29	0.29
Sat Flow, veh/h	1774	2376	1068	1774	2634	849	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	63	518	491	391	446	432	448	702	351	120	742	141
Grp Sat Flow(s),veh/h/ln	1774	1770	1674	1774	1770	1713	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	3.4	29.0	29.0	17.0	20.4	20.5	13.0	15.3	10.5	6.3	18.8	6.9
Cycle Q Clear(g_c), s	3.4	29.0	29.0	17.0	20.4	20.5	13.0	15.3	10.5	6.3	18.8	6.9
Prop In Lane	1.00		0.64	1.00		0.50	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	134	531	502	302	698	676	231	1026	459	231	1027	459
V/C Ratio(X)	0.47	0.98	0.98	1.30	0.64	0.64	1.94	0.68	0.76	0.52	0.72	0.31
Avail Cap(c_a), veh/h	302	531	502	302	698	676	231	1026	459	284	1133	507
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00
Upstream Filter(I)	0.17	0.17	0.17	0.97	0.97	0.97	1.00	1.00	1.00	0.70	0.70	0.70
Uniform Delay (d), s/veh	44.3	34.7	35.0	41.5	24.5	24.7	39.1	22.3	7.7	40.6	31.9	27.7
Incr Delay (d2), s/veh	0.5	11.4	11.9	155.1	1.9	2.0	439.7	3.7	11.5	1.3	1.5	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	15.8	15.0	21.3	10.3	10.0	34.5	7.8	5.8	3.2	9.4	3.0
LnGrp Delay(d),s/veh	44.8	46.1	46.8	196.6	26.4	26.7	478.8	26.0	19.1	41.9	33.3	27.9
LnGrp LOS	D	D	D	F	C	C	F	C	B	D	C	C
Approach Vol, veh/h		1072			1269			1501			1003	
Approach Delay, s/veh		46.3			78.9			159.5			33.6	
Approach LOS		D			E			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	32.0	15.0	31.0	9.5	41.5	15.0	31.0
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	14.0	27.0	10.0	29.0	14.0	27.0	13.0	26.0
Max Q Clear Time (g_c+I1), s	19.0	31.0	15.0	20.8	5.4	22.5	8.3	17.3
Green Ext Time (p_c), s	0.0	0.0	0.0	3.1	0.1	3.1	2.1	3.4

Intersection Summary	
HCM 2010 Ctrl Delay	87.3
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	640	88	112	648	1	310	20	313	0	25	9
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1900	1863	1863	1900	1900	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	0	674	93	118	682	1	326	21	214	0	26	9
Adj No. of Lanes	0	2	0	1	2	0	0	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	1460	201	148	2159	3	442	24	465	80	389	134
Arrive On Green	0.00	0.47	0.47	0.17	1.00	1.00	0.29	0.29	0.29	0.00	0.29	0.29
Sat Flow, veh/h	0	3219	431	1774	3626	5	1243	80	1583	1141	1324	458
Grp Volume(v), veh/h	0	381	386	118	333	350	347	0	214	0	0	35
Grp Sat Flow(s),veh/h/ln	0	1770	1787	1774	1770	1862	1323	0	1583	1141	0	1782
Q Serve(g_s), s	0.0	13.2	13.2	5.7	0.0	0.0	21.6	0.0	9.9	0.0	0.0	1.3
Cycle Q Clear(g_c), s	0.0	13.2	13.2	5.7	0.0	0.0	22.8	0.0	9.9	0.0	0.0	1.3
Prop In Lane	0.00		0.24	1.00		0.00	0.94		1.00	1.00		0.26
Lane Grp Cap(c), veh/h	0	827	835	148	1054	1108	466	0	465	80	0	523
V/C Ratio(X)	0.00	0.46	0.46	0.79	0.32	0.32	0.74	0.00	0.46	0.00	0.00	0.07
Avail Cap(c_a), veh/h	0	827	835	394	1054	1108	537	0	545	125	0	594
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.93	0.93	0.93	1.00	0.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	16.3	16.3	36.7	0.0	0.0	31.1	0.0	26.0	0.0	0.0	22.9
Incr Delay (d2), s/veh	0.0	1.8	1.8	8.6	0.2	0.2	4.8	0.0	0.7	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	6.8	6.9	3.2	0.0	0.0	8.9	0.0	4.4	0.0	0.0	0.6
LnGrp Delay(d),s/veh	0.0	18.1	18.1	45.3	0.2	0.2	36.0	0.0	26.7	0.0	0.0	23.0
LnGrp LOS		B	B	D	A	A	D		C			C
Approach Vol, veh/h		767			801			561			35	
Approach Delay, s/veh		18.1			6.8			32.4			23.0	
Approach LOS		B			A			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		8
Phs Duration (G+Y+Rc), s	11.5	47.0		31.4		58.6		31.4
Change Period (Y+Rc), s	4.0	5.0		5.0		5.0		5.0
Max Green Setting (Gmax), s	20.0	25.0		30.0		49.0		31.0
Max Q Clear Time (g_c+I1), s	7.7	15.2		3.3		2.0		24.8
Green Ext Time (p_c), s	0.2	5.6		3.0		11.3		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	17.7
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	68	471	156	360	376	421	224	1091	381	179	690	195
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	72	496	164	379	396	443	236	1148	401	188	726	205
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	145	622	204	284	559	500	266	1061	363	266	1117	315
Arrive On Green	0.08	0.24	0.23	0.16	0.32	0.31	0.15	0.41	0.40	0.15	0.41	0.40
Sat Flow, veh/h	1774	2619	861	1774	1770	1583	1774	2590	886	1774	2727	770
Grp Volume(v), veh/h	72	334	326	379	396	443	236	777	772	188	471	460
Grp Sat Flow(s),veh/h/ln	1774	1770	1711	1774	1770	1583	1774	1770	1706	1774	1770	1727
Q Serve(g_s), s	3.9	17.8	18.0	16.0	19.7	26.6	13.0	41.0	41.0	10.1	21.4	21.5
Cycle Q Clear(g_c), s	3.9	17.8	18.0	16.0	19.7	26.6	13.0	41.0	41.0	10.1	21.4	21.5
Prop In Lane	1.00		0.50	1.00		1.00	1.00		0.52	1.00		0.45
Lane Grp Cap(c), veh/h	145	420	406	284	559	500	266	725	699	266	725	707
V/C Ratio(X)	0.50	0.80	0.80	1.34	0.71	0.89	0.89	1.07	1.10	0.71	0.65	0.65
Avail Cap(c_a), veh/h	248	455	440	284	559	500	266	725	699	266	725	707
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.57	0.57	0.57	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.0	35.8	36.2	42.0	30.1	33.0	41.7	29.5	29.8	40.4	23.8	24.0
Incr Delay (d2), s/veh	2.6	8.9	9.6	172.9	4.1	17.1	18.2	47.0	59.4	8.3	4.5	4.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	9.7	9.6	21.4	10.2	14.0	7.7	29.4	30.7	5.5	11.4	11.1
LnGrp Delay(d),s/veh	46.6	44.7	45.8	214.9	34.2	50.1	59.9	76.5	89.2	48.7	28.2	28.6
LnGrp LOS	D	D	D	F	C	D	E	F	F	D	C	C
Approach Vol, veh/h		732			1218			1785			1119	
Approach Delay, s/veh		45.4			96.2			79.8			31.8	
Approach LOS		D			F			E			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	26.0	15.0	43.0	8.1	33.9	15.0	43.0
Change Period (Y+Rc), s	3.0	5.3	3.0	5.0	3.0	5.3	3.0	5.0
Max Green Setting (Gmax), s	13.0	22.7	12.0	36.0	11.0	24.7	12.0	36.0
Max Q Clear Time (g_c+I1), s	18.0	20.0	15.0	23.5	5.9	28.6	12.1	43.0
Green Ext Time (p_c), s	0.0	0.8	0.0	9.0	0.1	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	67.7
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	487	395	473	566	0	0	0	0	202	0	267
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1900	1863	1863	0				1863	1863	1863
Adj Flow Rate, veh/h	0	513	416	498	596	0				260	0	102
Adj No. of Lanes	0	4	0	2	2	0				2	0	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	2143	706	650	2468	0				504	0	225
Arrive On Green	0.00	0.45	0.45	0.19	0.70	0.00				0.14	0.00	0.14
Sat Flow, veh/h	0	5067	1583	3442	3632	0				3548	0	1583
Grp Volume(v), veh/h	0	513	416	498	596	0				260	0	102
Grp Sat Flow(s),veh/h/ln	0	1602	1583	1721	1770	0				1774	0	1583
Q Serve(g_s), s	0.0	3.7	11.1	7.7	3.4	0.0				3.8	0.0	3.3
Cycle Q Clear(g_c), s	0.0	3.7	11.1	7.7	3.4	0.0				3.8	0.0	3.3
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2143	706	650	2468	0				504	0	225
V/C Ratio(X)	0.00	0.24	0.59	0.77	0.24	0.00				0.52	0.00	0.45
Avail Cap(c_a), veh/h	0	2143	706	2148	2468	0				2215	0	988
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	9.6	11.7	21.6	3.1	0.0				22.3	0.0	22.0
Incr Delay (d2), s/veh	0.0	0.3	3.6	0.7	0.2	0.0				0.3	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.7	5.4	3.7	1.7	0.0				1.9	0.0	1.5
LnGrp Delay(d),s/veh	0.0	9.9	15.3	22.3	3.3	0.0				22.6	0.0	22.6
LnGrp LOS		A	B	C	A					C		C
Approach Vol, veh/h		929			1094						362	
Approach Delay, s/veh		12.3			12.0						22.6	
Approach LOS		B			B						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	14.1	29.5		12.5		43.6		
Change Period (Y+Rc), s	3.5	4.5		4.5		4.5		
Max Green Setting (Gmax), s	35.0	25.0		35.0		25.0		
Max Q Clear Time (g_c+I1), s	9.7	13.1		5.8		5.4		
Green Ext Time (p_c), s	0.9	5.4		0.6		6.8		

Intersection Summary	
HCM 2010 Ctrl Delay	13.7
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	181	717	0	0	865	566	409	1	465	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1863	1863	1863			
Adj Flow Rate, veh/h	191	755	0	0	911	509	561	0	279			
Adj No. of Lanes	2	2	0	0	4	1	2	0	1			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	325	2024	0	0	2601	643	831	0	371			
Arrive On Green	0.09	0.57	0.00	0.00	0.41	0.41	0.23	0.00	0.23			
Sat Flow, veh/h	3442	3632	0	0	6669	1583	3548	0	1583			
Grp Volume(v), veh/h	191	755	0	0	911	509	561	0	279			
Grp Sat Flow(s),veh/h/ln	1721	1770	0	0	1602	1583	1774	0	1583			
Q Serve(g_s), s	2.6	5.7	0.0	0.0	4.8	13.8	7.0	0.0	8.0			
Cycle Q Clear(g_c), s	2.6	5.7	0.0	0.0	4.8	13.8	7.0	0.0	8.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	325	2024	0	0	2601	643	831	0	371			
V/C Ratio(X)	0.59	0.37	0.00	0.00	0.35	0.79	0.68	0.00	0.75			
Avail Cap(c_a), veh/h	1405	2024	0	0	3270	808	1775	0	792			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	21.3	5.7	0.0	0.0	10.1	12.7	17.1	0.0	17.4			
Incr Delay (d2), s/veh	0.6	0.0	0.0	0.0	0.0	3.3	0.4	0.0	1.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.2	2.7	0.0	0.0	2.1	6.5	3.5	0.0	3.6			
LnGrp Delay(d),s/veh	21.9	5.7	0.0	0.0	10.1	16.0	17.4	0.0	18.6			
LnGrp LOS	C	A			B	B	B		B			
Approach Vol, veh/h		946			1420			840				
Approach Delay, s/veh		9.0			12.2			17.8				
Approach LOS		A			B			B				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		32.5			8.1	24.4		16.5
Change Period (Y+Rc), s		4.5			3.5	4.5		5.0
Max Green Setting (Gmax), s		25.0			20.0	25.0		24.5
Max Q Clear Time (g_c+I1), s		7.7			4.6	15.8		10.0
Green Ext Time (p_c), s		8.4			0.3	4.1		1.4

Intersection Summary	
HCM 2010 Ctrl Delay	12.7
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	29	717	125	230	573	121	139	401	58	23	435	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	31	755	132	242	603	127	146	422	61	24	458	84
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	400	1406	246	260	1359	286	353	1312	188	381	1263	230
Arrive On Green	0.47	0.47	0.47	0.93	0.93	0.93	0.42	0.42	0.42	0.42	0.42	0.42
Sat Flow, veh/h	723	3013	527	624	2912	612	860	3107	446	909	2991	545
Grp Volume(v), veh/h	31	443	444	242	366	364	146	239	244	24	270	272
Grp Sat Flow(s),veh/h/ln	723	1770	1770	624	1770	1755	860	1770	1784	909	1770	1767
Q Serve(g_s), s	2.2	16.0	16.1	25.9	2.1	2.1	12.6	8.1	8.2	1.6	9.4	9.5
Cycle Q Clear(g_c), s	4.4	16.0	16.1	42.0	2.1	2.1	22.0	8.1	8.2	9.9	9.4	9.5
Prop In Lane	1.00		0.30	1.00		0.35	1.00		0.25	1.00		0.31
Lane Grp Cap(c), veh/h	400	826	826	260	826	819	353	747	753	381	747	746
V/C Ratio(X)	0.08	0.54	0.54	0.93	0.44	0.44	0.41	0.32	0.32	0.06	0.36	0.36
Avail Cap(c_a), veh/h	400	826	826	260	826	819	353	747	753	381	747	746
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.91	0.91	0.91	0.88	0.88	0.88	1.00	1.00	1.00	0.95	0.95	0.95
Uniform Delay (d), s/veh	14.6	17.1	17.1	14.4	1.7	1.7	25.3	17.4	17.4	20.7	17.7	17.8
Incr Delay (d2), s/veh	0.1	0.6	0.6	34.6	0.3	0.3	3.6	1.1	1.1	0.3	1.3	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	7.9	7.9	8.4	0.9	0.9	3.3	4.2	4.3	0.4	4.8	4.9
LnGrp Delay(d),s/veh	14.7	17.7	17.7	49.0	2.0	2.0	28.8	18.5	18.5	21.0	19.0	19.1
LnGrp LOS	B	B	B	D	A	A	C	B	B	C	B	B
Approach Vol, veh/h		918			972			629			566	
Approach Delay, s/veh		17.6			13.7			20.9			19.1	
Approach LOS		B			B			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		43.0		47.0		43.0		47.0
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0
Max Green Setting (Gmax), s		38.0		42.0		38.0		42.0
Max Q Clear Time (g_c+I1), s		24.0		18.1		11.9		44.0
Green Ext Time (p_c), s		5.9		13.9		7.6		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	17.3
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	409	469	187	134	237	194	183	921	359	165	754	429
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	431	494	197	141	249	189	193	969	356	174	794	452
Adj No. of Lanes	1	2	0	1	2	1	1	2	1	1	3	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	898	1917	760	619	2616	1170	237	1140	510	217	1168	545
Arrive On Green	0.03	0.26	0.25	0.05	0.74	0.74	0.13	0.32	0.32	0.12	0.34	0.34
Sat Flow, veh/h	1774	2477	982	1774	3539	1583	1774	3539	1583	1774	3390	1583
Grp Volume(v), veh/h	431	352	339	141	249	189	193	969	356	174	794	452
Grp Sat Flow(s),veh/h/ln	1774	1770	1689	1774	1770	1583	1774	1770	1583	1774	1695	1583
Q Serve(g_s), s	4.4	14.3	14.4	1.8	1.8	3.2	9.5	23.0	22.2	8.6	18.0	23.6
Cycle Q Clear(g_c), s	4.4	14.3	14.4	1.8	1.8	3.2	9.5	23.0	22.2	8.6	18.0	23.6
Prop In Lane	1.00		0.58	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	898	1369	1307	619	2616	1170	237	1140	510	217	1168	545
V/C Ratio(X)	0.48	0.26	0.26	0.23	0.10	0.16	0.82	0.85	0.70	0.80	0.68	0.83
Avail Cap(c_a), veh/h	957	1369	1307	701	2616	1170	237	1140	510	217	1168	545
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.91	0.91	0.91	0.81	0.81	0.81	1.00	1.00	1.00	0.38	0.38	0.38
Uniform Delay (d), s/veh	2.0	12.9	13.0	3.4	3.3	3.5	37.9	28.5	42.0	38.4	25.3	27.1
Incr Delay (d2), s/veh	0.4	0.4	0.4	0.2	0.1	0.2	19.4	6.2	4.2	8.1	0.6	4.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	7.2	6.9	0.8	0.9	1.5	5.9	12.2	10.2	4.7	8.5	10.9
LnGrp Delay(d),s/veh	2.3	13.3	13.4	3.6	3.4	3.7	57.4	34.7	46.1	46.5	25.9	31.3
LnGrp LOS	A	B	B	A	A	A	E	C	D	D	C	C
Approach Vol, veh/h		1122			579			1518			1420	
Approach Delay, s/veh		9.1			3.5			40.3			30.1	
Approach LOS		A			A			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	31.0	10.0	68.5	14.0	33.0	6.9	71.7
Change Period (Y+Rc), s	6.0	* 6	3.0	5.0	3.0	6.0	3.0	5.0
Max Green Setting (Gmax), s	10.0	* 25	10.0	28.0	11.0	24.0	8.0	30.0
Max Q Clear Time (g_c+I1), s	10.6	25.0	6.4	5.2	11.5	25.6	3.8	16.4
Green Ext Time (p_c), s	0.0	0.0	0.6	4.9	0.0	0.0	0.2	4.2

Intersection Summary	
HCM 2010 Ctrl Delay	25.0
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	34	595	80	39	418	75	150	713	204	58	346	139
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	36	626	21	41	440	63	158	751	215	61	364	146
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	271	745	633	155	745	633	411	1268	363	232	1157	457
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.47	0.47	0.47	0.47	0.47	0.47
Sat Flow, veh/h	892	1863	1583	781	1863	1583	886	2717	778	579	2480	980
Grp Volume(v), veh/h	36	626	21	41	440	63	158	489	477	61	258	252
Grp Sat Flow(s),veh/h/ln	892	1863	1583	781	1863	1583	886	1770	1725	579	1770	1690
Q Serve(g_s), s	3.0	27.3	0.7	4.5	16.7	2.2	12.2	18.3	18.3	7.8	8.2	8.4
Cycle Q Clear(g_c), s	19.7	27.3	0.7	31.8	16.7	2.2	20.6	18.3	18.3	26.1	8.2	8.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.45	1.00		0.58
Lane Grp Cap(c), veh/h	271	745	633	155	745	633	411	826	805	232	826	789
V/C Ratio(X)	0.13	0.84	0.03	0.26	0.59	0.10	0.38	0.59	0.59	0.26	0.31	0.32
Avail Cap(c_a), veh/h	301	807	686	181	807	686	411	826	805	232	826	789
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.78	0.78	0.78	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.9	24.4	16.4	38.8	21.2	16.9	21.5	17.7	17.7	27.3	15.0	15.0
Incr Delay (d2), s/veh	0.2	6.0	0.0	0.3	0.6	0.0	2.7	3.1	3.2	2.7	1.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	15.1	0.3	1.0	8.7	1.0	3.3	9.5	9.3	1.4	4.2	4.2
LnGrp Delay(d),s/veh	29.1	30.4	16.4	39.1	21.8	16.9	24.2	20.8	20.9	30.1	16.0	16.1
LnGrp LOS	C	C	B	D	C	B	C	C	C	C	B	B
Approach Vol, veh/h		683			544			1124			571	
Approach Delay, s/veh		29.9			22.5			21.3			17.5	
Approach LOS		C			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		48.0		42.0		48.0		42.0
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0
Max Green Setting (Gmax), s		39.0		39.0		39.0		39.0
Max Q Clear Time (g_c+I1), s		22.6		29.3		28.1		33.8
Green Ext Time (p_c), s		6.9		3.2		5.5		2.2

Intersection Summary	
HCM 2010 Ctrl Delay	22.8
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	1211	339	282	460	0	0	0	0	125	343	259
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0				1900	1863	1863
Adj Flow Rate, veh/h	0	1275	357	297	484	0				132	361	273
Adj No. of Lanes	0	2	1	2	2	0				0	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1298	581	803	2281	0				120	329	387
Arrive On Green	0.00	0.37	0.37	0.47	1.00	0.00				0.24	0.24	0.24
Sat Flow, veh/h	0	3632	1583	3442	3632	0				492	1346	1583
Grp Volume(v), veh/h	0	1275	357	297	484	0				493	0	273
Grp Sat Flow(s),veh/h/ln	0	1770	1583	1721	1770	0				1838	0	1583
Q Serve(g_s), s	0.0	32.1	16.6	5.0	0.0	0.0				22.0	0.0	14.2
Cycle Q Clear(g_c), s	0.0	32.1	16.6	5.0	0.0	0.0				22.0	0.0	14.2
Prop In Lane	0.00		1.00	1.00		0.00				0.27		1.00
Lane Grp Cap(c), veh/h	0	1298	581	803	2281	0				449	0	387
V/C Ratio(X)	0.00	0.98	0.61	0.37	0.21	0.00				1.10	0.00	0.71
Avail Cap(c_a), veh/h	0	1298	581	803	2281	0				449	0	387
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.99	0.99	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	28.2	23.3	19.7	0.0	0.0				34.0	0.0	31.0
Incr Delay (d2), s/veh	0.0	21.1	4.8	1.3	0.2	0.0				71.4	0.0	4.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	19.4	8.0	2.5	0.1	0.0				20.0	0.0	6.7
LnGrp Delay(d),s/veh	0.0	49.4	28.1	21.0	0.2	0.0				105.4	0.0	36.0
LnGrp LOS		D	C	C	A					F		D
Approach Vol, veh/h		1632			781						766	
Approach Delay, s/veh		44.7			8.1						80.7	
Approach LOS		D			A						F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	25.0	38.0		27.0		63.0		
Change Period (Y+Rc), s	4.0	5.0		5.0		5.0		
Max Green Setting (Gmax), s	21.0	33.0		22.0		58.0		
Max Q Clear Time (g_c+I1), s	7.0	34.1		24.0		2.0		
Green Ext Time (p_c), s	0.4	0.0		0.0		11.6		

Intersection Summary	
HCM 2010 Ctrl Delay	44.4
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	150	1362	0	0	479	174	353	0	851	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1900	1863	1863			
Adj Flow Rate, veh/h	158	1434	0	0	504	183	372	0	896			
Adj No. of Lanes	1	2	0	0	3	1	0	1	1			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	187	2242	0	0	2401	747	453	0	405			
Arrive On Green	0.21	1.00	0.00	0.00	0.47	0.47	0.26	0.00	0.26			
Sat Flow, veh/h	1774	3632	0	0	5253	1583	1774	0	1583			
Grp Volume(v), veh/h	158	1434	0	0	504	183	372	0	896			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1695	1583	1774	0	1583			
Q Serve(g_s), s	7.7	0.0	0.0	0.0	5.2	6.2	17.8	0.0	23.0			
Cycle Q Clear(g_c), s	7.7	0.0	0.0	0.0	5.2	6.2	17.8	0.0	23.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	187	2242	0	0	2401	747	453	0	405			
V/C Ratio(X)	0.84	0.64	0.00	0.00	0.21	0.24	0.82	0.00	2.21			
Avail Cap(c_a), veh/h	197	2242	0	0	2401	747	453	0	405			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.13	0.13	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	34.8	0.0	0.0	0.0	13.9	14.2	31.6	0.0	33.5			
Incr Delay (d2), s/veh	4.0	0.2	0.0	0.0	0.2	0.8	10.7	0.0	554.5			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	3.9	0.1	0.0	0.0	2.5	2.9	10.0	0.0	72.3			
LnGrp Delay(d),s/veh	38.8	0.2	0.0	0.0	14.1	15.0	42.3	0.0	588.0			
LnGrp LOS	D	A			B	B	D		F			
Approach Vol, veh/h		1592			687			1268				
Approach Delay, s/veh		4.0			14.3			427.9				
Approach LOS		A			B			F				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		62.0			14.5	47.5		28.0
Change Period (Y+Rc), s		5.0			5.0	5.0		5.0
Max Green Setting (Gmax), s		57.0			10.0	42.0		23.0
Max Q Clear Time (g_c+I1), s		2.0			9.7	8.2		25.0
Green Ext Time (p_c), s		16.3			0.0	14.2		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	157.5
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	180	135	299	84	0	0	0	0	37	53	53
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1900	1863	1863	0				1900	1863	1863
Adj Flow Rate, veh/h	0	189	142	315	88	0				39	56	-49
Adj No. of Lanes	0	2	0	1	2	0				0	3	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	372	265	417	1874	0				417	798	373
Arrive On Green	0.00	0.19	0.19	0.24	0.53	0.00				0.24	0.24	0.00
Sat Flow, veh/h	0	2069	1408	1774	3632	0				1774	3390	1583
Grp Volume(v), veh/h	0	168	163	315	88	0				39	56	-49
Grp Sat Flow(s),veh/h/ln	0	1770	1614	1774	1770	0				1774	1695	1583
Q Serve(g_s), s	0.0	3.6	3.9	7.0	0.5	0.0				0.7	0.5	0.0
Cycle Q Clear(g_c), s	0.0	3.6	3.9	7.0	0.5	0.0				0.7	0.5	0.0
Prop In Lane	0.00		0.87	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	333	304	417	1874	0				417	798	373
V/C Ratio(X)	0.00	0.50	0.54	0.75	0.05	0.00				0.09	0.07	-0.13
Avail Cap(c_a), veh/h	0	1083	988	835	2665	0				835	1595	745
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	15.5	15.6	15.1	4.8	0.0				12.7	12.6	0.0
Incr Delay (d2), s/veh	0.0	0.9	1.1	1.1	0.0	0.0				0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.9	1.8	3.5	0.2	0.0				0.4	0.3	0.0
LnGrp Delay(d),s/veh	0.0	16.4	16.7	16.2	4.8	0.0				12.8	12.7	0.0
LnGrp LOS		B	B	B	A					B	B	
Approach Vol, veh/h		331			403						46	
Approach Delay, s/veh		16.5			13.7						26.2	
Approach LOS		B			B						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	14.5	13.0		15.0		27.5		
Change Period (Y+Rc), s	4.5	5.0		5.0		5.0		
Max Green Setting (Gmax), s	20.0	26.0		20.0		32.0		
Max Q Clear Time (g_c+I1), s	9.0	5.9		2.7		2.5		
Green Ext Time (p_c), s	0.4	1.9		0.3		2.1		

Intersection Summary	
HCM 2010 Ctrl Delay	15.6
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	101	173	0	0	361	326	164	131	120	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1900	1863	1900			
Adj Flow Rate, veh/h	106	182	0	0	380	320	173	138	126			
Adj No. of Lanes	1	2	0	0	2	2	0	2	0			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	2	2	0	0	2	2	0	2	0			
Cap, veh/h	171	1639	0	0	951	808	331	276	260			
Arrive On Green	0.10	0.46	0.00	0.00	0.26	0.26	0.25	0.25	0.25			
Sat Flow, veh/h	1774	3632	0	0	3725	3167	1328	1105	1042			
Grp Volume(v), veh/h	106	182	0	0	380	320	234	0	203			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1863	1583	1796	0	1679			
Q Serve(g_s), s	1.8	0.9	0.0	0.0	2.7	2.6	3.5	0.0	3.2			
Cycle Q Clear(g_c), s	1.8	0.9	0.0	0.0	2.7	2.6	3.5	0.0	3.2			
Prop In Lane	1.00		0.00	0.00		1.00	0.74		0.62			
Lane Grp Cap(c), veh/h	171	1639	0	0	951	808	448	0	419			
V/C Ratio(X)	0.62	0.11	0.00	0.00	0.40	0.40	0.52	0.00	0.48			
Avail Cap(c_a), veh/h	1415	3953	0	0	4161	3537	2007	0	1875			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	13.6	4.8	0.0	0.0	9.7	9.7	10.1	0.0	10.0			
Incr Delay (d2), s/veh	1.4	0.0	0.0	0.0	0.1	0.1	0.4	0.0	0.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.9	0.4	0.0	0.0	1.3	1.1	1.7	0.0	1.5			
LnGrp Delay(d),s/veh	15.0	4.8	0.0	0.0	9.8	9.8	10.5	0.0	10.4			
LnGrp LOS	B	A			A	A	B		B			
Approach Vol, veh/h		288			700			437				
Approach Delay, s/veh		8.5			9.8			10.4				
Approach LOS		A			A			B				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		19.0			6.5	12.5		12.3
Change Period (Y+Rc), s		4.5			3.5	4.5		4.5
Max Green Setting (Gmax), s		35.0			25.0	35.0		35.0
Max Q Clear Time (g_c+I1), s		2.9			3.8	4.7		5.5
Green Ext Time (p_c), s		3.2			0.1	3.2		1.8

Intersection Summary	
HCM 2010 Ctrl Delay	9.7
HCM 2010 LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	485	161	865	584	0	0	0	0	168	84	144
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0				1863	1863	1863
Adj Flow Rate, veh/h	0	511	112	911	615	0				132	150	59
Adj No. of Lanes	0	3	1	2	2	0				1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1991	620	737	2321	0				380	399	339
Arrive On Green	0.00	0.39	0.39	0.21	0.66	0.00				0.21	0.21	0.21
Sat Flow, veh/h	0	5253	1583	3442	3632	0				1774	1863	1583
Grp Volume(v), veh/h	0	511	112	911	615	0				132	150	59
Grp Sat Flow(s),veh/h/ln	0	1695	1583	1721	1770	0				1774	1863	1583
Q Serve(g_s), s	0.0	4.8	3.2	15.0	5.1	0.0				4.4	4.8	2.1
Cycle Q Clear(g_c), s	0.0	4.8	3.2	15.0	5.1	0.0				4.4	4.8	2.1
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1991	620	737	2321	0				380	399	339
V/C Ratio(X)	0.00	0.26	0.18	1.24	0.27	0.00				0.35	0.38	0.17
Avail Cap(c_a), veh/h	0	1991	620	737	2321	0				380	399	339
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.89	0.89	0.00				0.84	0.84	0.84
Uniform Delay (d), s/veh	0.0	14.4	13.9	27.5	5.0	0.0				23.3	23.5	22.4
Incr Delay (d2), s/veh	0.0	0.3	0.6	116.3	0.0	0.0				2.1	2.3	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.3	1.5	19.0	2.5	0.0				2.4	2.7	1.0
LnGrp Delay(d),s/veh	0.0	14.7	14.6	143.8	5.1	0.0				25.4	25.8	23.4
LnGrp LOS		B	B	F	A					C	C	C
Approach Vol, veh/h		623			1526						341	
Approach Delay, s/veh		14.7			87.9						25.2	
Approach LOS		B			F						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	18.5	31.5		20.0		50.0		
Change Period (Y+Rc), s	3.5	4.1		5.0		4.1		
Max Green Setting (Gmax), s	15.0	27.0		15.0		35.0		
Max Q Clear Time (g_c+I1), s	17.0	6.8		6.8		7.1		
Green Ext Time (p_c), s	0.0	7.0		0.5		7.8		

Intersection Summary	
HCM 2010 Ctrl Delay	61.0
HCM 2010 LOS	E

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	179	794	0	0	797	283	353	29	531	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1863	1863	1863			
Adj Flow Rate, veh/h	188	836	0	0	839	223	523	0	283			
Adj No. of Lanes	2	2	0	0	4	1	2	0	1			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	506	2004	0	0	2356	582	1044	0	466			
Arrive On Green	0.15	0.57	0.00	0.00	0.37	0.37	0.29	0.00	0.29			
Sat Flow, veh/h	3442	3632	0	0	6669	1583	3548	0	1583			
Grp Volume(v), veh/h	188	836	0	0	839	223	523	0	283			
Grp Sat Flow(s),veh/h/ln	1721	1770	0	0	1602	1583	1774	0	1583			
Q Serve(g_s), s	3.4	9.1	0.0	0.0	6.5	7.0	8.3	0.0	10.4			
Cycle Q Clear(g_c), s	3.4	9.1	0.0	0.0	6.5	7.0	8.3	0.0	10.4			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	506	2004	0	0	2356	582	1044	0	466			
V/C Ratio(X)	0.37	0.42	0.00	0.00	0.36	0.38	0.50	0.00	0.61			
Avail Cap(c_a), veh/h	506	2004	0	0	2356	582	1044	0	466			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.97	0.97	0.00	0.00	0.95	0.95	1.00	0.00	1.00			
Uniform Delay (d), s/veh	26.2	8.4	0.0	0.0	15.6	15.8	19.9	0.0	20.6			
Incr Delay (d2), s/veh	2.0	0.6	0.0	0.0	0.4	1.8	1.7	0.0	5.8			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.7	4.6	0.0	0.0	2.9	3.3	4.3	0.0	5.3			
LnGrp Delay(d),s/veh	28.2	9.0	0.0	0.0	16.0	17.6	21.6	0.0	26.4			
LnGrp LOS	C	A			B	B	C		C			
Approach Vol, veh/h		1024			1062			806				
Approach Delay, s/veh		12.5			16.4			23.3				
Approach LOS		B			B			C				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		43.0			13.5	29.5		25.0
Change Period (Y+Rc), s		4.5			3.5	4.5		5.0
Max Green Setting (Gmax), s		30.0			10.0	25.0		20.0
Max Q Clear Time (g_c+I1), s		11.1			5.4	9.0		12.4
Green Ext Time (p_c), s		8.9			0.1	8.1		2.0

Intersection Summary	
HCM 2010 Ctrl Delay	16.9
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	287	0	163	0	0	0	157	1250	0	0	744	182
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	0	1863				1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h	302	0	172				165	1316	0	0	783	192
Adj No. of Lanes	2	0	1				1	3	0	0	3	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	0	2				2	2	0	0	2	2
Cap, veh/h	496	0	228				496	3731	0	0	2647	644
Arrive On Green	0.14	0.00	0.14				0.05	0.73	0.00	0.00	0.65	0.65
Sat Flow, veh/h	3442	0	1583				1774	5253	0	0	4252	993
Grp Volume(v), veh/h	302	0	172				165	1316	0	0	649	326
Grp Sat Flow(s),veh/h/ln	1721	0	1583				1774	1695	0	0	1695	1688
Q Serve(g_s), s	7.4	0.0	9.4				2.6	8.4	0.0	0.0	7.5	7.6
Cycle Q Clear(g_c), s	7.4	0.0	9.4				2.6	8.4	0.0	0.0	7.5	7.6
Prop In Lane	1.00		1.00				1.00		0.00	0.00		0.59
Lane Grp Cap(c), veh/h	496	0	228				496	3731	0	0	2197	1094
V/C Ratio(X)	0.61	0.00	0.75				0.33	0.35	0.00	0.00	0.30	0.30
Avail Cap(c_a), veh/h	1262	0	581				621	3731	0	0	2197	1094
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.89	0.00	0.89				1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	36.1	0.0	37.0				4.5	4.3	0.0	0.0	6.9	6.9
Incr Delay (d2), s/veh	1.1	0.0	4.5				0.4	0.3	0.0	0.0	0.3	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	0.0	8.2				1.2	4.0	0.0	0.0	3.5	3.7
LnGrp Delay(d),s/veh	37.2	0.0	41.4				4.9	4.6	0.0	0.0	7.2	7.6
LnGrp LOS	D		D				A	A			A	A
Approach Vol, veh/h		474						1481			975	
Approach Delay, s/veh		38.7						4.6			7.4	
Approach LOS		D						A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		72.0		18.0	7.7	64.3		
Change Period (Y+Rc), s		6.0		5.0	3.0	6.0		
Max Green Setting (Gmax), s		46.0		33.0	11.0	30.0		
Max Q Clear Time (g_c+I1), s		10.4		11.4	4.6	9.6		
Green Ext Time (p_c), s		21.8		1.6	0.2	14.9		

Intersection Summary	
HCM 2010 Ctrl Delay	11.0
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	78.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	0	0	450	1610	1594	814
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	Yield
Storage Length	0	-	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	474	1695	1678	857

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	3473	839	1678	0	-	0
Stage 1	1678	-	-	-	-	-
Stage 2	1795	-	-	-	-	-
Critical Hdwy	6.29	7.14	5.34	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.67	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	8	265	~ 182	-	-	-
Stage 1	93	-	-	-	-	-
Stage 2	116	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	8	265	~ 182	-	-	-
Mov Cap-2 Maneuver	8	-	-	-	-	-
Stage 1	93	-	-	-	-	-
Stage 2	116	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	169.7	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	~ 182	-	-	-	-
HCM Lane V/C Ratio	2.603	-	-	-	-
HCM Control Delay (s)	$ 776.8	-	0	-	-
HCM Lane LOS	F	-	A	-	-
HCM 95th %tile Q(veh)	40.8	-	-	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

APPENDIX D: EXISTING PLUS PROJECT (2015) LEVEL OF SERVICE AND SYNCHRO WORKSHEETS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	6	72	138	274	583	194	386	400	105	15	560	638
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1765	1765	1765	1765
Adj Flow Rate, veh/h	6	77	148	295	627	209	415	430	45	16	498	666
Adj No. of Lanes	1	2	0	1	2	0	1	2	1	1	1	2
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	91	447	400	295	659	220	467	1602	717	168	529	900
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.28	0.48	0.48	0.10	0.30	0.30
Sat Flow, veh/h	654	1676	1500	1151	2473	823	1681	3353	1500	1681	1765	3000
Grp Volume(v), veh/h	6	77	148	295	425	411	415	430	45	16	498	666
Grp Sat Flow(s),veh/h/ln	654	1676	1500	1151	1676	1619	1681	1676	1500	1681	1765	1500
Q Serve(g_s), s	0.8	3.2	7.2	16.8	22.4	22.5	21.3	6.9	1.5	0.8	24.8	18.0
Cycle Q Clear(g_c), s	23.3	3.2	7.2	24.0	22.4	22.5	21.3	6.9	1.5	0.8	24.8	18.0
Prop In Lane	1.00		1.00	1.00		0.51	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	91	447	400	295	447	432	467	1602	717	168	529	900
V/C Ratio(X)	0.07	0.17	0.37	1.00	0.95	0.95	0.89	0.27	0.06	0.10	0.94	0.74
Avail Cap(c_a), veh/h	91	447	400	295	447	432	467	1602	717	168	529	900
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.62	0.62	0.62	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.9	25.4	26.8	38.9	32.4	32.4	31.2	14.1	12.7	36.8	30.7	28.3
Incr Delay (d2), s/veh	1.4	0.8	2.6	52.8	31.8	32.8	14.8	0.3	0.1	1.1	26.9	5.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.6	3.3	11.6	14.3	14.0	11.7	3.2	0.6	0.4	16.0	8.1
LnGrp Delay(d),s/veh	45.3	26.2	29.5	91.7	64.2	65.2	46.0	14.3	12.8	37.9	57.6	33.8
LnGrp LOS	D	C	C	F	E	E	D	B	B	D	E	C
Approach Vol, veh/h		231			1131			890			1180	
Approach Delay, s/veh		28.8			71.8			29.0			43.9	
Approach LOS		C			E			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	13.0	48.0		29.0	29.0	32.0		29.0
Change Period (Y+Rc), s	4.0	5.0		5.0	4.0	5.0		5.0
Max Green Setting (Gmax), s	9.0	41.0		24.0	25.0	27.0		24.0
Max Q Clear Time (g_c+I1), s	2.8	8.9		25.3	23.3	26.8		26.0
Green Ext Time (p_c), s	0.0	10.9		0.0	0.3	0.2		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	48.2
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	378	0	754	0	0	0	0	492	283	493	479	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800				0	1765	1765	1765	1765	0
Adj Flow Rate, veh/h	398	0	794				0	518	197	519	504	0
Adj No. of Lanes	1	1	0				0	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	532	0	474				0	723	324	546	1950	0
Arrive On Green	0.32	0.00	0.32				0.00	0.22	0.22	0.33	0.58	0.00
Sat Flow, veh/h	1681	0	1500				0	3441	1500	1681	3441	0
Grp Volume(v), veh/h	398	0	794				0	518	197	519	504	0
Grp Sat Flow(s),veh/h/ln	1681	0	1500				0	1676	1500	1681	1676	0
Q Serve(g_s), s	20.8	0.0	31.0				0.0	14.0	11.6	29.6	7.3	0.0
Cycle Q Clear(g_c), s	20.8	0.0	31.0				0.0	14.0	11.6	29.6	7.3	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	532	0	474				0	723	324	546	1950	0
V/C Ratio(X)	0.75	0.00	1.67				0.00	0.72	0.61	0.95	0.26	0.00
Avail Cap(c_a), veh/h	532	0	474				0	723	324	566	1950	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.22	0.22	0.00
Uniform Delay (d), s/veh	30.0	0.0	33.5				0.0	35.6	34.7	32.3	10.1	0.0
Incr Delay (d2), s/veh	6.2	0.0	312.2				0.0	6.0	8.3	8.6	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.5	0.0	53.9				0.0	7.1	5.6	15.0	3.4	0.0
LnGrp Delay(d),s/veh	36.2	0.0	345.7				0.0	41.6	43.0	40.9	10.2	0.0
LnGrp LOS	D		F					D	D	D	B	
Approach Vol, veh/h		1192						715			1023	
Approach Delay, s/veh		242.4						42.0			25.8	
Approach LOS		F						D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	35.9	26.1		36.0		62.0		
Change Period (Y+Rc), s	4.0	5.0		5.0		5.0		
Max Green Setting (Gmax), s	33.0	20.0		31.0		49.0		
Max Q Clear Time (g_c+I1), s	31.6	16.0		33.0		9.3		
Green Ext Time (p_c), s	0.3	2.4		0.0		8.7		

Intersection Summary	
HCM 2010 Ctrl Delay	117.8
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	41	290	132	61	294	27	84	552	39	176	898	78
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1765	1765	1765	1800	1765	1765	1765	1765	1765	1800
Adj Flow Rate, veh/h	42	299	23	63	303	28	87	569	-19	181	926	80
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	68	504	226	95	518	48	630	755	338	834	1084	94
Arrive On Green	0.04	0.15	0.15	0.06	0.17	0.16	0.37	0.23	0.00	0.50	0.35	0.34
Sat Flow, veh/h	1681	3353	1500	1681	3106	285	1681	3353	1500	1681	3124	270
Grp Volume(v), veh/h	42	299	23	63	163	168	87	569	-19	181	497	509
Grp Sat Flow(s),veh/h/ln	1681	1676	1500	1681	1676	1714	1681	1676	1500	1681	1676	1717
Q Serve(g_s), s	2.8	9.3	0.7	4.1	10.0	10.2	3.8	17.7	0.0	6.8	30.8	30.8
Cycle Q Clear(g_c), s	2.8	9.3	0.7	4.1	10.0	10.2	3.8	17.7	0.0	6.8	30.8	30.8
Prop In Lane	1.00		1.00	1.00		0.17	1.00		1.00	1.00		0.16
Lane Grp Cap(c), veh/h	68	504	226	95	279	286	630	755	338	834	582	596
V/C Ratio(X)	0.62	0.59	0.10	0.66	0.58	0.59	0.14	0.75	-0.06	0.22	0.85	0.85
Avail Cap(c_a), veh/h	240	958	429	240	479	490	630	1347	603	834	674	690
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.89	0.89	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.9	44.4	8.5	51.8	43.1	43.2	23.1	40.5	0.0	15.9	33.9	34.0
Incr Delay (d2), s/veh	9.0	1.1	0.2	7.7	1.9	1.9	0.1	6.1	0.0	0.1	14.8	14.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	4.4	0.3	2.1	4.8	5.0	1.8	8.9	0.0	3.2	16.6	17.0
LnGrp Delay(d),s/veh	61.9	45.5	8.7	59.5	45.0	45.1	23.2	46.6	0.0	16.0	48.7	48.5
LnGrp LOS	E	D	A	E	D	D	C	D		B	D	D
Approach Vol, veh/h		364			394			637			1187	
Approach Delay, s/veh		45.1			47.4			44.8			43.7	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	57.6	27.2	8.3	18.8	44.0	40.9	6.5	20.7
Change Period (Y+Rc), s	3.0	5.0	3.0	5.0	3.0	5.0	3.0	5.0
Max Green Setting (Gmax), s	10.0	42.0	15.0	29.0	10.0	42.0	15.0	29.0
Max Q Clear Time (g_c+I1), s	8.8	19.7	6.1	11.3	5.8	32.8	4.8	12.2
Green Ext Time (p_c), s	0.1	2.5	0.1	2.5	0.1	3.0	0.1	2.5

Intersection Summary	
HCM 2010 Ctrl Delay	44.7
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	486	295	511	474	0	0	0	0	666	33	225
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1765	1800	1765	1765	0				1765	1765	1765
Adj Flow Rate, veh/h	0	593	360	623	578	0				848	0	57
Adj No. of Lanes	0	4	0	2	2	0				2	0	1
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82				0.82	0.82	0.82
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1396	460	737	1955	0				986	0	440
Arrive On Green	0.00	0.31	0.31	0.23	0.58	0.00				0.29	0.00	0.29
Sat Flow, veh/h	0	4800	1500	3261	3441	0				3361	0	1500
Grp Volume(v), veh/h	0	593	360	623	578	0				848	0	57
Grp Sat Flow(s),veh/h/ln	0	1518	1500	1630	1676	0				1681	0	1500
Q Serve(g_s), s	0.0	7.2	15.2	12.7	6.0	0.0				16.6	0.0	1.9
Cycle Q Clear(g_c), s	0.0	7.2	15.2	12.7	6.0	0.0				16.6	0.0	1.9
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1396	460	737	1955	0				986	0	440
V/C Ratio(X)	0.00	0.42	0.78	0.85	0.30	0.00				0.86	0.00	0.13
Avail Cap(c_a), veh/h	0	2293	755	1173	1955	0				1693	0	755
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	19.2	22.0	25.7	7.3	0.0				23.2	0.0	18.0
Incr Delay (d2), s/veh	0.0	0.1	1.1	1.8	0.0	0.0				0.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.0	6.4	5.9	2.7	0.0				7.8	0.0	0.8
LnGrp Delay(d),s/veh	0.0	19.3	23.1	27.5	7.3	0.0				24.1	0.0	18.1
LnGrp LOS		B	C	C	A					C		B
Approach Vol, veh/h		953			1201						905	
Approach Delay, s/veh		20.7			17.8						23.7	
Approach LOS		C			B						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	19.2	25.4		24.9		44.6		
Change Period (Y+Rc), s	3.5	4.1		4.5		4.1		
Max Green Setting (Gmax), s	25.0	35.0		35.0		35.0		
Max Q Clear Time (g_c+I1), s	14.7	17.2		18.6		8.0		
Green Ext Time (p_c), s	1.0	4.1		1.8		7.6		

Intersection Summary	
HCM 2010 Ctrl Delay	20.5
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	143	1034	0	0	743	407	239	5	565	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1765	1765	0	0	1765	1765	1765	1765	1765			
Adj Flow Rate, veh/h	174	1261	0	0	906	307	196	0	692			
Adj No. of Lanes	2	2	0	0	4	1	1	0	2			
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	279	1890	0	0	2527	624	478	0	853			
Arrive On Green	0.09	0.56	0.00	0.00	0.42	0.42	0.28	0.00	0.28			
Sat Flow, veh/h	3261	3441	0	0	6318	1500	1681	0	3000			
Grp Volume(v), veh/h	174	1261	0	0	906	307	196	0	692			
Grp Sat Flow(s),veh/h/ln	1630	1676	0	0	1518	1500	1681	0	1500			
Q Serve(g_s), s	2.9	14.9	0.0	0.0	5.8	8.5	5.4	0.0	12.2			
Cycle Q Clear(g_c), s	2.9	14.9	0.0	0.0	5.8	8.5	5.4	0.0	12.2			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	279	1890	0	0	2527	624	478	0	853			
V/C Ratio(X)	0.62	0.67	0.00	0.00	0.36	0.49	0.41	0.00	0.81			
Avail Cap(c_a), veh/h	1439	2072	0	0	3859	953	1039	0	1854			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	25.0	8.6	0.0	0.0	11.3	12.1	16.4	0.0	18.8			
Incr Delay (d2), s/veh	0.8	0.5	0.0	0.0	0.0	0.2	0.2	0.0	0.7			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.3	7.0	0.0	0.0	2.4	3.5	2.5	0.0	5.1			
LnGrp Delay(d),s/veh	25.9	9.2	0.0	0.0	11.4	12.4	16.6	0.0	19.6			
LnGrp LOS	C	A			B	B	B		B			
Approach Vol, veh/h		1435			1213			888				
Approach Delay, s/veh		11.2			11.6			18.9				
Approach LOS		B			B			B				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		36.0			8.4	27.7		20.6
Change Period (Y+Rc), s		4.1			3.5	4.1		4.5
Max Green Setting (Gmax), s		35.0			25.0	36.0		35.0
Max Q Clear Time (g_c+I1), s		16.9			4.9	10.5		14.2
Green Ext Time (p_c), s		10.8			0.3	13.1		2.0

Intersection Summary	
HCM 2010 Ctrl Delay	13.3
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	72	1051	35	16	928	72	13	84	15	62	130	65
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	79	1155	38	18	1020	79	14	92	16	68	143	71
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	517	2427	80	436	2148	166	175	422	72	228	325	154
Arrive On Green	0.10	0.73	0.72	0.05	0.68	0.67	0.15	0.15	0.14	0.15	0.15	0.14
Sat Flow, veh/h	1681	3313	109	1681	3154	244	1163	2868	487	1280	2212	1045
Grp Volume(v), veh/h	79	584	609	18	542	557	14	53	55	68	107	107
Grp Sat Flow(s),veh/h/ln	1681	1676	1745	1681	1676	1722	1163	1676	1679	1280	1676	1580
Q Serve(g_s), s	0.9	13.4	13.5	0.3	14.3	14.4	1.0	2.6	2.7	4.7	5.4	5.9
Cycle Q Clear(g_c), s	0.9	13.4	13.5	0.3	14.3	14.4	6.9	2.6	2.7	7.4	5.4	5.9
Prop In Lane	1.00		0.06	1.00		0.14	1.00		0.29	1.00		0.66
Lane Grp Cap(c), veh/h	517	1228	1279	436	1142	1173	175	247	247	228	247	232
V/C Ratio(X)	0.15	0.48	0.48	0.04	0.47	0.47	0.08	0.21	0.22	0.30	0.43	0.46
Avail Cap(c_a), veh/h	586	1228	1279	592	1142	1173	375	535	536	448	535	504
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	3.7	5.2	5.2	4.0	7.1	7.1	39.9	35.3	35.5	38.6	36.5	37.0
Incr Delay (d2), s/veh	0.1	1.3	1.3	0.0	1.4	1.4	0.2	0.4	0.5	0.7	1.2	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	6.6	6.9	0.1	6.9	7.1	0.3	1.2	1.3	1.7	2.6	2.7
LnGrp Delay(d),s/veh	3.9	6.5	6.4	4.1	8.5	8.5	40.1	35.7	35.9	39.3	37.7	38.4
LnGrp LOS	A	A	A	A	A	A	D	D	D	D	D	D
Approach Vol, veh/h		1272			1117			122			282	
Approach Delay, s/veh		6.3			8.4			36.3			38.4	
Approach LOS		A			A			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.9	66.0		16.1	7.0	70.9		16.1
Change Period (Y+Rc), s	4.0	5.0		5.3	4.0	5.0		5.3
Max Green Setting (Gmax), s	11.7	41.0		27.0	11.7	41.0		27.0
Max Q Clear Time (g_c+I1), s	2.9	16.4		8.9	2.3	15.5		9.4
Green Ext Time (p_c), s	0.1	12.0		1.5	0.0	12.2		1.4

Intersection Summary	
HCM 2010 Ctrl Delay	11.7
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	39	823	96	36	828	38	96	132	22	33	231	46
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1765	1765	1765	1800	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	42	885	74	39	890	41	103	142	24	35	248	49
Adj No. of Lanes	1	1	1	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	339	1015	862	176	1877	86	255	442	75	364	430	85
Arrive On Green	0.57	0.57	0.57	0.57	0.57	0.57	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	599	1765	1500	583	3264	150	1078	1472	249	1215	1432	283
Grp Volume(v), veh/h	42	885	74	39	457	474	103	0	166	35	0	297
Grp Sat Flow(s),veh/h/ln	599	1765	1500	583	1676	1738	1078	0	1721	1215	0	1715
Q Serve(g_s), s	3.5	34.2	1.8	4.9	12.7	12.7	7.2	0.0	6.0	1.8	0.0	11.7
Cycle Q Clear(g_c), s	16.3	34.2	1.8	39.1	12.7	12.7	18.9	0.0	6.0	7.8	0.0	11.7
Prop In Lane	1.00		1.00	1.00		0.09	1.00		0.14	1.00		0.16
Lane Grp Cap(c), veh/h	339	1015	862	176	964	999	255	0	516	364	0	514
V/C Ratio(X)	0.12	0.87	0.09	0.22	0.47	0.47	0.40	0.00	0.32	0.10	0.00	0.58
Avail Cap(c_a), veh/h	339	1015	863	176	964	999	255	0	516	364	0	514
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.61	0.61	0.61	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.7	14.5	7.6	31.2	9.9	9.9	31.7	0.0	21.7	24.7	0.0	23.7
Incr Delay (d2), s/veh	0.8	10.3	0.2	0.4	0.2	0.2	4.7	0.0	1.6	0.5	0.0	4.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	19.4	0.8	0.8	5.9	6.1	2.4	0.0	3.0	0.7	0.0	6.2
LnGrp Delay(d),s/veh	15.4	24.8	7.8	31.5	10.2	10.1	36.4	0.0	23.3	25.2	0.0	28.4
LnGrp LOS	B	C	A	C	B	B	D		C	C		C
Approach Vol, veh/h		1001			970			269			332	
Approach Delay, s/veh		23.1			11.0			28.3			28.0	
Approach LOS		C			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		51.0		29.0		51.0		29.0
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0
Max Green Setting (Gmax), s		46.0		24.0		46.0		24.0
Max Q Clear Time (g_c+I1), s		36.2		13.7		41.1		20.9
Green Ext Time (p_c), s		7.5		2.3		4.1		1.0

Intersection Summary	
HCM 2010 Ctrl Delay	19.7
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	120	483	237	228	520	138	214	490	175	132	557	121
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1765	1765	1765	1765
Adj Flow Rate, veh/h	128	514	252	243	553	147	228	521	113	140	593	40
Adj No. of Lanes	1	2	0	1	2	0	1	2	1	1	2	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	303	621	304	269	692	183	278	1167	522	215	1039	465
Arrive On Green	0.18	0.28	0.27	0.16	0.26	0.25	0.05	0.11	0.11	0.13	0.31	0.31
Sat Flow, veh/h	1681	2185	1067	1681	2624	695	1681	3353	1500	1681	3353	1500
Grp Volume(v), veh/h	128	394	372	243	353	347	228	521	113	140	593	40
Grp Sat Flow(s),veh/h/ln	1681	1676	1576	1681	1676	1642	1681	1676	1500	1681	1676	1500
Q Serve(g_s), s	6.8	22.0	22.2	14.2	19.6	19.8	13.4	14.5	6.8	7.9	14.8	1.9
Cycle Q Clear(g_c), s	6.8	22.0	22.2	14.2	19.6	19.8	13.4	14.5	6.8	7.9	14.8	1.9
Prop In Lane	1.00		0.68	1.00		0.42	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	303	477	448	269	442	433	278	1167	522	215	1039	465
V/C Ratio(X)	0.42	0.83	0.83	0.90	0.80	0.80	0.82	0.45	0.22	0.65	0.57	0.09
Avail Cap(c_a), veh/h	303	520	489	269	520	509	278	1167	522	235	1039	465
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	0.36	0.36	0.36	0.96	0.96	0.96	1.00	1.00	1.00	0.86	0.86	0.86
Uniform Delay (d), s/veh	36.3	33.5	33.9	41.2	34.3	34.6	45.8	35.3	31.9	41.5	28.9	24.5
Incr Delay (d2), s/veh	0.3	3.8	4.2	30.2	7.1	7.5	17.3	0.3	0.2	4.8	2.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	10.7	10.2	8.9	10.0	9.9	7.6	6.8	2.9	4.0	7.1	0.8
LnGrp Delay(d),s/veh	36.7	37.3	38.0	71.5	41.4	42.0	63.1	35.5	32.1	46.3	30.9	24.8
LnGrp LOS	D	D	D	E	D	D	E	D	C	D	C	C
Approach Vol, veh/h		894			943			862			773	
Approach Delay, s/veh		37.5			49.4			42.4			33.4	
Approach LOS		D			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	30.4	18.6	33.0	20.0	28.4	14.8	36.8
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	13.0	28.0	11.0	28.0	13.0	28.0	11.0	28.0
Max Q Clear Time (g_c+I1), s	16.2	24.2	15.4	16.8	8.8	21.8	9.9	16.5
Green Ext Time (p_c), s	0.0	1.3	0.0	2.3	1.6	1.6	0.0	3.1

Intersection Summary	
HCM 2010 Ctrl Delay	41.0
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	401	213	199	567	0	166	7	119	0	13	1
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1765	1800	1765	1765	1800	1800	1765	1765	1765	1765	1800
Adj Flow Rate, veh/h	0	451	239	224	637	0	187	8	12	0	15	1
Adj No. of Lanes	0	2	0	1	2	0	0	1	1	1	1	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	0	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	1101	579	255	2394	0	303	10	262	80	286	19
Arrive On Green	0.00	0.52	0.52	0.30	1.00	0.00	0.17	0.17	0.17	0.00	0.17	0.17
Sat Flow, veh/h	0	2214	1118	1681	3441	0	1287	55	1500	1386	1636	109
Grp Volume(v), veh/h	0	355	335	224	637	0	195	0	12	0	0	16
Grp Sat Flow(s),veh/h/ln	0	1676	1567	1681	1676	0	1342	0	1500	1386	0	1745
Q Serve(g_s), s	0.0	11.7	11.8	11.4	0.0	0.0	12.1	0.0	0.6	0.0	0.0	0.7
Cycle Q Clear(g_c), s	0.0	11.7	11.8	11.4	0.0	0.0	12.8	0.0	0.6	0.0	0.0	0.7
Prop In Lane	0.00		0.71	1.00		0.00	0.96		1.00	1.00		0.06
Lane Grp Cap(c), veh/h	0	868	812	255	2394	0	313	0	262	80	0	305
V/C Ratio(X)	0.00	0.41	0.41	0.88	0.27	0.00	0.62	0.00	0.05	0.00	0.00	0.05
Avail Cap(c_a), veh/h	0	868	812	373	2394	0	551	0	517	300	0	582
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.91	0.91	0.00	1.00	0.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	13.3	13.3	30.5	0.0	0.0	36.2	0.0	30.9	0.0	0.0	30.9
Incr Delay (d2), s/veh	0.0	1.4	1.6	13.8	0.1	0.0	2.0	0.0	0.1	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.7	5.5	6.2	0.0	0.0	4.8	0.0	0.3	0.0	0.0	0.3
LnGrp Delay(d),s/veh	0.0	14.7	14.9	44.3	0.1	0.0	38.3	0.0	31.0	0.0	0.0	31.0
LnGrp LOS		B	B	D	A		D		C			C
Approach Vol, veh/h		690			861			207			16	
Approach Delay, s/veh		14.8			11.6			37.8			31.0	
Approach LOS		B			B			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		8
Phs Duration (G+Y+Rc), s	17.7	51.6		20.7		69.3		20.7
Change Period (Y+Rc), s	4.0	5.0		5.0		5.0		5.0
Max Green Setting (Gmax), s	20.0	25.0		30.0		49.0		31.0
Max Q Clear Time (g_c+I1), s	13.4	13.8		2.7		2.0		14.8
Green Ext Time (p_c), s	0.3	6.0		1.1		10.9		1.0

Intersection Summary	
HCM 2010 Ctrl Delay	16.1
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	83	301	101	214	323	153	91	496	180	189	759	50
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	88	320	107	228	344	163	97	528	191	201	807	53
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	160	469	154	269	565	263	169	1015	366	282	1620	106
Arrive On Green	0.09	0.19	0.18	0.16	0.25	0.24	0.10	0.42	0.41	0.22	0.67	0.66
Sat Flow, veh/h	1681	2482	815	1681	2224	1035	1681	2417	871	1681	3194	210
Grp Volume(v), veh/h	88	214	213	228	258	249	97	366	353	201	423	437
Grp Sat Flow(s),veh/h/ln	1681	1676	1621	1681	1676	1582	1681	1676	1611	1681	1676	1728
Q Serve(g_s), s	5.0	11.9	12.3	13.2	13.6	14.0	5.5	16.2	16.4	11.0	12.4	12.4
Cycle Q Clear(g_c), s	5.0	11.9	12.3	13.2	13.6	14.0	5.5	16.2	16.4	11.0	12.4	12.4
Prop In Lane	1.00		0.50	1.00		0.65	1.00		0.54	1.00		0.12
Lane Grp Cap(c), veh/h	160	317	307	269	426	402	169	704	677	282	850	876
V/C Ratio(X)	0.55	0.68	0.69	0.85	0.60	0.62	0.57	0.52	0.52	0.71	0.50	0.50
Avail Cap(c_a), veh/h	269	414	400	269	426	402	235	704	677	282	850	876
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.89	0.89	0.89	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.2	37.7	38.1	40.8	32.9	33.3	42.9	21.5	21.8	36.6	10.0	10.1
Incr Delay (d2), s/veh	3.0	2.8	3.4	21.6	2.4	2.9	2.7	2.4	2.6	8.2	2.1	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	5.7	5.8	7.8	6.5	6.4	2.7	7.9	7.8	5.8	6.2	6.3
LnGrp Delay(d),s/veh	46.2	40.5	41.5	62.4	35.3	36.2	45.6	23.9	24.3	44.8	12.1	12.1
LnGrp LOS	D	D	D	E	D	D	D	C	C	D	B	B
Approach Vol, veh/h		515			735			816			1061	
Approach Delay, s/veh		41.9			44.0			26.7			18.3	
Approach LOS		D			D			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	21.2	10.1	52.7	9.5	27.7	18.8	44.0
Change Period (Y+Rc), s	3.0	5.3	3.0	5.0	3.0	5.3	5.0	* 5
Max Green Setting (Gmax), s	13.0	21.7	11.0	38.0	13.0	21.7	10.0	* 39
Max Q Clear Time (g_c+I1), s	15.2	14.3	7.5	14.4	7.0	16.0	13.0	18.4
Green Ext Time (p_c), s	0.0	1.6	0.1	4.6	0.1	2.1	0.0	3.0

Intersection Summary	
HCM 2010 Ctrl Delay	30.4
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	470	309	306	409	0	0	0	0	882	0	187
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1765	1800	1765	1765	0				1765	1765	1765
Adj Flow Rate, veh/h	0	495	325	322	431	0				949	0	46
Adj No. of Lanes	0	4	0	2	2	0				2	0	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1654	545	431	1832	0				1085	0	484
Arrive On Green	0.00	0.36	0.36	0.13	0.55	0.00				0.32	0.00	0.32
Sat Flow, veh/h	0	4800	1500	3261	3441	0				3361	0	1500
Grp Volume(v), veh/h	0	495	325	322	431	0				949	0	46
Grp Sat Flow(s),veh/h/ln	0	1518	1500	1630	1676	0				1681	0	1500
Q Serve(g_s), s	0.0	5.3	12.1	6.5	4.6	0.0				18.3	0.0	1.5
Cycle Q Clear(g_c), s	0.0	5.3	12.1	6.5	4.6	0.0				18.3	0.0	1.5
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1654	545	431	1832	0				1085	0	484
V/C Ratio(X)	0.00	0.30	0.60	0.75	0.24	0.00				0.87	0.00	0.09
Avail Cap(c_a), veh/h	0	1654	545	1658	1832	0				1710	0	763
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	15.6	17.8	28.8	8.1	0.0				22.0	0.0	16.3
Incr Delay (d2), s/veh	0.0	0.5	4.8	1.0	0.3	0.0				2.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.3	5.7	3.0	2.2	0.0				8.7	0.0	0.6
LnGrp Delay(d),s/veh	0.0	16.1	22.6	29.7	8.4	0.0				24.0	0.0	16.3
LnGrp LOS		B	C	C	A					C		B
Approach Vol, veh/h		820			753						995	
Approach Delay, s/veh		18.7			17.5						23.6	
Approach LOS		B			B						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	12.6	29.5		26.7		42.1		
Change Period (Y+Rc), s	3.5	4.5		4.5		4.5		
Max Green Setting (Gmax), s	35.0	25.0		35.0		25.0		
Max Q Clear Time (g_c+I1), s	8.5	14.1		20.3		6.6		
Green Ext Time (p_c), s	0.6	4.2		1.9		5.3		

Intersection Summary	
HCM 2010 Ctrl Delay	20.3
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	135	1208	0	0	471	234	225	0	682	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1765	1765	0	0	1765	1765	1765	1765	1765			
Adj Flow Rate, veh/h	141	1258	0	0	491	158	156	0	723			
Adj No. of Lanes	2	2	0	0	4	1	1	0	2			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	299	1631	0	0	1927	476	510	0	910			
Arrive On Green	0.09	0.49	0.00	0.00	0.32	0.32	0.30	0.00	0.30			
Sat Flow, veh/h	3261	3441	0	0	6318	1500	1681	0	3000			
Grp Volume(v), veh/h	141	1258	0	0	491	158	156	0	723			
Grp Sat Flow(s),veh/h/ln	1630	1676	0	0	1518	1500	1681	0	1500			
Q Serve(g_s), s	1.9	13.9	0.0	0.0	2.7	3.6	3.2	0.0	10.0			
Cycle Q Clear(g_c), s	1.9	13.9	0.0	0.0	2.7	3.6	3.2	0.0	10.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	299	1631	0	0	1927	476	510	0	910			
V/C Ratio(X)	0.47	0.77	0.00	0.00	0.25	0.33	0.31	0.00	0.79			
Avail Cap(c_a), veh/h	1442	1854	0	0	3357	830	911	0	1626			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	19.5	9.5	0.0	0.0	11.5	11.8	12.1	0.0	14.5			
Incr Delay (d2), s/veh	0.4	1.5	0.0	0.0	0.0	0.2	0.1	0.0	0.6			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.8	6.6	0.0	0.0	1.1	1.5	1.5	0.0	4.2			
LnGrp Delay(d),s/veh	19.9	11.0	0.0	0.0	11.5	11.9	12.2	0.0	15.1			
LnGrp LOS	B	B			B	B	B		B			
Approach Vol, veh/h		1399			649			879				
Approach Delay, s/veh		11.9			11.6			14.6				
Approach LOS		B			B			B				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		26.5			7.6	18.8		18.7
Change Period (Y+Rc), s		4.5			3.5	4.5		5.0
Max Green Setting (Gmax), s		25.0			20.0	25.0		24.5
Max Q Clear Time (g_c+I1), s		15.9			3.9	5.6		12.0
Green Ext Time (p_c), s		5.5			0.2	8.7		1.7

Intersection Summary	
HCM 2010 Ctrl Delay	12.6
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	29	508	110	30	443	36	38	150	19	44	269	40
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	35	612	133	36	534	43	46	181	23	53	324	48
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	257	950	206	193	1089	88	568	1626	204	681	1592	234
Arrive On Green	0.35	0.35	0.35	0.35	0.35	0.35	0.54	0.54	0.54	0.54	0.54	0.54
Sat Flow, veh/h	833	2742	595	713	3144	253	1006	2999	376	1173	2935	431
Grp Volume(v), veh/h	35	374	371	36	284	293	46	100	104	53	184	188
Grp Sat Flow(s),veh/h/ln	833	1676	1660	713	1676	1720	1006	1676	1698	1173	1676	1689
Q Serve(g_s), s	3.1	16.9	16.9	4.0	12.0	12.1	2.2	2.6	2.7	2.1	5.1	5.2
Cycle Q Clear(g_c), s	15.2	16.9	16.9	21.0	12.0	12.1	7.4	2.6	2.7	4.8	5.1	5.2
Prop In Lane	1.00		0.36	1.00		0.15	1.00		0.22	1.00		0.26
Lane Grp Cap(c), veh/h	257	581	575	193	581	596	568	909	921	681	909	916
V/C Ratio(X)	0.14	0.64	0.65	0.19	0.49	0.49	0.08	0.11	0.11	0.08	0.20	0.21
Avail Cap(c_a), veh/h	357	782	775	278	782	803	568	909	921	681	909	916
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.64	0.64	0.64	0.93	0.93	0.93	1.00	1.00	1.00	0.91	0.91	0.91
Uniform Delay (d), s/veh	29.1	24.7	24.8	33.6	23.1	23.2	12.5	10.0	10.0	11.2	10.6	10.6
Incr Delay (d2), s/veh	0.2	0.8	0.8	0.4	0.6	0.6	0.3	0.2	0.2	0.2	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	7.9	7.9	0.8	5.6	5.8	0.7	1.3	1.3	0.7	2.5	2.5
LnGrp Delay(d),s/veh	29.3	25.5	25.5	34.0	23.7	23.7	12.8	10.3	10.3	11.4	11.0	11.1
LnGrp LOS	C	C	C	C	C	C	B	B	B	B	B	B
Approach Vol, veh/h		780			613			250			425	
Approach Delay, s/veh		25.7			24.3			10.7			11.1	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		53.8		36.2		53.8		36.2
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0
Max Green Setting (Gmax), s		38.0		42.0		38.0		42.0
Max Q Clear Time (g_c+I1), s		9.4		18.9		7.2		23.0
Green Ext Time (p_c), s		3.7		9.0		3.8		8.2

Intersection Summary	
HCM 2010 Ctrl Delay	20.5
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	267	137	140	119	225	125	76	586	70	94	805	246
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1765	1765	1765	1765	1765	1765	1800
Adj Flow Rate, veh/h	275	141	144	123	232	115	78	604	50	97	830	254
Adj No. of Lanes	1	2	0	1	2	1	1	2	1	1	3	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	340	296	264	299	524	235	116	1881	841	139	2105	640
Arrive On Green	0.04	0.06	0.05	0.09	0.16	0.16	0.07	0.56	0.56	0.08	0.57	0.57
Sat Flow, veh/h	1681	1676	1500	1681	3353	1500	1681	3353	1500	1681	3665	1114
Grp Volume(v), veh/h	275	141	144	123	232	115	78	604	50	97	727	357
Grp Sat Flow(s),veh/h/ln	1681	1676	1500	1681	1676	1500	1681	1676	1500	1681	1606	1568
Q Serve(g_s), s	10.0	7.3	8.4	5.5	5.6	6.3	4.1	8.7	1.4	5.1	11.2	11.3
Cycle Q Clear(g_c), s	10.0	7.3	8.4	5.5	5.6	6.3	4.1	8.7	1.4	5.1	11.2	11.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.71
Lane Grp Cap(c), veh/h	340	296	264	299	524	235	116	1881	841	139	1845	901
V/C Ratio(X)	0.81	0.48	0.54	0.41	0.44	0.49	0.67	0.32	0.06	0.70	0.39	0.40
Avail Cap(c_a), veh/h	340	577	517	333	1155	517	168	1881	841	168	1845	901
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.66	0.66	0.66	0.52	0.52	0.52	1.00	1.00	1.00	0.77	0.77	0.77
Uniform Delay (d), s/veh	33.5	38.4	39.0	29.4	34.4	34.7	40.9	10.6	9.0	40.2	10.5	10.6
Incr Delay (d2), s/veh	9.3	0.8	1.1	0.5	0.3	0.8	6.5	0.5	0.1	7.3	0.5	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	3.5	3.6	2.6	2.6	2.7	2.1	4.1	0.6	2.6	5.1	5.1
LnGrp Delay(d),s/veh	42.8	39.2	40.2	29.9	34.7	35.5	47.4	11.0	9.1	47.5	11.0	11.6
LnGrp LOS	D	D	D	C	C	D	D	B	A	D	B	B
Approach Vol, veh/h		560			470			732			1181	
Approach Delay, s/veh		41.2			33.6			14.8			14.2	
Approach LOS		D			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	52.5	12.0	16.1	8.2	53.7	10.2	17.9
Change Period (Y+Rc), s	3.0	6.0	3.0	5.0	3.0	6.0	3.0	5.0
Max Green Setting (Gmax), s	8.0	28.0	9.0	28.0	8.0	28.0	9.0	28.0
Max Q Clear Time (g_c+I1), s	7.1	10.7	12.0	8.3	6.1	13.3	7.5	10.4
Green Ext Time (p_c), s	0.0	8.0	0.0	2.5	0.0	7.4	0.0	2.4

Intersection Summary	
HCM 2010 Ctrl Delay	22.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	40	208	60	33	368	38	40	308	23	39	534	57
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1765	1765	1765	1765	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	50	260	0	41	460	29	50	385	29	49	668	71
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	163	580	493	317	580	493	373	1702	128	539	1646	175
Arrive On Green	0.33	0.33	0.00	0.33	0.33	0.33	0.54	0.54	0.54	0.54	0.54	0.54
Sat Flow, veh/h	904	1765	1500	1115	1765	1500	717	3162	237	968	3059	325
Grp Volume(v), veh/h	50	260	0	41	460	29	50	203	211	49	366	373
Grp Sat Flow(s),veh/h/ln	904	1765	1500	1115	1765	1500	717	1676	1723	968	1676	1707
Q Serve(g_s), s	4.8	10.4	0.0	2.7	21.3	1.2	4.0	5.7	5.8	2.5	11.6	11.6
Cycle Q Clear(g_c), s	26.1	10.4	0.0	13.1	21.3	1.2	15.6	5.7	5.8	8.3	11.6	11.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.14	1.00		0.19
Lane Grp Cap(c), veh/h	163	580	493	317	580	493	373	902	927	539	902	919
V/C Ratio(X)	0.31	0.45	0.00	0.13	0.79	0.06	0.13	0.23	0.23	0.09	0.41	0.41
Avail Cap(c_a), veh/h	258	765	650	434	765	650	373	902	927	539	902	919
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.95	0.95	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.3	23.8	0.0	29.0	27.4	20.7	16.9	10.9	10.9	13.1	12.3	12.3
Incr Delay (d2), s/veh	1.0	0.5	0.0	0.1	3.1	0.0	0.7	0.6	0.6	0.3	1.4	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	5.1	0.0	0.8	10.8	0.5	0.9	2.8	2.9	0.7	5.6	5.7
LnGrp Delay(d),s/veh	40.3	24.3	0.0	29.0	30.5	20.7	17.6	11.5	11.5	13.5	13.6	13.6
LnGrp LOS	D	C		C	C	C	B	B	B	B	B	B
Approach Vol, veh/h		310			530			464			788	
Approach Delay, s/veh		26.9			29.9			12.2			13.6	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		54.4		35.6		54.4		35.6
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0
Max Green Setting (Gmax), s		39.0		39.0		39.0		39.0
Max Q Clear Time (g_c+I1), s		17.6		28.1		13.6		23.3
Green Ext Time (p_c), s		2.8		1.5		2.9		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	19.4
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	322	419	729	945	0	0	0	0	167	4	269
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1765	1765	1765	1765	0				1800	1765	1765
Adj Flow Rate, veh/h	0	350	455	792	1027	0				182	4	292
Adj No. of Lanes	0	2	1	2	2	0				0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1323	592	761	2254	0				356	8	325
Arrive On Green	0.00	0.39	0.39	0.47	1.00	0.00				0.22	0.22	0.22
Sat Flow, veh/h	0	3441	1500	3261	3441	0				1646	36	1500
Grp Volume(v), veh/h	0	350	455	792	1027	0				186	0	292
Grp Sat Flow(s),veh/h/ln	0	1676	1500	1630	1676	0				1682	0	1500
Q Serve(g_s), s	0.0	6.4	23.7	21.0	0.0	0.0				8.8	0.0	17.0
Cycle Q Clear(g_c), s	0.0	6.4	23.7	21.0	0.0	0.0				8.8	0.0	17.0
Prop In Lane	0.00		1.00	1.00		0.00				0.98		1.00
Lane Grp Cap(c), veh/h	0	1323	592	761	2254	0				364	0	325
V/C Ratio(X)	0.00	0.26	0.77	1.04	0.46	0.00				0.51	0.00	0.90
Avail Cap(c_a), veh/h	0	1323	592	761	2254	0				411	0	367
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.78	0.78	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	18.4	23.7	24.0	0.0	0.0				31.1	0.0	34.3
Incr Delay (d2), s/veh	0.0	0.5	9.3	40.1	0.5	0.0				0.4	0.0	21.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.0	11.3	13.5	0.2	0.0				4.1	0.0	9.0
LnGrp Delay(d),s/veh	0.0	18.9	33.0	64.1	0.5	0.0				31.5	0.0	55.4
LnGrp LOS		B	C	F	A					C		E
Approach Vol, veh/h		805			1819						478	
Approach Delay, s/veh		26.8			28.2						46.1	
Approach LOS		C			C						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	25.0	40.5		24.5		65.5		
Change Period (Y+Rc), s	4.0	5.0		5.0		5.0		
Max Green Setting (Gmax), s	21.0	33.0		22.0		58.0		
Max Q Clear Time (g_c+I1), s	23.0	25.7		19.0		2.0		
Green Ext Time (p_c), s	0.0	4.1		0.4		8.3		

Intersection Summary	
HCM 2010 Ctrl Delay	30.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	127	362	0	0	1225	254	446	4	280	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1765	1765	0	0	1765	1765	1800	1765	1765			
Adj Flow Rate, veh/h	138	393	0	0	1332	276	485	4	304			
Adj No. of Lanes	1	2	0	0	3	1	0	1	1			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	167	2124	0	0	2303	717	426	4	383			
Arrive On Green	0.10	0.63	0.00	0.00	0.48	0.48	0.26	0.26	0.26			
Sat Flow, veh/h	1681	3441	0	0	4976	1500	1668	14	1500			
Grp Volume(v), veh/h	138	393	0	0	1332	276	489	0	304			
Grp Sat Flow(s),veh/h/ln	1681	1676	0	0	1606	1500	1681	0	1500			
Q Serve(g_s), s	7.2	4.4	0.0	0.0	17.9	10.6	23.0	0.0	17.0			
Cycle Q Clear(g_c), s	7.2	4.4	0.0	0.0	17.9	10.6	23.0	0.0	17.0			
Prop In Lane	1.00		0.00	0.00		1.00	0.99		1.00			
Lane Grp Cap(c), veh/h	167	2124	0	0	2303	717	430	0	383			
V/C Ratio(X)	0.82	0.19	0.00	0.00	0.58	0.38	1.14	0.00	0.79			
Avail Cap(c_a), veh/h	187	2124	0	0	2303	717	430	0	383			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.97	0.97	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	39.7	6.9	0.0	0.0	16.9	15.0	33.5	0.0	31.3			
Incr Delay (d2), s/veh	20.2	0.2	0.0	0.0	1.1	1.6	86.8	0.0	10.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	4.3	2.1	0.0	0.0	8.1	4.7	21.0	0.0	8.1			
LnGrp Delay(d),s/veh	59.9	7.0	0.0	0.0	18.0	16.6	120.3	0.0	41.3			
LnGrp LOS	E	A			B	B	F		D			
Approach Vol, veh/h		531			1608			793				
Approach Delay, s/veh		20.8			17.8			90.1				
Approach LOS		C			B			F				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		62.0			14.0	48.0		28.0
Change Period (Y+Rc), s		5.0			5.0	5.0		5.0
Max Green Setting (Gmax), s		57.0			10.0	42.0		23.0
Max Q Clear Time (g_c+I1), s		6.4			9.2	19.9		25.0
Green Ext Time (p_c), s		13.1			0.0	10.2		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	37.9
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	81	9	40	84	0	0	0	0	403	542	121
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1765	1800	1765	1765	0				1800	1765	1765
Adj Flow Rate, veh/h	0	104	12	51	108	0				517	695	27
Adj No. of Lanes	0	2	0	1	2	0				0	3	1
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78				0.78	0.78	0.78
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	475	54	329	1475	0				613	1171	547
Arrive On Green	0.00	0.16	0.16	0.20	0.44	0.00				0.36	0.36	0.36
Sat Flow, veh/h	0	3123	345	1681	3441	0				1681	3212	1500
Grp Volume(v), veh/h	0	57	59	51	108	0				517	695	27
Grp Sat Flow(s),veh/h/ln	0	1676	1704	1681	1676	0				1681	1606	1500
Q Serve(g_s), s	0.0	1.5	1.6	1.3	1.0	0.0				14.4	9.0	0.6
Cycle Q Clear(g_c), s	0.0	1.5	1.6	1.3	1.0	0.0				14.4	9.0	0.6
Prop In Lane	0.00		0.20	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	262	266	329	1475	0				613	1171	547
V/C Ratio(X)	0.00	0.22	0.22	0.16	0.07	0.00				0.84	0.59	0.05
Avail Cap(c_a), veh/h	0	852	866	657	2098	0				657	1256	586
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	18.8	18.9	17.1	8.3	0.0				14.9	13.2	10.5
Incr Delay (d2), s/veh	0.0	0.3	0.3	0.1	0.0	0.0				9.0	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.7	0.7	0.6	0.4	0.0				8.1	4.0	0.3
LnGrp Delay(d),s/veh	0.0	19.1	19.2	17.2	8.3	0.0				23.9	13.7	10.5
LnGrp LOS		B	B	B	A					C	B	B
Approach Vol, veh/h		116			159						1239	
Approach Delay, s/veh		19.2			11.1						17.9	
Approach LOS		B			B						B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	14.5	13.0		23.7		27.5		
Change Period (Y+Rc), s	4.5	5.0		5.0		5.0		
Max Green Setting (Gmax), s	20.0	26.0		20.0		32.0		
Max Q Clear Time (g_c+I1), s	3.3	3.6		16.4		3.0		
Green Ext Time (p_c), s	0.0	1.0		2.2		1.0		

Intersection Summary	
HCM 2010 Ctrl Delay	17.3
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	35	459	0	0	95	52	26	202	138	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1765	1765	0	0	1765	1765	1800	1765	1800			
Adj Flow Rate, veh/h	41	534	0	0	110	34	30	235	160			
Adj No. of Lanes	1	2	0	0	3	1	0	2	0			
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86			
Percent Heavy Veh, %	2	2	0	0	2	2	0	2	0			
Cap, veh/h	81	1461	0	0	1426	404	59	468	334			
Arrive On Green	0.05	0.44	0.00	0.00	0.27	0.27	0.26	0.26	0.26			
Sat Flow, veh/h	1681	3441	0	0	5294	1500	227	1789	1277			
Grp Volume(v), veh/h	41	534	0	0	110	34	232	0	193			
Grp Sat Flow(s),veh/h/ln	1681	1676	0	0	1765	1500	1753	0	1539			
Q Serve(g_s), s	0.7	3.2	0.0	0.0	0.5	0.5	3.3	0.0	3.1			
Cycle Q Clear(g_c), s	0.7	3.2	0.0	0.0	0.5	0.5	3.3	0.0	3.1			
Prop In Lane	1.00		0.00	0.00		1.00	0.13		0.83			
Lane Grp Cap(c), veh/h	81	1461	0	0	1426	404	458	0	402			
V/C Ratio(X)	0.50	0.37	0.00	0.00	0.08	0.08	0.51	0.00	0.48			
Avail Cap(c_a), veh/h	1415	3952	0	0	6240	1768	2067	0	1814			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	13.8	5.6	0.0	0.0	8.1	8.1	9.3	0.0	9.3			
Incr Delay (d2), s/veh	1.8	0.1	0.0	0.0	0.0	0.0	0.3	0.0	0.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.4	1.4	0.0	0.0	0.2	0.2	1.7	0.0	1.4			
LnGrp Delay(d),s/veh	15.6	5.7	0.0	0.0	8.1	8.1	9.7	0.0	9.6			
LnGrp LOS	B	A			A	A	A		A			
Approach Vol, veh/h		575			144			425				
Approach Delay, s/veh		6.4			8.1			9.6				
Approach LOS		A			A			A				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		17.4			4.9	12.5		12.3
Change Period (Y+Rc), s		4.5			3.5	4.5		4.5
Max Green Setting (Gmax), s		35.0			25.0	35.0		35.0
Max Q Clear Time (g_c+I1), s		5.2			2.7	2.5		5.3
Green Ext Time (p_c), s		3.0			0.0	3.0		1.8

Intersection Summary	
HCM 2010 Ctrl Delay	7.8
HCM 2010 LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	417	76	233	287	0	0	0	0	376	80	107
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1765	1765	1765	1765	0				1765	1765	1765
Adj Flow Rate, veh/h	0	485	25	271	334	0				503	0	22
Adj No. of Lanes	0	3	1	2	2	0				2	0	1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86				0.86	0.86	0.86
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1886	587	699	2199	0				720	0	321
Arrive On Green	0.00	0.39	0.39	0.21	0.66	0.00				0.21	0.00	0.21
Sat Flow, veh/h	0	4976	1500	3261	3441	0				3361	0	1500
Grp Volume(v), veh/h	0	485	25	271	334	0				503	0	22
Grp Sat Flow(s),veh/h/ln	0	1606	1500	1630	1676	0				1681	0	1500
Q Serve(g_s), s	0.0	4.8	0.7	5.0	2.7	0.0				9.7	0.0	0.8
Cycle Q Clear(g_c), s	0.0	4.8	0.7	5.0	2.7	0.0				9.7	0.0	0.8
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1886	587	699	2199	0				720	0	321
V/C Ratio(X)	0.00	0.26	0.04	0.39	0.15	0.00				0.70	0.00	0.07
Avail Cap(c_a), veh/h	0	1886	587	699	2199	0				720	0	321
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.99	0.99	0.00				0.66	0.00	0.66
Uniform Delay (d), s/veh	0.0	14.4	13.2	23.6	4.6	0.0				25.4	0.0	21.9
Incr Delay (d2), s/veh	0.0	0.3	0.1	1.6	0.0	0.0				3.7	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.2	0.3	2.4	1.2	0.0				4.8	0.0	0.4
LnGrp Delay(d),s/veh	0.0	14.7	13.3	25.2	4.6	0.0				29.1	0.0	22.2
LnGrp LOS		B	B	C	A					C		C
Approach Vol, veh/h		510			605						525	
Approach Delay, s/veh		14.7			13.8						28.9	
Approach LOS		B			B						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	18.5	31.5		20.0		50.0		
Change Period (Y+Rc), s	3.5	4.1		5.0		4.1		
Max Green Setting (Gmax), s	15.0	27.0		15.0		35.0		
Max Q Clear Time (g_c+I1), s	7.0	6.8		11.7		4.7		
Green Ext Time (p_c), s	0.0	4.7		0.4		5.2		

Intersection Summary	
HCM 2010 Ctrl Delay	18.9
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	93	704	0	0	407	105	110	158	1132	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1765	1765	0	0	1765	1765	1765	1765	1765			
Adj Flow Rate, veh/h	102	774	0	0	447	37	121	0	1216			
Adj No. of Lanes	2	2	0	0	4	1	1	0	2			
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	479	1898	0	0	2232	551	494	0	882			
Arrive On Green	0.15	0.57	0.00	0.00	0.37	0.37	0.29	0.00	0.29			
Sat Flow, veh/h	3261	3441	0	0	6318	1500	1681	0	3000			
Grp Volume(v), veh/h	102	774	0	0	447	37	121	0	1216			
Grp Sat Flow(s),veh/h/ln	1630	1676	0	0	1518	1500	1681	0	1500			
Q Serve(g_s), s	1.9	8.9	0.0	0.0	3.4	1.1	3.7	0.0	20.0			
Cycle Q Clear(g_c), s	1.9	8.9	0.0	0.0	3.4	1.1	3.7	0.0	20.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	479	1898	0	0	2232	551	494	0	882			
V/C Ratio(X)	0.21	0.41	0.00	0.00	0.20	0.07	0.24	0.00	1.38			
Avail Cap(c_a), veh/h	479	1898	0	0	2232	551	494	0	882			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	25.5	8.3	0.0	0.0	14.7	13.9	18.3	0.0	24.0			
Incr Delay (d2), s/veh	1.0	0.7	0.0	0.0	0.2	0.2	1.2	0.0	177.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.9	4.3	0.0	0.0	1.5	0.5	1.9	0.0	29.9			
LnGrp Delay(d),s/veh	26.5	9.0	0.0	0.0	14.9	14.2	19.4	0.0	201.3			
LnGrp LOS	C	A			B	B	B		F			
Approach Vol, veh/h		876			484			1337				
Approach Delay, s/veh		11.0			14.8			184.8				
Approach LOS		B			B			F				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		43.0			13.5	29.5		25.0
Change Period (Y+Rc), s		4.5			3.5	4.5		5.0
Max Green Setting (Gmax), s		30.0			10.0	25.0		20.0
Max Q Clear Time (g_c+I1), s		10.9			3.9	5.4		22.0
Green Ext Time (p_c), s		6.0			0.1	6.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	97.9
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	210	0	69	0	0	0	60	660	0	0	818	120
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	0	1765				1765	1765	0	0	1765	1800
Adj Flow Rate, veh/h	223	0	73				64	702	0	0	870	128
Adj No. of Lanes	2	0	1				1	3	0	0	3	0
Peak Hour Factor	0.94	0.94	0.94				0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	0	2				2	2	0	0	2	2
Cap, veh/h	323	0	149				488	3751	0	0	3051	447
Arrive On Green	0.10	0.00	0.10				0.03	0.78	0.00	0.00	0.72	0.72
Sat Flow, veh/h	3261	0	1500				1681	4976	0	0	4404	622
Grp Volume(v), veh/h	223	0	73				64	702	0	0	657	341
Grp Sat Flow(s),veh/h/ln	1630	0	1500				1681	1606	0	0	1606	1655
Q Serve(g_s), s	6.0	0.0	4.1				0.8	3.4	0.0	0.0	6.5	6.6
Cycle Q Clear(g_c), s	6.0	0.0	4.1				0.8	3.4	0.0	0.0	6.5	6.6
Prop In Lane	1.00		1.00				1.00		0.00	0.00		0.38
Lane Grp Cap(c), veh/h	323	0	149				488	3751	0	0	2308	1189
V/C Ratio(X)	0.69	0.00	0.49				0.13	0.19	0.00	0.00	0.28	0.29
Avail Cap(c_a), veh/h	1196	0	550				648	3751	0	0	2308	1189
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.47	0.00	0.47				1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	39.2	0.0	38.4				3.0	2.6	0.0	0.0	4.5	4.5
Incr Delay (d2), s/veh	1.2	0.0	1.2				0.1	0.1	0.0	0.0	0.3	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	0.0	3.5				0.4	1.5	0.0	0.0	2.9	3.1
LnGrp Delay(d),s/veh	40.4	0.0	39.6				3.1	2.7	0.0	0.0	4.8	5.1
LnGrp LOS	D		D				A	A			A	A
Approach Vol, veh/h		296						766			998	
Approach Delay, s/veh		40.2						2.7			4.9	
Approach LOS		D						A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		76.1		13.9	5.4	70.7		
Change Period (Y+Rc), s		6.0		5.0	3.0	6.0		
Max Green Setting (Gmax), s		46.0		33.0	11.0	30.0		
Max Q Clear Time (g_c+I1), s		5.4		8.0	2.8	8.6		
Green Ext Time (p_c), s		15.6		1.0	0.1	11.6		

Intersection Summary	
HCM 2010 Ctrl Delay	9.2
HCM 2010 LOS	A

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	0	0	257	1907	785	216
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	Yield
Storage Length	0	-	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	273	2029	835	230

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2396	418	835	0	-	0
Stage 1	835	-	-	-	-	-
Stage 2	1561	-	-	-	-	-
Critical Hdwy	6.29	7.14	5.34	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.67	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	40	499	470	-	-	-
Stage 1	312	-	-	-	-	-
Stage 2	156	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	17	499	470	-	-	-
Mov Cap-2 Maneuver	17	-	-	-	-	-
Stage 1	312	-	-	-	-	-
Stage 2	65	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	2.7	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	470	-	-	-	-
HCM Lane V/C Ratio	0.582	-	-	-	-
HCM Control Delay (s)	22.8	-	0	-	-
HCM Lane LOS	C	-	A	-	-
HCM 95th %tile Q(veh)	3.6	-	-	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	20	255	98	174	714	189	373	705	303	15	375	330
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1765	1765	1765	1765
Adj Flow Rate, veh/h	22	274	105	187	768	203	401	758	258	16	467	223
Adj No. of Lanes	1	2	0	1	2	0	1	2	1	1	2	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	72	621	232	234	682	180	622	1609	720	202	812	345
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.37	0.48	0.48	0.12	0.23	0.23
Sat Flow, veh/h	577	2389	894	1000	2625	694	1681	3353	1500	1681	3529	1500
Grp Volume(v), veh/h	22	190	189	187	491	480	401	758	258	16	467	223
Grp Sat Flow(s),veh/h/ln	577	1676	1607	1000	1676	1642	1681	1676	1500	1681	1765	1500
Q Serve(g_s), s	0.0	9.5	9.8	16.2	26.0	26.0	19.7	15.2	10.8	0.8	11.7	13.4
Cycle Q Clear(g_c), s	26.0	9.5	9.8	26.0	26.0	26.0	19.7	15.2	10.8	0.8	11.7	13.4
Prop In Lane	1.00		0.56	1.00		0.42	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	72	436	418	234	436	427	622	1609	720	202	812	345
V/C Ratio(X)	0.31	0.44	0.45	0.80	1.13	1.13	0.64	0.47	0.36	0.08	0.58	0.65
Avail Cap(c_a), veh/h	72	436	418	234	436	427	622	1609	720	202	812	345
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.09	0.09	0.09	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.0	30.9	31.0	43.0	37.0	37.0	26.1	17.5	16.3	39.1	34.2	34.8
Incr Delay (d2), s/veh	10.6	3.2	3.5	24.4	81.9	82.3	0.5	0.1	0.1	0.8	3.0	9.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	4.8	4.8	6.7	21.9	21.5	9.2	7.0	4.5	0.4	6.0	6.4
LnGrp Delay(d),s/veh	60.6	34.0	34.5	67.4	118.9	119.3	26.5	17.6	16.5	39.9	37.1	43.8
LnGrp LOS	E	C	C	E	F	F	C	B	B	D	D	D
Approach Vol, veh/h		401			1158			1417			706	
Approach Delay, s/veh		35.7			110.8			19.9			39.3	
Approach LOS		D			F			B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	16.0	53.0		31.0	41.0	28.0		31.0
Change Period (Y+Rc), s	4.0	5.0		5.0	4.0	5.0		5.0
Max Green Setting (Gmax), s	12.0	46.0		26.0	37.0	23.0		24.0
Max Q Clear Time (g_c+I1), s	2.8	17.2		28.0	21.7	15.4		28.0
Green Ext Time (p_c), s	0.0	11.7		0.0	1.1	5.1		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	53.9
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	815	0	635	0	0	0	0	563	261	228	415	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800				0	1765	1765	1765	1765	0
Adj Flow Rate, veh/h	763	133	668				0	593	174	240	437	0
Adj No. of Lanes	1	1	0				0	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	532	81	406				0	1198	536	308	1950	0
Arrive On Green	0.32	0.32	0.32				0.00	0.36	0.36	0.18	0.58	0.00
Sat Flow, veh/h	1681	255	1283				0	3441	1500	1681	3441	0
Grp Volume(v), veh/h	763	0	801				0	593	174	240	437	0
Grp Sat Flow(s),veh/h/ln	1681	0	1538				0	1676	1500	1681	1676	0
Q Serve(g_s), s	31.0	0.0	31.0				0.0	13.5	8.3	13.3	6.1	0.0
Cycle Q Clear(g_c), s	31.0	0.0	31.0				0.0	13.5	8.3	13.3	6.1	0.0
Prop In Lane	1.00		0.83				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	532	0	487				0	1198	536	308	1950	0
V/C Ratio(X)	1.44	0.00	1.65				0.00	0.49	0.32	0.78	0.22	0.00
Avail Cap(c_a), veh/h	532	0	487				0	1198	536	566	1950	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.50	0.50	0.00
Uniform Delay (d), s/veh	33.5	0.0	33.5				0.0	24.6	22.9	38.1	9.9	0.0
Incr Delay (d2), s/veh	206.4	0.0	299.9				0.0	1.5	1.6	2.2	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	44.8	0.0	53.6				0.0	6.5	3.7	6.4	2.8	0.0
LnGrp Delay(d),s/veh	239.9	0.0	333.4				0.0	26.0	24.5	40.3	10.0	0.0
LnGrp LOS	F		F					C	C	D	A	
Approach Vol, veh/h		1564						767			677	
Approach Delay, s/veh		287.8						25.7			20.7	
Approach LOS		F						C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	22.0	40.0		36.0		62.0		
Change Period (Y+Rc), s	4.0	5.0		5.0		5.0		
Max Green Setting (Gmax), s	33.0	20.0		31.0		49.0		
Max Q Clear Time (g_c+I1), s	15.3	15.5		33.0		8.1		
Green Ext Time (p_c), s	0.6	2.7		0.0		8.8		

Intersection Summary	
HCM 2010 Ctrl Delay	160.9
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	81	508	159	56	701	48	187	716	67	171	682	81
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1765	1765	1765	1800	1765	1765	1765	1765	1765	1800
Adj Flow Rate, veh/h	84	524	51	58	723	49	193	738	10	176	703	84
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	120	973	435	89	865	59	501	930	416	518	867	104
Arrive On Green	0.07	0.29	0.29	0.05	0.27	0.26	0.30	0.28	0.28	0.31	0.29	0.28
Sat Flow, veh/h	1681	3353	1500	1681	3187	216	1681	3353	1500	1681	3017	360
Grp Volume(v), veh/h	84	524	51	58	380	392	193	738	10	176	390	397
Grp Sat Flow(s),veh/h/ln	1681	1676	1500	1681	1676	1727	1681	1676	1500	1681	1676	1701
Q Serve(g_s), s	5.5	14.7	1.3	3.8	23.9	24.0	10.2	22.8	0.4	9.1	24.2	24.3
Cycle Q Clear(g_c), s	5.5	14.7	1.3	3.8	23.9	24.0	10.2	22.8	0.4	9.1	24.2	24.3
Prop In Lane	1.00		1.00	1.00		0.13	1.00		1.00	1.00		0.21
Lane Grp Cap(c), veh/h	120	973	435	89	455	468	501	930	416	518	482	489
V/C Ratio(X)	0.70	0.54	0.12	0.65	0.84	0.84	0.39	0.79	0.02	0.34	0.81	0.81
Avail Cap(c_a), veh/h	240	973	435	240	479	493	501	1347	603	518	674	683
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.65	0.65	0.65	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.8	33.4	6.0	52.0	38.5	38.5	31.2	37.5	19.0	29.9	37.1	37.2
Incr Delay (d2), s/veh	7.1	0.6	0.1	7.9	11.8	11.5	0.3	4.6	0.1	0.4	13.8	13.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	6.9	0.5	2.0	12.6	12.9	4.8	11.2	0.2	4.3	13.0	13.2
LnGrp Delay(d),s/veh	57.9	34.0	6.1	60.0	50.2	50.0	31.5	42.1	19.1	30.3	50.8	50.9
LnGrp LOS	E	C	A	E	D	D	C	D	B	C	D	D
Approach Vol, veh/h		659			830			941			963	
Approach Delay, s/veh		34.9			50.8			39.7			47.1	
Approach LOS		C			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	36.5	33.1	7.9	34.5	35.4	34.2	10.0	32.4
Change Period (Y+Rc), s	3.0	5.0	3.0	5.0	3.0	5.0	3.0	5.0
Max Green Setting (Gmax), s	10.0	42.0	15.0	29.0	10.0	42.0	15.0	29.0
Max Q Clear Time (g_c+I1), s	11.1	24.8	5.8	16.7	12.2	26.3	7.5	26.0
Green Ext Time (p_c), s	0.0	3.2	0.1	4.9	0.0	2.9	0.1	1.4

Intersection Summary	
HCM 2010 Ctrl Delay	43.6
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	563	261	488	754	0	0	0	0	440	2	138
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1765	1800	1765	1765	0				1765	1765	1765
Adj Flow Rate, veh/h	0	687	318	595	920	0				538	0	-41
Adj No. of Lanes	0	4	0	2	2	0				2	0	1
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82				0.82	0.82	0.82
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1618	533	737	2156	0				690	0	308
Arrive On Green	0.00	0.36	0.36	0.23	0.64	0.00				0.21	0.00	0.00
Sat Flow, veh/h	0	4800	1500	3261	3441	0				3361	0	1500
Grp Volume(v), veh/h	0	687	318	595	920	0				538	0	-41
Grp Sat Flow(s),veh/h/ln	0	1518	1500	1630	1676	0				1681	0	1500
Q Serve(g_s), s	0.0	6.5	9.8	9.8	7.7	0.0				8.6	0.0	0.0
Cycle Q Clear(g_c), s	0.0	6.5	9.8	9.8	7.7	0.0				8.6	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1618	533	737	2156	0				690	0	308
V/C Ratio(X)	0.00	0.42	0.60	0.81	0.43	0.00				0.78	0.00	-0.13
Avail Cap(c_a), veh/h	0	2810	926	1438	2156	0				2075	0	926
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	13.9	14.9	20.8	5.0	0.0				21.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.4	0.8	0.0	0.0				0.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.7	4.1	4.5	3.5	0.0				4.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	13.9	15.3	21.6	5.0	0.0				22.1	0.0	0.0
LnGrp LOS		B	B	C	A					C		
Approach Vol, veh/h		1005			1515						497	
Approach Delay, s/veh		14.4			11.5						23.9	
Approach LOS		B			B						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	16.3	24.3		16.1		40.6		
Change Period (Y+Rc), s	3.5	4.1		4.5		4.1		
Max Green Setting (Gmax), s	25.0	35.0		35.0		35.0		
Max Q Clear Time (g_c+I1), s	11.8	11.8		10.6		9.7		
Green Ext Time (p_c), s	1.0	8.3		1.1		10.1		

Intersection Summary	
HCM 2010 Ctrl Delay	14.5
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	187	826	0	0	874	468	353	11	634	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1765	1765	0	0	1765	1765	1765	1765	1765			
Adj Flow Rate, veh/h	228	1007	0	0	1066	382	291	0	828			
Adj No. of Lanes	2	2	0	0	4	1	1	0	2			
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	331	1831	0	0	2378	588	545	0	973			
Arrive On Green	0.10	0.55	0.00	0.00	0.39	0.39	0.32	0.00	0.32			
Sat Flow, veh/h	3261	3441	0	0	6318	1500	1681	0	3000			
Grp Volume(v), veh/h	228	1007	0	0	1066	382	291	0	828			
Grp Sat Flow(s),veh/h/ln	1630	1676	0	0	1518	1500	1681	0	1500			
Q Serve(g_s), s	4.5	12.9	0.0	0.0	8.6	13.8	9.4	0.0	17.1			
Cycle Q Clear(g_c), s	4.5	12.9	0.0	0.0	8.6	13.8	9.4	0.0	17.1			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	331	1831	0	0	2378	588	545	0	973			
V/C Ratio(X)	0.69	0.55	0.00	0.00	0.45	0.65	0.53	0.00	0.85			
Avail Cap(c_a), veh/h	1229	1831	0	0	3294	814	887	0	1583			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	28.8	9.8	0.0	0.0	14.9	16.5	18.3	0.0	20.9			
Incr Delay (d2), s/veh	1.0	0.2	0.0	0.0	0.0	0.5	0.3	0.0	1.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	2.1	5.9	0.0	0.0	3.6	5.7	4.4	0.0	7.2			
LnGrp Delay(d),s/veh	29.7	10.0	0.0	0.0	14.9	16.9	18.6	0.0	22.2			
LnGrp LOS	C	A			B	B	B		C			
Approach Vol, veh/h		1235			1448			1119				
Approach Delay, s/veh		13.6			15.5			21.3				
Approach LOS		B			B			C				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		40.3			10.2	30.1		26.0
Change Period (Y+Rc), s		4.1			3.5	4.1		4.5
Max Green Setting (Gmax), s		35.0			25.0	36.0		35.0
Max Q Clear Time (g_c+I1), s		14.9			6.5	15.8		19.1
Green Ext Time (p_c), s		11.0			0.4	10.2		2.4

Intersection Summary	
HCM 2010 Ctrl Delay	16.6
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	76	1168	44	34	1060	54	63	141	42	42	98	63
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	84	1284	48	37	1165	59	69	155	46	46	108	69
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	457	2253	84	393	2114	107	227	451	130	219	355	212
Arrive On Green	0.11	0.68	0.67	0.07	0.65	0.64	0.18	0.18	0.16	0.18	0.18	0.16
Sat Flow, veh/h	1681	3296	123	1681	3248	164	1203	2571	740	1177	2023	1206
Grp Volume(v), veh/h	84	652	680	37	601	623	69	99	102	46	88	89
Grp Sat Flow(s),veh/h/ln	1681	1676	1743	1681	1676	1736	1203	1676	1634	1177	1676	1552
Q Serve(g_s), s	1.1	19.0	19.0	0.6	18.3	18.4	5.0	4.9	5.2	3.4	4.3	4.7
Cycle Q Clear(g_c), s	1.1	19.0	19.0	0.6	18.3	18.4	9.7	4.9	5.2	8.5	4.3	4.7
Prop In Lane	1.00		0.07	1.00		0.09	1.00		0.45	1.00		0.78
Lane Grp Cap(c), veh/h	457	1146	1191	393	1091	1130	227	294	287	219	294	273
V/C Ratio(X)	0.18	0.57	0.57	0.09	0.55	0.55	0.30	0.34	0.35	0.21	0.30	0.33
Avail Cap(c_a), veh/h	523	1146	1191	514	1091	1130	400	535	522	388	535	495
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	5.4	7.7	7.7	5.4	8.9	9.0	38.2	34.0	34.3	37.8	33.7	34.2
Incr Delay (d2), s/veh	0.2	2.1	2.0	0.1	2.0	1.9	0.7	0.7	0.7	0.5	0.6	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	9.4	9.7	0.3	9.0	9.3	1.7	2.3	2.4	1.1	2.0	2.1
LnGrp Delay(d),s/veh	5.6	9.8	9.7	5.5	10.9	10.9	38.9	34.6	35.0	38.3	34.3	34.9
LnGrp LOS	A	A	A	A	B	B	D	C	D	D	C	C
Approach Vol, veh/h		1416			1261			270			223	
Approach Delay, s/veh		9.5			10.8			35.9			35.4	
Approach LOS		A			B			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.0	63.2		18.8	9.0	66.2		18.8
Change Period (Y+Rc), s	4.0	5.0		5.3	4.0	5.0		5.3
Max Green Setting (Gmax), s	11.7	41.0		27.0	11.7	41.0		27.0
Max Q Clear Time (g_c+I1), s	3.1	20.4		11.7	2.6	21.0		10.5
Green Ext Time (p_c), s	0.1	12.5		1.8	0.0	12.3		1.8

Intersection Summary	
HCM 2010 Ctrl Delay	14.1
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	93	997	61	37	894	54	75	202	50	60	146	67
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1765	1765	1765	1800	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	100	1072	37	40	961	58	81	217	54	65	157	72
Adj No. of Lanes	1	1	1	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	307	1015	862	90	1847	112	307	410	102	275	344	158
Arrive On Green	0.57	0.57	0.57	0.57	0.57	0.57	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	551	1765	1500	506	3213	194	1147	1365	340	1104	1146	526
Grp Volume(v), veh/h	100	1072	37	40	501	518	81	0	271	65	0	229
Grp Sat Flow(s),veh/h/ln	551	1765	1500	506	1676	1730	1147	0	1705	1104	0	1672
Q Serve(g_s), s	10.8	46.0	0.9	0.0	14.5	14.5	4.9	0.0	10.6	4.2	0.0	8.9
Cycle Q Clear(g_c), s	25.3	46.0	0.9	46.0	14.5	14.5	13.8	0.0	10.6	14.8	0.0	8.9
Prop In Lane	1.00		1.00	1.00		0.11	1.00		0.20	1.00		0.31
Lane Grp Cap(c), veh/h	307	1015	863	90	964	995	307	0	511	275	0	502
V/C Ratio(X)	0.33	1.06	0.04	0.44	0.52	0.52	0.26	0.00	0.53	0.24	0.00	0.46
Avail Cap(c_a), veh/h	307	1015	863	90	964	995	307	0	511	275	0	502
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.47	0.47	0.47	0.98	0.00	0.98	1.00	0.00	1.00
Uniform Delay (d), s/veh	18.0	17.0	7.4	40.0	10.3	10.3	28.3	0.0	23.3	29.4	0.0	22.7
Incr Delay (d2), s/veh	2.8	44.4	0.1	1.6	0.2	0.2	2.0	0.0	3.8	2.0	0.0	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	34.5	0.4	0.9	6.7	7.0	1.7	0.0	5.5	1.4	0.0	4.5
LnGrp Delay(d),s/veh	20.8	61.4	7.5	41.6	10.5	10.5	30.4	0.0	27.1	31.5	0.0	25.7
LnGrp LOS	C	F	A	D	B	B	C		C	C		C
Approach Vol, veh/h		1209			1059			352			294	
Approach Delay, s/veh		56.4			11.7			27.9			27.0	
Approach LOS		E			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		51.0		29.0		51.0		29.0
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0
Max Green Setting (Gmax), s		46.0		24.0		46.0		24.0
Max Q Clear Time (g_c+I1), s		48.0		16.8		48.0		15.8
Green Ext Time (p_c), s		0.0		2.0		0.0		2.2

Intersection Summary	
HCM 2010 Ctrl Delay	33.7
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	80	634	259	252	534	123	309	676	268	160	644	88
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1765	1765	1765	1765
Adj Flow Rate, veh/h	85	674	276	268	568	131	329	719	212	170	685	5
Adj No. of Lanes	1	2	0	1	2	0	1	2	1	1	2	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	156	697	285	286	1021	235	218	972	435	254	1043	466
Arrive On Green	0.09	0.30	0.29	0.17	0.38	0.37	0.26	0.58	0.58	0.15	0.31	0.31
Sat Flow, veh/h	1681	2322	951	1681	2709	623	1681	3353	1500	1681	3353	1500
Grp Volume(v), veh/h	85	487	463	268	351	348	329	719	212	170	685	5
Grp Sat Flow(s),veh/h/ln	1681	1676	1597	1681	1676	1655	1681	1676	1500	1681	1676	1500
Q Serve(g_s), s	4.8	28.6	28.6	15.7	16.5	16.6	13.0	15.8	5.0	9.6	17.7	0.2
Cycle Q Clear(g_c), s	4.8	28.6	28.6	15.7	16.5	16.6	13.0	15.8	5.0	9.6	17.7	0.2
Prop In Lane	1.00		0.60	1.00		0.38	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	156	503	479	286	632	624	218	972	435	254	1043	466
V/C Ratio(X)	0.54	0.97	0.97	0.94	0.56	0.56	1.51	0.74	0.49	0.67	0.66	0.01
Avail Cap(c_a), veh/h	286	503	479	286	632	624	218	972	435	269	1073	480
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.96	0.96	0.96	1.00	1.00	1.00	0.80	0.80	0.80
Uniform Delay (d), s/veh	43.3	34.5	34.8	41.0	24.5	24.7	37.0	18.2	6.1	40.1	29.8	23.8
Incr Delay (d2), s/veh	0.3	6.3	6.6	36.1	1.0	1.1	249.9	5.0	3.9	4.7	1.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	14.1	13.5	10.2	7.8	7.7	21.1	7.9	2.4	4.8	8.3	0.1
LnGrp Delay(d),s/veh	43.6	40.9	41.4	77.1	25.6	25.8	286.9	23.3	10.0	44.8	31.0	23.8
LnGrp LOS	D	D	D	E	C	C	F	C	B	D	C	C
Approach Vol, veh/h		1035			967			1260			860	
Approach Delay, s/veh		41.3			39.9			89.9			33.7	
Approach LOS		D			D			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	32.0	15.0	33.1	11.3	39.7	17.1	31.0
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	14.0	27.0	10.0	29.0	14.0	27.0	13.0	26.0
Max Q Clear Time (g_c+I1), s	17.7	30.6	15.0	19.7	6.8	18.6	11.6	17.8
Green Ext Time (p_c), s	0.0	0.0	0.0	2.8	0.1	4.5	0.7	2.9

Intersection Summary	
HCM 2010 Ctrl Delay	54.2
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	1	647	167	145	592	4	220	21	227	1	19	8
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1800	1765	1800	1765	1765	1800	1800	1765	1765	1765	1765	1800
Adj Flow Rate, veh/h	1	727	188	163	665	4	247	24	133	1	21	9
Adj No. of Lanes	0	2	0	1	2	0	0	1	1	1	1	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	40	1261	326	197	2219	13	365	28	359	129	281	120
Arrive On Green	0.49	0.49	0.49	0.16	0.86	0.86	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	0	2584	667	1681	3417	21	1203	117	1500	1225	1173	503
Grp Volume(v), veh/h	497	0	419	163	326	343	271	0	133	1	0	30
Grp Sat Flow(s),veh/h/ln	1764	0	1488	1681	1676	1761	1320	0	1500	1225	0	1676
Q Serve(g_s), s	0.0	0.0	18.1	8.5	3.2	3.2	16.7	0.0	6.7	0.1	0.0	1.2
Cycle Q Clear(g_c), s	18.1	0.0	18.1	8.5	3.2	3.2	18.0	0.0	6.7	18.0	0.0	1.2
Prop In Lane	0.00		0.45	1.00		0.01	0.91		1.00	1.00		0.30
Lane Grp Cap(c), veh/h	901	0	726	197	1089	1144	393	0	359	129	0	401
V/C Ratio(X)	0.55	0.00	0.58	0.83	0.30	0.30	0.69	0.00	0.37	0.01	0.00	0.07
Avail Cap(c_a), veh/h	901	0	726	373	1089	1144	540	0	517	244	0	559
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.91	0.91	0.91	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.4	0.0	16.4	37.1	2.4	2.4	33.5	0.0	28.6	41.5	0.0	26.5
Incr Delay (d2), s/veh	2.4	0.0	3.3	7.9	0.1	0.1	2.2	0.0	0.6	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.3	0.0	8.0	4.3	1.4	1.5	6.7	0.0	2.8	0.0	0.0	0.6
LnGrp Delay(d),s/veh	18.9	0.0	19.8	45.0	2.5	2.5	35.7	0.0	29.2	41.5	0.0	26.6
LnGrp LOS	B		B	D	A	A	D		C	D		C
Approach Vol, veh/h		916			832			404			31	
Approach Delay, s/veh		19.3			10.8			33.5			27.1	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		8
Phs Duration (G+Y+Rc), s	14.5	48.9		26.5		63.5		26.5
Change Period (Y+Rc), s	4.0	5.0		5.0		5.0		5.0
Max Green Setting (Gmax), s	20.0	25.0		30.0		49.0		31.0
Max Q Clear Time (g_c+I1), s	10.5	20.1		20.0		5.2		20.0
Green Ext Time (p_c), s	0.3	3.5		1.5		13.1		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	18.8
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	138	365	95	268	322	226	120	855	261	226	831	105
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	147	388	101	285	343	240	128	910	278	240	884	112
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	221	571	147	269	466	320	203	1091	332	252	1377	174
Arrive On Green	0.13	0.22	0.21	0.16	0.24	0.23	0.12	0.43	0.42	0.15	0.46	0.45
Sat Flow, veh/h	1681	2641	680	1681	1903	1307	1681	2533	772	1681	2995	379
Grp Volume(v), veh/h	147	245	244	285	301	282	128	602	586	240	495	501
Grp Sat Flow(s),veh/h/ln	1681	1676	1645	1681	1676	1534	1681	1676	1628	1681	1676	1698
Q Serve(g_s), s	8.3	13.4	13.7	16.0	16.6	17.0	7.2	31.9	32.1	14.2	22.6	22.7
Cycle Q Clear(g_c), s	8.3	13.4	13.7	16.0	16.6	17.0	7.2	31.9	32.1	14.2	22.6	22.7
Prop In Lane	1.00		0.41	1.00		0.85	1.00		0.47	1.00		0.22
Lane Grp Cap(c), veh/h	221	363	356	269	410	375	203	722	701	252	771	781
V/C Ratio(X)	0.66	0.67	0.69	1.06	0.73	0.75	0.63	0.83	0.84	0.95	0.64	0.64
Avail Cap(c_a), veh/h	235	431	423	269	464	425	252	722	701	252	771	781
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.61	0.61	0.61	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.3	36.0	36.3	42.0	34.8	35.4	41.8	25.3	25.6	42.1	20.7	20.8
Incr Delay (d2), s/veh	6.3	3.3	3.6	71.5	5.2	6.4	2.1	7.0	7.3	43.5	4.1	4.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	6.5	6.5	12.7	8.2	7.9	3.5	16.1	15.8	9.6	11.3	11.5
LnGrp Delay(d),s/veh	47.6	39.2	39.9	113.5	40.0	41.8	43.9	32.2	32.8	85.6	24.8	24.8
LnGrp LOS	D	D	D	F	D	D	D	C	C	F	C	C
Approach Vol, veh/h		636			868			1316			1236	
Approach Delay, s/veh		41.4			64.7			33.6			36.6	
Approach LOS		D			E			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	23.9	12.1	48.0	13.2	26.8	15.0	45.1
Change Period (Y+Rc), s	3.0	5.3	3.0	5.0	3.0	5.3	3.0	5.0
Max Green Setting (Gmax), s	13.0	22.7	12.0	36.0	11.0	24.7	12.0	36.0
Max Q Clear Time (g_c+I1), s	18.0	15.7	9.2	24.7	10.3	19.0	16.2	34.1
Green Ext Time (p_c), s	0.0	2.8	0.1	7.4	0.0	2.4	0.0	1.6

Intersection Summary	
HCM 2010 Ctrl Delay	42.4
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	480	342	629	699	0	0	0	0	329	1	128
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1765	1800	1765	1765	0				1765	1765	1765
Adj Flow Rate, veh/h	0	505	360	662	736	0				348	0	5
Adj No. of Lanes	0	4	0	2	2	0				2	0	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1861	613	800	2385	0				476	0	213
Arrive On Green	0.00	0.41	0.41	0.25	0.71	0.00				0.14	0.00	0.14
Sat Flow, veh/h	0	4800	1500	3261	3441	0				3361	0	1500
Grp Volume(v), veh/h	0	505	360	662	736	0				348	0	5
Grp Sat Flow(s),veh/h/ln	0	1518	1500	1630	1676	0				1681	0	1500
Q Serve(g_s), s	0.0	4.5	11.4	11.8	5.0	0.0				6.1	0.0	0.2
Cycle Q Clear(g_c), s	0.0	4.5	11.4	11.8	5.0	0.0				6.1	0.0	0.2
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1861	613	800	2385	0				476	0	213
V/C Ratio(X)	0.00	0.27	0.59	0.83	0.31	0.00				0.73	0.00	0.02
Avail Cap(c_a), veh/h	0	1861	613	1866	2385	0				1923	0	858
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	12.0	14.1	21.9	3.3	0.0				25.1	0.0	22.6
Incr Delay (d2), s/veh	0.0	0.4	4.1	0.9	0.3	0.0				0.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.9	5.4	5.3	2.4	0.0				2.9	0.0	0.1
LnGrp Delay(d),s/veh	0.0	12.4	18.2	22.7	3.6	0.0				26.0	0.0	22.6
LnGrp LOS		B	B	C	A					C		C
Approach Vol, veh/h		865			1398						353	
Approach Delay, s/veh		14.8			12.7						25.9	
Approach LOS		B			B						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	18.5	29.5		13.2		48.0		
Change Period (Y+Rc), s	3.5	4.5		4.5		4.5		
Max Green Setting (Gmax), s	35.0	25.0		35.0		25.0		
Max Q Clear Time (g_c+I1), s	13.8	13.4		8.1		7.0		
Green Ext Time (p_c), s	1.2	5.6		0.6		7.0		

Intersection Summary	
HCM 2010 Ctrl Delay	15.1
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	157	655	0	0	1002	775	317	3	447	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1765	1765	0	0	1765	1765	1765	1765	1765			
Adj Flow Rate, veh/h	164	682	0	0	1044	721	464	0	254			
Adj No. of Lanes	2	2	0	0	4	1	2	0	1			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	274	2037	0	0	2786	689	733	0	327			
Arrive On Green	0.08	0.61	0.00	0.00	0.46	0.46	0.22	0.00	0.22			
Sat Flow, veh/h	3261	3441	0	0	6318	1500	3361	0	1500			
Grp Volume(v), veh/h	164	682	0	0	1044	721	464	0	254			
Grp Sat Flow(s),veh/h/ln	1630	1676	0	0	1518	1500	1681	0	1500			
Q Serve(g_s), s	2.6	5.5	0.0	0.0	6.1	25.0	6.8	0.0	8.7			
Cycle Q Clear(g_c), s	2.6	5.5	0.0	0.0	6.1	25.0	6.8	0.0	8.7			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	274	2037	0	0	2786	689	733	0	327			
V/C Ratio(X)	0.60	0.33	0.00	0.00	0.37	1.05	0.63	0.00	0.78			
Avail Cap(c_a), veh/h	1197	2037	0	0	2786	689	1512	0	675			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	24.1	5.3	0.0	0.0	9.6	14.7	19.3	0.0	20.0			
Incr Delay (d2), s/veh	0.8	0.0	0.0	0.0	0.0	47.3	0.3	0.0	1.5			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.2	2.5	0.0	0.0	2.5	19.2	3.2	0.0	3.7			
LnGrp Delay(d),s/veh	24.8	5.3	0.0	0.0	9.7	62.0	19.7	0.0	21.5			
LnGrp LOS	C	A			A	F	B		C			
Approach Vol, veh/h		846			1765			718				
Approach Delay, s/veh		9.1			31.0			20.3				
Approach LOS		A			C			C				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		37.6			8.1	29.5		16.9
Change Period (Y+Rc), s		4.5			3.5	4.5		5.0
Max Green Setting (Gmax), s		25.0			20.0	25.0		24.5
Max Q Clear Time (g_c+I1), s		7.5			4.6	27.0		10.7
Green Ext Time (p_c), s		9.4			0.2	0.0		1.2

Intersection Summary	
HCM 2010 Ctrl Delay	23.2
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	66	754	41	9	586	32	80	257	37	44	142	41
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	80	908	49	11	706	39	96	310	45	53	171	49
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	294	1256	68	167	1254	69	617	1474	212	531	1298	362
Arrive On Green	0.39	0.39	0.39	0.78	0.78	0.78	0.50	0.50	0.50	0.50	0.50	0.50
Sat Flow, veh/h	713	3236	175	584	3231	178	1156	2943	423	1022	2592	722
Grp Volume(v), veh/h	80	470	487	11	366	379	96	175	180	53	109	111
Grp Sat Flow(s),veh/h/ln	713	1676	1734	584	1676	1733	1156	1676	1690	1022	1676	1637
Q Serve(g_s), s	8.0	21.5	21.5	1.2	7.8	7.8	4.4	5.2	5.3	2.7	3.1	3.3
Cycle Q Clear(g_c), s	15.8	21.5	21.5	22.7	7.8	7.8	7.6	5.2	5.3	8.1	3.1	3.3
Prop In Lane	1.00		0.10	1.00		0.10	1.00		0.25	1.00		0.44
Lane Grp Cap(c), veh/h	294	650	673	167	650	673	617	840	847	531	840	820
V/C Ratio(X)	0.27	0.72	0.72	0.07	0.56	0.56	0.16	0.21	0.21	0.10	0.13	0.14
Avail Cap(c_a), veh/h	351	782	809	213	782	809	617	840	847	531	840	820
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.93	0.93	0.93	0.96	0.96	0.96	1.00	1.00	1.00	0.94	0.94	0.94
Uniform Delay (d), s/veh	24.8	23.4	23.4	16.5	7.0	7.0	14.1	12.5	12.5	14.8	12.0	12.0
Incr Delay (d2), s/veh	0.5	2.5	2.4	0.2	0.7	0.7	0.5	0.6	0.6	0.4	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	10.4	10.7	0.2	3.6	3.7	1.5	2.6	2.6	0.8	1.5	1.6
LnGrp Delay(d),s/veh	25.2	25.9	25.8	16.7	7.8	7.8	14.6	13.1	13.1	15.2	12.3	12.3
LnGrp LOS	C	C	C	B	A	A	B	B	B	B	B	B
Approach Vol, veh/h		1037			756			451			273	
Approach Delay, s/veh		25.8			7.9			13.4			12.9	
Approach LOS		C			A			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		50.1		39.9		50.1		39.9
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0
Max Green Setting (Gmax), s		38.0		42.0		38.0		42.0
Max Q Clear Time (g_c+I1), s		9.6		23.5		10.1		24.7
Green Ext Time (p_c), s		4.0		10.7		4.0		10.2

Intersection Summary	
HCM 2010 Ctrl Delay	16.8
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	358	305	131	100	133	159	110	895	163	175	836	391
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1765	1765	1765	1765	1765	1765	1800
Adj Flow Rate, veh/h	369	314	135	103	137	150	113	923	146	180	862	403
Adj No. of Lanes	1	2	0	1	2	1	1	2	1	1	3	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	968	1726	727	747	2392	1070	159	1080	483	205	1232	575
Arrive On Green	0.03	0.25	0.24	0.05	0.71	0.71	0.09	0.32	0.32	0.12	0.38	0.38
Sat Flow, veh/h	1681	2301	969	1681	3353	1500	1681	3353	1500	1681	3214	1498
Grp Volume(v), veh/h	369	227	222	103	137	150	113	923	146	180	862	403
Grp Sat Flow(s),veh/h/ln	1681	1676	1594	1681	1676	1500	1681	1676	1500	1681	1606	1500
Q Serve(g_s), s	4.5	9.6	9.9	1.5	1.1	2.9	5.9	23.2	8.0	9.5	20.3	20.4
Cycle Q Clear(g_c), s	4.5	9.6	9.9	1.5	1.1	2.9	5.9	23.2	8.0	9.5	20.3	20.4
Prop In Lane	1.00		0.61	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	968	1257	1195	747	2392	1070	159	1080	483	205	1232	575
V/C Ratio(X)	0.38	0.18	0.19	0.14	0.06	0.14	0.71	0.85	0.30	0.88	0.70	0.70
Avail Cap(c_a), veh/h	1024	1257	1195	827	2392	1070	224	1080	483	205	1232	575
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.62	0.62	0.62	0.91	0.91	0.91	1.00	1.00	1.00	0.54	0.54	0.54
Uniform Delay (d), s/veh	2.4	12.1	12.2	3.4	3.9	4.1	39.6	28.5	33.9	38.8	23.4	23.4
Incr Delay (d2), s/veh	0.2	0.2	0.2	0.1	0.0	0.3	6.0	6.8	0.3	19.9	1.0	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	4.5	4.5	0.7	0.5	1.2	3.0	11.7	3.3	5.5	9.1	8.7
LnGrp Delay(d),s/veh	2.6	12.3	12.4	3.5	3.9	4.4	45.6	35.4	34.2	58.7	24.3	25.5
LnGrp LOS	A	B	B	A	A	A	D	D	C	E	C	C
Approach Vol, veh/h		818			390			1182			1445	
Approach Delay, s/veh		8.0			4.0			36.2			28.9	
Approach LOS		A			A			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	31.0	10.0	66.2	10.5	36.5	6.7	69.5
Change Period (Y+Rc), s	6.0	* 6	3.0	5.0	3.0	6.0	3.0	5.0
Max Green Setting (Gmax), s	10.0	* 25	10.0	28.0	11.0	24.0	8.0	30.0
Max Q Clear Time (g_c+I1), s	11.5	25.2	6.5	4.9	7.9	22.4	3.5	11.9
Green Ext Time (p_c), s	0.0	0.0	0.5	3.0	0.1	1.1	0.1	2.8

Intersection Summary	
HCM 2010 Ctrl Delay	24.2
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	52	562	39	20	272	54	63	509	51	67	352	28
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1765	1765	1765	1765	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	65	702	-26	25	340	49	79	636	64	84	440	35
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	373	762	648	123	762	648	394	1338	134	294	1369	109
Arrive On Green	0.43	0.43	0.00	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43
Sat Flow, veh/h	991	1765	1500	760	1765	1500	915	3077	309	743	3148	250
Grp Volume(v), veh/h	65	702	-26	25	340	49	79	346	354	84	234	241
Grp Sat Flow(s),veh/h/ln	991	1765	1500	760	1765	1500	915	1676	1710	743	1676	1721
Q Serve(g_s), s	4.4	33.8	0.0	2.9	12.2	1.7	5.6	13.2	13.3	8.2	8.2	8.3
Cycle Q Clear(g_c), s	16.7	33.8	0.0	36.7	12.2	1.7	13.9	13.2	13.3	21.4	8.2	8.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.18	1.00		0.15
Lane Grp Cap(c), veh/h	373	762	648	123	762	648	394	729	744	294	729	748
V/C Ratio(X)	0.17	0.92	-0.04	0.20	0.45	0.08	0.20	0.47	0.48	0.29	0.32	0.32
Avail Cap(c_a), veh/h	375	765	650	124	765	650	394	729	744	294	729	748
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.89	0.89	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.9	24.1	0.0	41.4	18.0	15.0	21.3	18.1	18.1	25.8	16.7	16.7
Incr Delay (d2), s/veh	0.2	15.1	0.0	0.3	0.2	0.0	1.1	2.2	2.2	2.4	1.2	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	19.6	0.0	0.6	6.0	0.7	1.5	6.5	6.6	1.9	4.0	4.2
LnGrp Delay(d),s/veh	24.0	39.2	0.0	41.7	18.1	15.0	22.4	20.3	20.3	28.2	17.9	17.9
LnGrp LOS	C	D		D	B	B	C	C	C	C	B	B
Approach Vol, veh/h		741			414			779			559	
Approach Delay, s/veh		39.2			19.2			20.5			19.4	
Approach LOS		D			B			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		45.1		44.9		45.1		44.9
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0
Max Green Setting (Gmax), s		39.0		39.0		39.0		39.0
Max Q Clear Time (g_c+I1), s		15.9		35.8		23.4		38.7
Green Ext Time (p_c), s		4.8		1.6		4.3		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	25.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	775	582	329	547	0	0	0	0	358	4	208
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1765	1765	1765	1765	0				1800	1765	1765
Adj Flow Rate, veh/h	0	842	633	358	595	0				389	4	226
Adj No. of Lanes	0	2	1	2	2	0				0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1229	550	761	2161	0				407	4	367
Arrive On Green	0.00	0.37	0.37	0.47	1.00	0.00				0.24	0.24	0.24
Sat Flow, veh/h	0	3441	1500	3261	3441	0				1664	17	1500
Grp Volume(v), veh/h	0	842	633	358	595	0				393	0	226
Grp Sat Flow(s),veh/h/ln	0	1676	1500	1630	1676	0				1681	0	1500
Q Serve(g_s), s	0.0	19.1	33.0	6.8	0.0	0.0				20.7	0.0	12.1
Cycle Q Clear(g_c), s	0.0	19.1	33.0	6.8	0.0	0.0				20.7	0.0	12.1
Prop In Lane	0.00		1.00	1.00		0.00				0.99		1.00
Lane Grp Cap(c), veh/h	0	1229	550	761	2161	0				411	0	367
V/C Ratio(X)	0.00	0.68	1.15	0.47	0.28	0.00				0.96	0.00	0.62
Avail Cap(c_a), veh/h	0	1229	550	761	2161	0				411	0	367
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.97	0.97	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	24.1	28.5	20.2	0.0	0.0				33.5	0.0	30.2
Incr Delay (d2), s/veh	0.0	3.1	87.3	2.0	0.3	0.0				32.9	0.0	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	9.3	26.9	3.2	0.1	0.0				13.4	0.0	5.2
LnGrp Delay(d),s/veh	0.0	27.2	115.8	22.2	0.3	0.0				66.4	0.0	32.5
LnGrp LOS		C	F	C	A					E		C
Approach Vol, veh/h		1475			953						619	
Approach Delay, s/veh		65.2			8.5						54.1	
Approach LOS		E			A						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	25.0	38.0		27.0		63.0		
Change Period (Y+Rc), s	4.0	5.0		5.0		5.0		
Max Green Setting (Gmax), s	21.0	33.0		22.0		58.0		
Max Q Clear Time (g_c+I1), s	8.8	35.0		22.7		2.0		
Green Ext Time (p_c), s	0.5	0.0		0.0		9.4		

Intersection Summary	
HCM 2010 Ctrl Delay	45.2
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	230	942	0	0	543	215	357	1	605	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1765	1765	0	0	1765	1765	1800	1765	1765			
Adj Flow Rate, veh/h	250	1024	0	0	590	234	388	1	658			
Adj No. of Lanes	1	2	0	0	3	1	0	1	1			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	187	2124	0	0	2248	700	428	1	383			
Arrive On Green	0.22	1.00	0.00	0.00	0.47	0.47	0.26	0.26	0.26			
Sat Flow, veh/h	1681	3441	0	0	4976	1500	1677	4	1500			
Grp Volume(v), veh/h	250	1024	0	0	590	234	389	0	658			
Grp Sat Flow(s),veh/h/ln	1681	1676	0	0	1606	1500	1681	0	1500			
Q Serve(g_s), s	10.0	0.0	0.0	0.0	6.7	8.9	20.2	0.0	23.0			
Cycle Q Clear(g_c), s	10.0	0.0	0.0	0.0	6.7	8.9	20.2	0.0	23.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	187	2124	0	0	2248	700	430	0	383			
V/C Ratio(X)	1.34	0.48	0.00	0.00	0.26	0.33	0.91	0.00	1.72			
Avail Cap(c_a), veh/h	187	2124	0	0	2248	700	430	0	383			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.67	0.67	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	35.0	0.0	0.0	0.0	14.6	15.2	32.4	0.0	33.5			
Incr Delay (d2), s/veh	174.7	0.5	0.0	0.0	0.3	1.3	21.9	0.0	333.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	13.6	0.2	0.0	0.0	3.0	3.9	11.9	0.0	45.0			
LnGrp Delay(d),s/veh	209.7	0.5	0.0	0.0	14.9	16.5	54.4	0.0	366.8			
LnGrp LOS	F	A			B	B	D		F			
Approach Vol, veh/h		1274			824			1047				
Approach Delay, s/veh		41.6			15.3			250.7				
Approach LOS		D			B			F				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		62.0			15.0	47.0		28.0
Change Period (Y+Rc), s		5.0			5.0	5.0		5.0
Max Green Setting (Gmax), s		57.0			10.0	42.0		23.0
Max Q Clear Time (g_c+I1), s		2.0			12.0	10.9		25.0
Green Ext Time (p_c), s		11.7			0.0	10.5		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	104.3
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	124	34	223	99	0	0	0	0	87	196	70
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1765	1800	1765	1765	0				1800	1765	1765
Adj Flow Rate, veh/h	0	159	44	286	127	0				112	251	-38
Adj No. of Lanes	0	2	0	1	2	0				0	3	1
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78				0.78	0.78	0.78
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	492	132	395	1775	0				395	756	353
Arrive On Green	0.00	0.19	0.19	0.24	0.53	0.00				0.24	0.24	0.00
Sat Flow, veh/h	0	2702	703	1681	3441	0				1681	3212	1500
Grp Volume(v), veh/h	0	100	103	286	127	0				112	251	-38
Grp Sat Flow(s),veh/h/ln	0	1676	1641	1681	1676	0				1681	1606	1500
Q Serve(g_s), s	0.0	2.2	2.3	6.7	0.8	0.0				2.3	2.8	0.0
Cycle Q Clear(g_c), s	0.0	2.2	2.3	6.7	0.8	0.0				2.3	2.8	0.0
Prop In Lane	0.00		0.43	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	316	309	395	1775	0				395	756	353
V/C Ratio(X)	0.00	0.32	0.33	0.72	0.07	0.00				0.28	0.33	-0.11
Avail Cap(c_a), veh/h	0	1026	1004	791	2525	0				791	1511	706
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	14.9	14.9	15.0	4.9	0.0				13.3	13.5	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.5	0.9	0.0	0.0				0.3	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.0	1.1	3.1	0.4	0.0				1.1	1.2	0.0
LnGrp Delay(d),s/veh	0.0	15.3	15.4	15.9	4.9	0.0				13.6	13.7	0.0
LnGrp LOS		B	B	B	A					B	B	
Approach Vol, veh/h		203			413						325	
Approach Delay, s/veh		15.4			12.5						15.2	
Approach LOS		B			B						B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	14.5	13.0		15.0		27.5		
Change Period (Y+Rc), s	4.5	5.0		5.0		5.0		
Max Green Setting (Gmax), s	20.0	26.0		20.0		32.0		
Max Q Clear Time (g_c+I1), s	8.7	4.3		4.8		2.8		
Green Ext Time (p_c), s	0.3	1.5		1.6		1.6		

Intersection Summary	
HCM 2010 Ctrl Delay	14.1
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	74	136	0	0	305	255	16	493	96	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1765	1765	0	0	1765	1765	1800	1765	1800			
Adj Flow Rate, veh/h	86	158	0	0	351	274	19	573	112			
Adj No. of Lanes	1	2	0	0	2	2	0	2	0			
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86			
Percent Heavy Veh, %	2	2	0	0	2	2	0	2	0			
Cap, veh/h	136	1384	0	0	814	692	29	906	187			
Arrive On Green	0.08	0.41	0.00	0.00	0.23	0.23	0.33	0.33	0.33			
Sat Flow, veh/h	1681	3441	0	0	3529	3000	89	2764	571			
Grp Volume(v), veh/h	86	158	0	0	351	274	378	0	326			
Grp Sat Flow(s),veh/h/ln	1681	1676	0	0	1765	1500	1760	0	1664			
Q Serve(g_s), s	1.7	1.0	0.0	0.0	2.9	2.7	6.4	0.0	5.7			
Cycle Q Clear(g_c), s	1.7	1.0	0.0	0.0	2.9	2.7	6.4	0.0	5.7			
Prop In Lane	1.00		0.00	0.00		1.00	0.05		0.34			
Lane Grp Cap(c), veh/h	136	1384	0	0	814	692	577	0	545			
V/C Ratio(X)	0.63	0.11	0.00	0.00	0.43	0.40	0.65	0.00	0.60			
Avail Cap(c_a), veh/h	1211	3383	0	0	3561	3027	1776	0	1679			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	15.4	6.3	0.0	0.0	11.4	11.3	10.0	0.0	9.7			
Incr Delay (d2), s/veh	1.8	0.0	0.0	0.0	0.1	0.1	0.5	0.0	0.4			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.9	0.5	0.0	0.0	1.4	1.1	3.1	0.0	2.6			
LnGrp Delay(d),s/veh	17.2	6.3	0.0	0.0	11.5	11.4	10.5	0.0	10.1			
LnGrp LOS	B	A			B	B	B		B			
Approach Vol, veh/h		244			625			704				
Approach Delay, s/veh		10.1			11.5			10.3				
Approach LOS		B			B			B				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		18.8			6.3	12.5		15.9
Change Period (Y+Rc), s		4.5			3.5	4.5		4.5
Max Green Setting (Gmax), s		35.0			25.0	35.0		35.0
Max Q Clear Time (g_c+I1), s		3.0			3.7	4.9		8.4
Green Ext Time (p_c), s		2.8			0.1	2.8		3.0

Intersection Summary	
HCM 2010 Ctrl Delay	10.8
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	423	140	706	476	0	0	0	0	142	255	57
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1765	1765	1765	1765	0				1765	1765	1765
Adj Flow Rate, veh/h	0	492	100	821	553	0				165	297	-36
Adj No. of Lanes	0	3	1	2	2	0				1	1	1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86				0.86	0.86	0.86
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1886	587	699	2199	0				360	378	321
Arrive On Green	0.00	0.39	0.39	0.21	0.66	0.00				0.21	0.21	0.00
Sat Flow, veh/h	0	4976	1500	3261	3441	0				1681	1765	1500
Grp Volume(v), veh/h	0	492	100	821	553	0				165	297	-36
Grp Sat Flow(s),veh/h/ln	0	1606	1500	1630	1676	0				1681	1765	1500
Q Serve(g_s), s	0.0	4.8	3.0	15.0	4.8	0.0				6.0	11.1	0.0
Cycle Q Clear(g_c), s	0.0	4.8	3.0	15.0	4.8	0.0				6.0	11.1	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1886	587	699	2199	0				360	378	321
V/C Ratio(X)	0.00	0.26	0.17	1.18	0.25	0.00				0.46	0.79	-0.11
Avail Cap(c_a), veh/h	0	1886	587	699	2199	0				360	378	321
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.86	0.86	0.00				0.87	0.87	0.00
Uniform Delay (d), s/veh	0.0	14.4	13.9	27.5	5.0	0.0				24.0	26.0	0.0
Incr Delay (d2), s/veh	0.0	0.3	0.6	91.6	0.0	0.0				3.6	13.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.2	1.4	15.6	2.2	0.0				3.1	6.8	0.0
LnGrp Delay(d),s/veh	0.0	14.8	14.5	119.1	5.0	0.0				27.6	39.3	0.0
LnGrp LOS		B	B	F	A					C	D	
Approach Vol, veh/h		592			1374						426	
Approach Delay, s/veh		14.7			73.2						38.1	
Approach LOS		B			E						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	18.5	31.5		20.0		50.0		
Change Period (Y+Rc), s	3.5	4.1		5.0		4.1		
Max Green Setting (Gmax), s	15.0	27.0		15.0		35.0		
Max Q Clear Time (g_c+I1), s	17.0	6.8		13.1		6.8		
Green Ext Time (p_c), s	0.0	6.4		0.3		7.1		

Intersection Summary	
HCM 2010 Ctrl Delay	52.5
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	139	445	0	0	1053	398	146	59	379	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1765	1765	0	0	1765	1765	1765	1765	1765			
Adj Flow Rate, veh/h	153	489	0	0	1157	359	128	191	184			
Adj No. of Lanes	2	2	0	0	4	1	1	1	1			
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	479	1898	0	0	2232	551	494	519	441			
Arrive On Green	0.15	0.57	0.00	0.00	0.37	0.37	0.29	0.29	0.29			
Sat Flow, veh/h	3261	3441	0	0	6318	1500	1681	1765	1500			
Grp Volume(v), veh/h	153	489	0	0	1157	359	128	191	184			
Grp Sat Flow(s),veh/h/ln	1630	1676	0	0	1518	1500	1681	1765	1500			
Q Serve(g_s), s	2.9	5.0	0.0	0.0	10.1	13.5	4.0	5.8	6.7			
Cycle Q Clear(g_c), s	2.9	5.0	0.0	0.0	10.1	13.5	4.0	5.8	6.7			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	479	1898	0	0	2232	551	494	519	441			
V/C Ratio(X)	0.32	0.26	0.00	0.00	0.52	0.65	0.26	0.37	0.42			
Avail Cap(c_a), veh/h	479	1898	0	0	2232	551	494	519	441			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	26.0	7.5	0.0	0.0	16.8	17.9	18.3	19.0	19.3			
Incr Delay (d2), s/veh	1.7	0.3	0.0	0.0	0.9	5.9	1.3	2.0	2.9			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.4	2.4	0.0	0.0	4.3	6.5	2.0	3.1	3.1			
LnGrp Delay(d),s/veh	27.7	7.8	0.0	0.0	17.7	23.7	19.6	21.0	22.2			
LnGrp LOS	C	A			B	C	B	C	C			
Approach Vol, veh/h		642			1516			503				
Approach Delay, s/veh		12.6			19.1			21.1				
Approach LOS		B			B			C				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		43.0			13.5	29.5		25.0
Change Period (Y+Rc), s		4.5			3.5	4.5		5.0
Max Green Setting (Gmax), s		30.0			10.0	25.0		20.0
Max Q Clear Time (g_c+I1), s		7.0			4.9	15.5		8.7
Green Ext Time (p_c), s		10.0			0.1	5.9		1.7

Intersection Summary	
HCM 2010 Ctrl Delay	17.9
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	246	0	101	0	0	0	87	880	0	1	891	149
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	0	1765				1765	1765	0	1800	1765	1800
Adj Flow Rate, veh/h	262	0	107				93	936	0	1	948	159
Adj No. of Lanes	2	0	1				1	3	0	0	3	0
Peak Hour Factor	0.94	0.94	0.94				0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	0	2				2	2	0	2	2	2
Cap, veh/h	370	0	170				443	3682	0	40	2814	470
Arrive On Green	0.11	0.00	0.11				0.03	0.76	0.00	0.70	0.70	0.70
Sat Flow, veh/h	3261	0	1500				1681	4976	0	0	4038	674
Grp Volume(v), veh/h	262	0	107				93	936	0	414	343	351
Grp Sat Flow(s),veh/h/ln	1630	0	1500				1681	1606	0	1764	1461	1487
Q Serve(g_s), s	7.0	0.0	6.1				1.3	5.1	0.0	0.0	8.4	8.4
Cycle Q Clear(g_c), s	7.0	0.0	6.1				1.3	5.1	0.0	8.4	8.4	8.4
Prop In Lane	1.00		1.00				1.00		0.00	0.00		0.45
Lane Grp Cap(c), veh/h	370	0	170				443	3682	0	1269	1018	1036
V/C Ratio(X)	0.71	0.00	0.63				0.21	0.25	0.00	0.33	0.34	0.34
Avail Cap(c_a), veh/h	1196	0	550				591	3682	0	1269	1018	1036
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.96	0.00	0.96				1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.5	0.0	38.1				3.6	3.1	0.0	5.4	5.4	5.4
Incr Delay (d2), s/veh	2.4	0.0	3.6				0.2	0.2	0.0	0.7	0.9	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	0.0	5.2				0.6	2.3	0.0	4.3	3.6	3.7
LnGrp Delay(d),s/veh	40.9	0.0	41.7				3.9	3.3	0.0	6.1	6.3	6.3
LnGrp LOS	D		D				A	A		A	A	A
Approach Vol, veh/h		369						1029			1108	
Approach Delay, s/veh		41.1						3.3			6.2	
Approach LOS		D						A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		74.8		15.2	6.1	68.7		
Change Period (Y+Rc), s		6.0		5.0	3.0	6.0		
Max Green Setting (Gmax), s		46.0		33.0	11.0	30.0		
Max Q Clear Time (g_c+I1), s		7.1		9.0	3.3	10.4		
Green Ext Time (p_c), s		19.0		1.2	0.1	12.7		

Intersection Summary	
HCM 2010 Ctrl Delay	10.2
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	39.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	0	0	370	1463	1428	665
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	Yield
Storage Length	0	-	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	394	1556	1519	707

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	3084	760	1519	0	-	0
Stage 1	1519	-	-	-	-	-
Stage 2	1565	-	-	-	-	-
Critical Hdwy	6.29	7.14	5.34	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.67	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	15	299	~ 218	-	-	-
Stage 1	117	-	-	-	-	-
Stage 2	155	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	15	299	~ 218	-	-	-
Mov Cap-2 Maneuver	15	-	-	-	-	-
Stage 1	117	-	-	-	-	-
Stage 2	155	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	84.4	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	~ 218	-	-	-	-
HCM Lane V/C Ratio	1.806	-	-	-	-
HCM Control Delay (s)	$ 417.9	-	0	-	-
HCM Lane LOS	F	-	A	-	-
HCM 95th %tile Q(veh)	27.3	-	-	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

APPENDIX E: BUILD-OUT (2035) NO PROJECT LEVEL OF SERVICE AND SYNCHRO WORKSHEETS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	20	180	220	360	590	200	310	460	130	20	700	640
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	21	189	232	379	621	211	326	484	71	21	955	441
Adj No. of Lanes	1	2	0	1	2	0	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	103	472	422	215	692	235	493	1691	756	177	1118	475
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.28	0.48	0.48	0.10	0.30	0.30
Sat Flow, veh/h	657	1770	1583	962	2596	881	1774	3539	1583	1774	3725	1583
Grp Volume(v), veh/h	21	189	232	379	423	409	326	484	71	21	955	441
Grp Sat Flow(s),veh/h/ln	657	1770	1583	962	1770	1707	1774	1770	1583	1774	1863	1583
Q Serve(g_s), s	2.9	7.9	11.3	12.7	20.7	20.8	14.6	7.4	2.2	1.0	21.7	24.3
Cycle Q Clear(g_c), s	23.7	7.9	11.3	24.0	20.7	20.8	14.6	7.4	2.2	1.0	21.7	24.3
Prop In Lane	1.00		1.00	1.00		0.52	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	103	472	422	215	472	455	493	1691	756	177	1118	475
V/C Ratio(X)	0.20	0.40	0.55	1.76	0.90	0.90	0.66	0.29	0.09	0.12	0.85	0.93
Avail Cap(c_a), veh/h	103	472	422	215	472	455	493	1691	756	177	1118	475
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.65	0.65	0.65	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.2	27.1	28.4	41.0	31.8	31.8	28.8	14.2	12.8	36.9	29.7	30.6
Incr Delay (d2), s/veh	4.4	2.5	5.1	360.1	22.3	23.2	4.5	0.3	0.2	1.4	8.4	26.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	4.2	5.6	26.9	13.0	12.7	7.8	3.7	1.0	0.5	12.4	14.1
LnGrp Delay(d),s/veh	47.6	29.6	33.4	401.1	54.1	55.0	33.3	14.5	13.0	38.2	38.0	57.4
LnGrp LOS	D	C	C	F	D	D	C	B	B	D	D	E
Approach Vol, veh/h		442			1211			881			1417	
Approach Delay, s/veh		32.5			163.0			21.3			44.1	
Approach LOS		C			F			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	13.0	48.0		29.0	29.0	32.0		29.0
Change Period (Y+Rc), s	4.0	5.0		5.0	4.0	5.0		5.0
Max Green Setting (Gmax), s	9.0	41.0		24.0	25.0	27.0		24.0
Max Q Clear Time (g_c+I1), s	3.0	9.4		25.7	16.6	26.3		26.0
Green Ext Time (p_c), s	0.0	14.8		0.0	0.6	0.6		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	74.2
HCM 2010 LOS	E

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	380	0	630	0	0	0	0	490	360	700	510	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	400	0	663				0	516	278	737	537	0
Adj No. of Lanes	1	1	0				0	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	561	0	501				0	722	323	597	2059	0
Arrive On Green	0.32	0.00	0.32				0.00	0.20	0.20	0.34	0.58	0.00
Sat Flow, veh/h	1774	0	1583				0	3632	1583	1774	3632	0
Grp Volume(v), veh/h	400	0	663				0	516	278	737	537	0
Grp Sat Flow(s),veh/h/ln	1774	0	1583				0	1770	1583	1774	1770	0
Q Serve(g_s), s	19.5	0.0	31.0				0.0	13.3	16.6	33.0	7.3	0.0
Cycle Q Clear(g_c), s	19.5	0.0	31.0				0.0	13.3	16.6	33.0	7.3	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	561	0	501				0	722	323	597	2059	0
V/C Ratio(X)	0.71	0.00	1.32				0.00	0.71	0.86	1.23	0.26	0.00
Avail Cap(c_a), veh/h	561	0	501				0	722	323	597	2059	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.09	0.09	0.00
Uniform Delay (d), s/veh	29.6	0.0	33.5				0.0	36.3	37.7	32.5	10.1	0.0
Incr Delay (d2), s/veh	4.6	0.0	159.1				0.0	6.0	24.6	106.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.3	0.0	35.6				0.0	7.1	9.5	33.8	3.6	0.0
LnGrp Delay(d),s/veh	34.2	0.0	192.6				0.0	42.3	62.3	139.1	10.1	0.0
LnGrp LOS	C		F					D	E	F	B	
Approach Vol, veh/h		1063						794			1274	
Approach Delay, s/veh		133.0						49.3			84.7	
Approach LOS		F						D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	37.0	25.0		36.0		62.0		
Change Period (Y+Rc), s	4.0	5.0		5.0		5.0		
Max Green Setting (Gmax), s	33.0	20.0		31.0		49.0		
Max Q Clear Time (g_c+I1), s	35.0	18.6		33.0		9.3		
Green Ext Time (p_c), s	0.0	1.0		0.0		9.5		

Intersection Summary	
HCM 2010 Ctrl Delay	92.1
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	50	420	160	240	300	80	90	290	90	260	630	140
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	53	442	52	253	316	84	95	305	35	274	663	147
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	84	674	301	253	793	208	549	491	220	810	824	182
Arrive On Green	0.05	0.19	0.19	0.14	0.29	0.28	0.31	0.14	0.14	0.46	0.29	0.28
Sat Flow, veh/h	1774	3539	1583	1774	2777	727	1774	3539	1583	1774	2882	638
Grp Volume(v), veh/h	53	442	52	253	200	200	95	305	35	274	407	403
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1734	1774	1770	1583	1774	1770	1750
Q Serve(g_s), s	3.3	12.9	1.6	16.0	10.2	10.5	4.4	9.1	1.6	11.1	23.9	24.0
Cycle Q Clear(g_c), s	3.3	12.9	1.6	16.0	10.2	10.5	4.4	9.1	1.6	11.1	23.9	24.0
Prop In Lane	1.00		1.00	1.00		0.42	1.00		1.00	1.00		0.36
Lane Grp Cap(c), veh/h	84	674	301	253	506	495	549	491	220	810	506	500
V/C Ratio(X)	0.63	0.66	0.17	1.00	0.39	0.40	0.17	0.62	0.16	0.34	0.80	0.81
Avail Cap(c_a), veh/h	253	1011	452	253	506	496	549	1422	636	810	711	703
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.96	0.96	0.96	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.4	41.9	9.8	48.0	32.2	32.5	28.2	45.4	22.7	19.6	37.1	37.3
Incr Delay (d2), s/veh	7.5	1.1	0.3	56.0	0.5	0.5	0.1	5.6	1.5	0.2	12.8	13.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	6.4	0.7	11.7	5.1	5.1	2.2	4.8	0.8	5.5	13.4	13.4
LnGrp Delay(d),s/veh	59.8	43.0	10.0	104.0	32.7	33.0	28.4	51.0	24.1	19.8	49.9	50.3
LnGrp LOS	E	D	B	F	C	C	C	D	C	B	D	D
Approach Vol, veh/h		547			653			435			1084	
Approach Delay, s/veh		41.5			60.4			43.9			42.4	
Approach LOS		D			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	53.1	17.6	18.0	23.3	36.7	34.0	7.3	34.0
Change Period (Y+Rc), s	3.0	5.0	3.0	5.0	3.0	5.0	3.0	5.0
Max Green Setting (Gmax), s	10.0	42.0	15.0	29.0	10.0	42.0	15.0	29.0
Max Q Clear Time (g_c+I1), s	13.1	11.1	18.0	14.9	6.4	26.0	5.3	12.5
Green Ext Time (p_c), s	0.0	1.5	0.0	3.4	0.1	3.0	0.1	3.6

Intersection Summary	
HCM 2010 Ctrl Delay	46.8
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	610	320	400	490	0	0	0	0	760	40	230
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1900	1863	1863	0				1863	1863	1863
Adj Flow Rate, veh/h	0	642	337	421	516	0				836	0	55
Adj No. of Lanes	0	4	0	2	2	0				2	0	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1619	533	564	1990	0				1018	0	454
Arrive On Green	0.00	0.34	0.34	0.16	0.56	0.00				0.29	0.00	0.29
Sat Flow, veh/h	0	5067	1583	3442	3632	0				3548	0	1583
Grp Volume(v), veh/h	0	642	337	421	516	0				836	0	55
Grp Sat Flow(s),veh/h/ln	0	1602	1583	1721	1770	0				1774	0	1583
Q Serve(g_s), s	0.0	5.8	10.2	6.6	4.3	0.0				12.5	0.0	1.5
Cycle Q Clear(g_c), s	0.0	5.8	10.2	6.6	4.3	0.0				12.5	0.0	1.5
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1619	533	564	1990	0				1018	0	454
V/C Ratio(X)	0.00	0.40	0.63	0.75	0.26	0.00				0.82	0.00	0.12
Avail Cap(c_a), veh/h	0	2951	972	1510	2173	0				2179	0	972
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	14.5	15.9	22.7	6.4	0.0				19.0	0.0	15.0
Incr Delay (d2), s/veh	0.0	0.1	0.5	0.7	0.0	0.0				0.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.6	4.5	3.2	2.1	0.0				6.1	0.0	0.6
LnGrp Delay(d),s/veh	0.0	14.5	16.4	23.4	6.4	0.0				19.6	0.0	15.1
LnGrp LOS		B	B	C	A					B		B
Approach Vol, veh/h		979			937						891	
Approach Delay, s/veh		15.2			14.1						19.3	
Approach LOS		B			B						B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	12.8	23.3		20.8		36.1		
Change Period (Y+Rc), s	3.5	4.1		4.5		4.1		
Max Green Setting (Gmax), s	25.0	35.0		35.0		35.0		
Max Q Clear Time (g_c+I1), s	8.6	12.2		14.5		6.3		
Green Ext Time (p_c), s	0.7	7.0		1.8		7.4		

Intersection Summary	
HCM 2010 Ctrl Delay	16.1
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	160	820	0	0	630	190	240	10	500	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1863	1863	1863			
Adj Flow Rate, veh/h	168	863	0	0	663	37	172	0	531			
Adj No. of Lanes	2	2	0	0	4	1	1	0	2			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	372	1893	0	0	2154	532	431	0	769			
Arrive On Green	0.11	0.53	0.00	0.00	0.34	0.34	0.24	0.00	0.24			
Sat Flow, veh/h	3442	3632	0	0	6669	1583	1774	0	3167			
Grp Volume(v), veh/h	168	863	0	0	663	37	172	0	531			
Grp Sat Flow(s),veh/h/ln	1721	1770	0	0	1602	1583	1774	0	1583			
Q Serve(g_s), s	1.8	5.8	0.0	0.0	3.0	0.6	3.1	0.0	5.9			
Cycle Q Clear(g_c), s	1.8	5.8	0.0	0.0	3.0	0.6	3.1	0.0	5.9			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	372	1893	0	0	2154	532	431	0	769			
V/C Ratio(X)	0.45	0.46	0.00	0.00	0.31	0.07	0.40	0.00	0.69			
Avail Cap(c_a), veh/h	2226	3205	0	0	5969	1475	1607	0	2868			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	16.2	5.5	0.0	0.0	9.5	8.7	12.3	0.0	13.3			
Incr Delay (d2), s/veh	0.3	0.1	0.0	0.0	0.0	0.0	0.2	0.0	0.4			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.9	2.8	0.0	0.0	1.3	0.3	1.6	0.0	2.6			
LnGrp Delay(d),s/veh	16.5	5.6	0.0	0.0	9.5	8.7	12.5	0.0	13.7			
LnGrp LOS	B	A			A	A	B		B			
Approach Vol, veh/h		1031			700			703				
Approach Delay, s/veh		7.4			9.5			13.4				
Approach LOS		A			A			B				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		24.8			7.7	17.1		13.9
Change Period (Y+Rc), s		4.1			3.5	4.1		4.5
Max Green Setting (Gmax), s		35.0			25.0	36.0		35.0
Max Q Clear Time (g_c+I1), s		7.8			3.8	5.0		7.9
Green Ext Time (p_c), s		7.8			0.3	8.0		1.5

Intersection Summary	
HCM 2010 Ctrl Delay	9.7
HCM 2010 LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	80	740	60	80	580	80	30	180	40	120	170	130
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	84	779	63	84	611	84	32	189	42	126	179	137
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	625	1997	162	554	1854	254	237	676	147	281	459	332
Arrive On Green	0.11	0.60	0.59	0.10	0.59	0.58	0.23	0.23	0.22	0.23	0.23	0.22
Sat Flow, veh/h	1774	3317	268	1774	3127	429	1059	2892	629	1145	1963	1419
Grp Volume(v), veh/h	84	416	426	84	345	350	32	114	117	126	160	156
Grp Sat Flow(s),veh/h/ln	1774	1770	1815	1774	1770	1787	1059	1770	1752	1145	1770	1612
Q Serve(g_s), s	1.4	11.5	11.5	1.5	9.3	9.4	2.5	5.0	5.2	9.5	7.2	7.8
Cycle Q Clear(g_c), s	1.4	11.5	11.5	1.5	9.3	9.4	10.2	5.0	5.2	14.7	7.2	7.8
Prop In Lane	1.00		0.15	1.00		0.24	1.00		0.36	1.00		0.88
Lane Grp Cap(c), veh/h	625	1066	1093	554	1049	1059	237	414	410	281	414	377
V/C Ratio(X)	0.13	0.39	0.39	0.15	0.33	0.33	0.14	0.28	0.29	0.45	0.39	0.41
Avail Cap(c_a), veh/h	695	1066	1093	640	1049	1059	327	565	559	379	565	515
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	5.1	9.7	9.8	5.8	9.7	9.8	34.9	29.5	29.7	35.6	30.3	30.9
Incr Delay (d2), s/veh	0.1	1.1	1.0	0.1	0.8	0.8	0.3	0.4	0.4	1.1	0.6	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	5.9	6.0	0.7	4.8	4.8	0.7	2.4	2.6	3.1	3.6	3.5
LnGrp Delay(d),s/veh	5.2	10.8	10.8	5.9	10.5	10.6	35.2	29.8	30.1	36.7	30.9	31.7
LnGrp LOS	A	B	B	A	B	B	D	C	C	D	C	C
Approach Vol, veh/h		926			779			263			442	
Approach Delay, s/veh		10.3			10.1			30.6			32.8	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.0	57.7		24.3	11.1	58.6		24.3
Change Period (Y+Rc), s	4.0	5.0		5.3	4.0	5.0		5.3
Max Green Setting (Gmax), s	11.7	41.0		27.0	11.7	41.0		27.0
Max Q Clear Time (g_c+I1), s	3.4	11.4		12.2	3.5	13.5		16.7
Green Ext Time (p_c), s	0.1	7.2		2.6	0.1	7.1		2.3

Intersection Summary	
HCM 2010 Ctrl Delay	16.6
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	40	610	60	90	540	50	30	150	30	30	230	60
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	42	642	35	95	568	53	32	158	32	32	242	63
Adj No. of Lanes	1	1	1	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	478	1071	910	357	1882	175	258	451	91	349	428	111
Arrive On Green	0.57	0.57	0.57	0.57	0.57	0.57	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	800	1863	1583	759	3274	305	1070	1504	305	1188	1426	371
Grp Volume(v), veh/h	42	642	35	95	306	315	32	0	190	32	0	305
Grp Sat Flow(s),veh/h/ln	800	1863	1583	759	1770	1809	1070	0	1809	1188	0	1797
Q Serve(g_s), s	2.3	17.9	0.8	7.4	7.1	7.2	2.1	0.0	6.6	1.7	0.0	11.4
Cycle Q Clear(g_c), s	9.4	17.9	0.8	25.3	7.1	7.2	13.5	0.0	6.6	8.3	0.0	11.4
Prop In Lane	1.00		1.00	1.00		0.17	1.00		0.17	1.00		0.21
Lane Grp Cap(c), veh/h	478	1071	910	357	1018	1040	258	0	543	349	0	539
V/C Ratio(X)	0.09	0.60	0.04	0.27	0.30	0.30	0.12	0.00	0.35	0.09	0.00	0.57
Avail Cap(c_a), veh/h	478	1071	910	357	1018	1040	258	0	543	349	0	539
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.73	0.73	0.73	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.2	11.0	7.4	19.2	8.7	8.7	29.3	0.0	21.9	25.1	0.0	23.6
Incr Delay (d2), s/veh	0.4	2.5	0.1	0.3	0.1	0.1	1.0	0.0	1.8	0.5	0.0	4.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	9.8	0.4	1.6	3.4	3.5	0.7	0.0	3.5	0.6	0.0	6.3
LnGrp Delay(d),s/veh	11.5	13.5	7.5	19.5	8.9	8.9	30.3	0.0	23.7	25.7	0.0	27.9
LnGrp LOS	B	B	A	B	A	A	C		C	C		C
Approach Vol, veh/h		719			716			222			337	
Approach Delay, s/veh		13.1			10.3			24.6			27.7	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		51.0		29.0		51.0		29.0
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0
Max Green Setting (Gmax), s		46.0		24.0		46.0		24.0
Max Q Clear Time (g_c+I1), s		19.9		13.4		27.3		15.5
Green Ext Time (p_c), s		10.1		2.2		8.7		2.0

Intersection Summary	
HCM 2010 Ctrl Delay	15.8
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	120	450	160	270	410	130	210	390	250	60	490	210
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	126	474	168	284	432	137	221	411	190	63	516	133
Adj No. of Lanes	1	2	0	1	2	0	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	321	620	218	284	586	184	370	1569	702	133	1097	491
Arrive On Green	0.18	0.24	0.23	0.16	0.22	0.21	0.07	0.15	0.15	0.08	0.31	0.31
Sat Flow, veh/h	1774	2569	904	1774	2652	833	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	126	326	316	284	287	282	221	411	190	63	516	133
Grp Sat Flow(s),veh/h/ln	1774	1770	1703	1774	1770	1716	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	6.3	17.1	17.3	16.0	15.1	15.4	12.1	10.3	10.7	3.4	11.8	6.3
Cycle Q Clear(g_c), s	6.3	17.1	17.3	16.0	15.1	15.4	12.1	10.3	10.7	3.4	11.8	6.3
Prop In Lane	1.00		0.53	1.00		0.49	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	321	427	411	284	391	379	370	1569	702	133	1097	491
V/C Ratio(X)	0.39	0.76	0.77	1.00	0.73	0.74	0.60	0.26	0.27	0.47	0.47	0.27
Avail Cap(c_a), veh/h	321	549	528	284	549	532	370	1569	702	248	1097	491
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	0.60	0.60	0.60	0.97	0.97	0.97	1.00	1.00	1.00	0.72	0.72	0.72
Uniform Delay (d), s/veh	36.1	35.2	35.6	42.0	36.2	36.6	42.5	28.2	28.3	44.3	27.9	26.0
Incr Delay (d2), s/veh	0.5	2.8	3.1	52.7	3.0	3.4	2.6	0.1	0.2	1.9	1.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	8.7	8.5	12.0	7.7	7.7	6.2	5.1	4.7	1.7	5.9	2.9
LnGrp Delay(d),s/veh	36.6	38.1	38.7	94.7	39.3	40.0	45.1	28.3	28.5	46.2	28.9	27.0
LnGrp LOS	D	D	D	F	D	D	D	C	C	D	C	C
Approach Vol, veh/h		768			853			822			712	
Approach Delay, s/veh		38.1			58.0			32.8			30.1	
Approach LOS		D			E			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	26.2	22.8	33.0	20.1	24.1	9.5	46.3
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	13.0	28.0	11.0	28.0	13.0	28.0	11.0	28.0
Max Q Clear Time (g_c+I1), s	18.0	19.3	14.1	13.8	8.3	17.4	5.4	12.7
Green Ext Time (p_c), s	0.0	1.8	0.0	2.6	1.5	1.7	0.1	3.3

Intersection Summary	
HCM 2010 Ctrl Delay	40.3
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	290	210	200	460	0	200	0	170	0	10	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1900	1863	1863	1900	1900	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	0	305	221	211	484	0	211	0	64	0	11	11
Adj No. of Lanes	0	2	0	1	2	0	0	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	1018	719	245	2462	0	333	0	306	80	165	165
Arrive On Green	0.00	0.51	0.51	0.28	1.00	0.00	0.19	0.00	0.19	0.00	0.19	0.19
Sat Flow, veh/h	0	2077	1401	1774	3632	0	1309	0	1583	1332	856	856
Grp Volume(v), veh/h	0	271	255	211	484	0	211	0	64	0	0	22
Grp Sat Flow(s),veh/h/ln	0	1770	1615	1774	1770	0	1309	0	1583	1332	0	1712
Q Serve(g_s), s	0.0	7.9	8.2	10.2	0.0	0.0	13.2	0.0	3.1	0.0	0.0	0.9
Cycle Q Clear(g_c), s	0.0	7.9	8.2	10.2	0.0	0.0	14.2	0.0	3.1	0.0	0.0	0.9
Prop In Lane	0.00		0.87	1.00		0.00	1.00		1.00	1.00		0.50
Lane Grp Cap(c), veh/h	0	908	829	245	2462	0	333	0	306	80	0	331
V/C Ratio(X)	0.00	0.30	0.31	0.86	0.20	0.00	0.63	0.00	0.21	0.00	0.00	0.07
Avail Cap(c_a), veh/h	0	908	829	394	2462	0	542	0	545	267	0	571
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.93	0.93	0.00	1.00	0.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	12.6	12.7	31.7	0.0	0.0	35.5	0.0	30.5	0.0	0.0	29.7
Incr Delay (d2), s/veh	0.0	0.8	1.0	9.9	0.0	0.0	2.0	0.0	0.3	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.1	3.8	5.6	0.0	0.0	5.2	0.0	1.4	0.0	0.0	0.5
LnGrp Delay(d),s/veh	0.0	13.4	13.6	41.6	0.0	0.0	37.5	0.0	30.9	0.0	0.0	29.8
LnGrp LOS		B	B	D	A		D		C			C
Approach Vol, veh/h		526			695			275			22	
Approach Delay, s/veh		13.5			12.7			35.9			29.8	
Approach LOS		B			B			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		8
Phs Duration (G+Y+Rc), s	16.4	51.2		22.4		67.6		22.4
Change Period (Y+Rc), s	4.0	5.0		5.0		5.0		5.0
Max Green Setting (Gmax), s	20.0	25.0		30.0		49.0		31.0
Max Q Clear Time (g_c+I1), s	12.2	10.2		2.9		2.0		16.2
Green Ext Time (p_c), s	0.3	5.4		1.5		7.4		1.2

Intersection Summary	
HCM 2010 Ctrl Delay	17.4
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	70	430	120	210	330	110	170	360	240	70	550	160
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	74	453	126	221	347	116	179	379	253	74	579	168
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	147	594	164	284	769	253	248	860	566	249	1193	345
Arrive On Green	0.08	0.22	0.21	0.16	0.29	0.28	0.14	0.42	0.41	0.19	0.59	0.57
Sat Flow, veh/h	1774	2742	757	1774	2618	862	1774	2047	1348	1774	2710	784
Grp Volume(v), veh/h	74	291	288	221	233	230	179	327	305	74	378	369
Grp Sat Flow(s),veh/h/ln	1774	1770	1729	1774	1770	1711	1774	1770	1625	1774	1770	1724
Q Serve(g_s), s	4.0	15.4	15.7	12.0	10.7	11.0	9.7	13.1	13.5	3.6	12.3	12.5
Cycle Q Clear(g_c), s	4.0	15.4	15.7	12.0	10.7	11.0	9.7	13.1	13.5	3.6	12.3	12.5
Prop In Lane	1.00		0.44	1.00		0.50	1.00		0.83	1.00		0.45
Lane Grp Cap(c), veh/h	147	384	375	284	520	502	248	743	682	249	779	759
V/C Ratio(X)	0.50	0.76	0.77	0.78	0.45	0.46	0.72	0.44	0.45	0.30	0.48	0.49
Avail Cap(c_a), veh/h	284	437	427	284	520	502	248	743	682	249	779	759
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.98	0.98	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.9	36.7	37.0	40.3	28.7	29.0	41.1	20.6	21.0	36.4	14.2	14.4
Incr Delay (d2), s/veh	2.6	6.6	7.3	12.9	0.6	0.7	9.6	1.9	2.1	0.7	2.2	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	8.2	8.2	6.8	5.3	5.3	5.4	6.7	6.5	1.8	6.3	6.4
LnGrp Delay(d),s/veh	46.5	43.4	44.3	53.2	29.3	29.7	50.7	22.5	23.1	37.1	16.3	16.6
LnGrp LOS	D	D	D	D	C	C	D	C	C	D	B	B
Approach Vol, veh/h		653			684			811			821	
Approach Delay, s/veh		44.1			37.2			29.0			18.3	
Approach LOS		D			D			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	24.0	14.0	46.0	8.3	31.7	16.0	44.0
Change Period (Y+Rc), s	3.0	5.3	3.0	5.0	3.0	5.3	5.0	* 5
Max Green Setting (Gmax), s	13.0	21.7	11.0	38.0	13.0	21.7	10.0	* 39
Max Q Clear Time (g_c+I1), s	14.0	17.7	11.7	14.5	6.0	13.0	5.6	15.5
Green Ext Time (p_c), s	0.0	1.0	0.0	3.5	0.1	3.1	1.5	2.7

Intersection Summary	
HCM 2010 Ctrl Delay	31.2
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	820	390	260	410	0	0	0	0	780	0	210
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1900	1863	1863	0				1863	1863	1863
Adj Flow Rate, veh/h	0	863	411	274	432	0				850	0	62
Adj No. of Lanes	0	4	0	2	2	0				2	0	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1921	633	396	2021	0				1012	0	451
Arrive On Green	0.00	0.40	0.40	0.12	0.57	0.00				0.29	0.00	0.29
Sat Flow, veh/h	0	5067	1583	3442	3632	0				3548	0	1583
Grp Volume(v), veh/h	0	863	411	274	432	0				850	0	62
Grp Sat Flow(s),veh/h/ln	0	1602	1583	1721	1770	0				1774	0	1583
Q Serve(g_s), s	0.0	8.2	13.2	4.8	3.7	0.0				14.1	0.0	1.8
Cycle Q Clear(g_c), s	0.0	8.2	13.2	4.8	3.7	0.0				14.1	0.0	1.8
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1921	633	396	2021	0				1012	0	451
V/C Ratio(X)	0.00	0.45	0.65	0.69	0.21	0.00				0.84	0.00	0.14
Avail Cap(c_a), veh/h	0	1921	633	1926	2021	0				1986	0	886
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	13.7	15.2	26.6	6.6	0.0				21.0	0.0	16.6
Incr Delay (d2), s/veh	0.0	0.8	5.1	0.8	0.2	0.0				0.7	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.7	6.6	2.3	1.9	0.0				7.0	0.0	0.8
LnGrp Delay(d),s/veh	0.0	14.5	20.3	27.4	6.8	0.0				21.8	0.0	16.7
LnGrp LOS		B	C	C	A					C		B
Approach Vol, veh/h		1274			706						912	
Approach Delay, s/veh		16.4			14.8						21.4	
Approach LOS		B			B						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	10.7	29.5		22.3		40.2		
Change Period (Y+Rc), s	3.5	4.5		4.5		4.5		
Max Green Setting (Gmax), s	35.0	25.0		35.0		25.0		
Max Q Clear Time (g_c+I1), s	6.8	15.2		16.1		5.7		
Green Ext Time (p_c), s	0.5	5.4		1.7		7.8		

Intersection Summary	
HCM 2010 Ctrl Delay	17.6
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	170	1190	0	0	450	140	270	0	760	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1863	1863	1863			
Adj Flow Rate, veh/h	179	1253	0	0	474	60	189	0	830			
Adj No. of Lanes	2	2	0	0	4	1	1	0	2			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	339	1645	0	0	1854	458	579	0	1034			
Arrive On Green	0.10	0.46	0.00	0.00	0.29	0.29	0.33	0.00	0.33			
Sat Flow, veh/h	3442	3632	0	0	6669	1583	1774	0	3167			
Grp Volume(v), veh/h	179	1253	0	0	474	60	189	0	830			
Grp Sat Flow(s),veh/h/ln	1721	1770	0	0	1602	1583	1774	0	1583			
Q Serve(g_s), s	2.2	13.3	0.0	0.0	2.6	1.3	3.7	0.0	10.9			
Cycle Q Clear(g_c), s	2.2	13.3	0.0	0.0	2.6	1.3	3.7	0.0	10.9			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	339	1645	0	0	1854	458	579	0	1034			
V/C Ratio(X)	0.53	0.76	0.00	0.00	0.26	0.13	0.33	0.00	0.80			
Avail Cap(c_a), veh/h	1514	1946	0	0	3523	870	956	0	1706			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	19.5	10.1	0.0	0.0	12.4	11.9	11.5	0.0	14.0			
Incr Delay (d2), s/veh	0.5	1.2	0.0	0.0	0.0	0.0	0.1	0.0	0.6			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.1	6.7	0.0	0.0	1.1	0.6	1.8	0.0	4.8			
LnGrp Delay(d),s/veh	20.0	11.3	0.0	0.0	12.4	12.0	11.7	0.0	14.5			
LnGrp LOS	B	B			B	B	B		B			
Approach Vol, veh/h		1432			534			1019				
Approach Delay, s/veh		12.4			12.4			14.0				
Approach LOS		B			B			B				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		25.6			8.0	17.7		19.8
Change Period (Y+Rc), s		4.5			3.5	4.5		5.0
Max Green Setting (Gmax), s		25.0			20.0	25.0		24.5
Max Q Clear Time (g_c+I1), s		15.3			4.2	4.6		12.9
Green Ext Time (p_c), s		5.6			0.3	8.6		2.0

Intersection Summary	
HCM 2010 Ctrl Delay	12.9
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	360	110	110	300	50	40	160	20	50	250	50
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	32	379	116	116	316	53	42	168	21	53	263	53
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	319	849	257	262	963	160	641	1814	224	731	1684	334
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.57	0.57	0.57	0.57	0.57	0.57
Sat Flow, veh/h	1009	2679	810	899	3039	504	1059	3172	391	1189	2945	584
Grp Volume(v), veh/h	32	249	246	116	183	186	42	93	96	53	156	160
Grp Sat Flow(s),veh/h/ln	1009	1770	1720	899	1770	1774	1059	1770	1794	1189	1770	1760
Q Serve(g_s), s	2.3	10.1	10.3	10.6	7.1	7.2	1.7	2.1	2.2	1.9	3.7	3.8
Cycle Q Clear(g_c), s	9.5	10.1	10.3	20.9	7.1	7.2	5.6	2.1	2.2	4.1	3.7	3.8
Prop In Lane	1.00		0.47	1.00		0.28	1.00		0.22	1.00		0.33
Lane Grp Cap(c), veh/h	319	561	545	262	561	562	641	1012	1026	731	1012	1006
V/C Ratio(X)	0.10	0.44	0.45	0.44	0.33	0.33	0.07	0.09	0.09	0.07	0.15	0.16
Avail Cap(c_a), veh/h	470	826	803	397	826	828	641	1012	1026	731	1012	1006
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.66	0.66	0.66	0.90	0.90	0.90	1.00	1.00	1.00	0.93	0.93	0.93
Uniform Delay (d), s/veh	27.1	24.4	24.5	32.8	23.4	23.5	10.4	8.7	8.7	9.6	9.0	9.1
Incr Delay (d2), s/veh	0.1	0.4	0.4	1.1	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	5.0	4.9	2.7	3.5	3.6	0.5	1.1	1.1	0.7	1.9	1.9
LnGrp Delay(d),s/veh	27.2	24.8	24.9	33.9	23.7	23.8	10.6	8.9	8.9	9.8	9.3	9.4
LnGrp LOS	C	C	C	C	C	C	B	A	A	A	A	A
Approach Vol, veh/h		527			485			231			369	
Approach Delay, s/veh		25.0			26.2			9.2			9.4	
Approach LOS		C			C			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		56.5		33.5		56.5		33.5
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0
Max Green Setting (Gmax), s		38.0		42.0		38.0		42.0
Max Q Clear Time (g_c+I1), s		7.6		12.3		6.1		22.9
Green Ext Time (p_c), s		3.3		6.4		3.3		5.6

Intersection Summary	
HCM 2010 Ctrl Delay	19.5
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	110	240	180	110	250	40	130	430	140	20	640	140
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	116	253	189	116	263	27	137	453	125	21	674	147
Adj No. of Lanes	1	2	0	1	2	1	1	2	1	1	3	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	365	423	304	283	759	340	177	2089	935	44	2160	465
Arrive On Green	0.03	0.07	0.07	0.08	0.21	0.21	0.10	0.59	0.59	0.02	0.52	0.52
Sat Flow, veh/h	1774	1966	1416	1774	3539	1583	1774	3539	1583	1774	4192	902
Grp Volume(v), veh/h	116	227	215	116	263	27	137	453	125	21	543	278
Grp Sat Flow(s),veh/h/ln	1774	1770	1613	1774	1770	1583	1774	1770	1583	1774	1695	1704
Q Serve(g_s), s	4.6	11.2	11.7	4.6	5.7	1.2	6.8	5.4	3.2	1.1	8.3	8.5
Cycle Q Clear(g_c), s	4.6	11.2	11.7	4.6	5.7	1.2	6.8	5.4	3.2	1.1	8.3	8.5
Prop In Lane	1.00		0.88	1.00		1.00	1.00		1.00	1.00		0.53
Lane Grp Cap(c), veh/h	365	380	347	283	759	340	177	2089	935	44	1747	878
V/C Ratio(X)	0.32	0.60	0.62	0.41	0.35	0.08	0.77	0.22	0.13	0.47	0.31	0.32
Avail Cap(c_a), veh/h	417	610	556	336	1219	545	177	2089	935	177	1747	878
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.85	0.85	0.85	0.72	0.72	0.72	1.00	1.00	1.00	0.80	0.80	0.80
Uniform Delay (d), s/veh	27.1	38.0	38.4	26.3	30.0	28.2	39.5	8.7	8.2	43.3	12.6	12.6
Incr Delay (d2), s/veh	0.4	1.3	1.5	0.7	0.2	0.1	18.7	0.2	0.3	6.1	0.4	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	5.6	5.4	2.3	2.8	0.5	4.2	2.7	1.5	0.6	3.9	4.2
LnGrp Delay(d),s/veh	27.5	39.3	39.9	27.0	30.2	28.3	58.2	8.9	8.5	49.4	13.0	13.4
LnGrp LOS	C	D	D	C	C	C	E	A	A	D	B	B
Approach Vol, veh/h		558			406			715			842	
Approach Delay, s/veh		37.1			29.2			18.3			14.0	
Approach LOS		D			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.2	55.1	9.3	21.3	11.0	48.4	9.3	21.3
Change Period (Y+Rc), s	3.0	6.0	3.0	5.0	3.0	6.0	3.0	5.0
Max Green Setting (Gmax), s	8.0	28.0	9.0	28.0	8.0	28.0	9.0	28.0
Max Q Clear Time (g_c+I1), s	3.1	7.4	6.6	7.7	8.8	10.5	6.6	13.7
Green Ext Time (p_c), s	0.0	6.6	0.1	2.9	0.0	6.2	0.1	2.7

Intersection Summary	
HCM 2010 Ctrl Delay	22.8
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	40	160	130	50	270	30	150	320	90	30	550	150
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	42	168	74	53	284	16	158	337	95	32	579	158
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	159	400	340	235	400	340	481	1784	496	653	1793	488
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.65	0.65	0.65	0.65	0.65	0.65
Sat Flow, veh/h	1075	1863	1583	1133	1863	1583	718	2738	761	952	2751	749
Grp Volume(v), veh/h	42	168	74	53	284	16	158	216	216	32	372	365
Grp Sat Flow(s),veh/h/ln	1075	1863	1583	1133	1863	1583	718	1770	1729	952	1770	1731
Q Serve(g_s), s	3.4	7.0	3.5	3.8	12.7	0.7	11.2	4.4	4.5	1.2	8.3	8.4
Cycle Q Clear(g_c), s	16.1	7.0	3.5	10.8	12.7	0.7	19.6	4.4	4.5	5.7	8.3	8.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.44	1.00		0.43
Lane Grp Cap(c), veh/h	159	400	340	235	400	340	481	1153	1126	653	1153	1128
V/C Ratio(X)	0.26	0.42	0.22	0.23	0.71	0.05	0.33	0.19	0.19	0.05	0.32	0.32
Avail Cap(c_a), veh/h	394	807	686	483	807	686	481	1153	1126	653	1153	1128
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.90	0.90	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.2	30.5	29.1	35.1	32.7	28.0	11.2	6.2	6.2	7.4	6.9	6.9
Incr Delay (d2), s/veh	0.8	0.6	0.3	0.2	0.9	0.0	1.8	0.4	0.4	0.1	0.7	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	3.7	1.5	1.2	6.6	0.3	2.4	2.2	2.2	0.4	4.3	4.2
LnGrp Delay(d),s/veh	41.0	31.1	29.4	35.3	33.6	28.0	13.1	6.6	6.6	7.5	7.7	7.7
LnGrp LOS	D	C	C	D	C	C	B	A	A	A	A	A
Approach Vol, veh/h		284			353			590			769	
Approach Delay, s/veh		32.1			33.6			8.3			7.7	
Approach LOS		C			C			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		64.7		25.3		64.7		25.3
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0
Max Green Setting (Gmax), s		39.0		39.0		39.0		39.0
Max Q Clear Time (g_c+I1), s		21.6		18.1		10.4		14.7
Green Ext Time (p_c), s		3.7		1.2		4.0		1.3

Intersection Summary	
HCM 2010 Ctrl Delay	15.9
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	330	370	730	840	0	0	0	0	170	460	360
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0				1900	1863	1863
Adj Flow Rate, veh/h	0	347	389	768	884	0				179	484	379
Adj No. of Lanes	0	2	1	2	2	0				0	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1298	581	803	2281	0				121	328	387
Arrive On Green	0.00	0.37	0.37	0.47	1.00	0.00				0.24	0.24	0.24
Sat Flow, veh/h	0	3632	1583	3442	3632	0				496	1342	1583
Grp Volume(v), veh/h	0	347	389	768	884	0				663	0	379
Grp Sat Flow(s),veh/h/ln	0	1770	1583	1721	1770	0				1838	0	1583
Q Serve(g_s), s	0.0	6.2	18.6	19.3	0.0	0.0				22.0	0.0	21.4
Cycle Q Clear(g_c), s	0.0	6.2	18.6	19.3	0.0	0.0				22.0	0.0	21.4
Prop In Lane	0.00		1.00	1.00		0.00				0.27		1.00
Lane Grp Cap(c), veh/h	0	1298	581	803	2281	0				449	0	387
V/C Ratio(X)	0.00	0.27	0.67	0.96	0.39	0.00				1.48	0.00	0.98
Avail Cap(c_a), veh/h	0	1298	581	803	2281	0				449	0	387
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.86	0.86	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	20.0	23.9	23.6	0.0	0.0				34.0	0.0	33.8
Incr Delay (d2), s/veh	0.0	0.5	6.0	20.7	0.4	0.0				225.9	0.0	40.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.1	9.1	11.3	0.1	0.0				39.3	0.0	13.7
LnGrp Delay(d),s/veh	0.0	20.5	30.0	44.2	0.4	0.0				259.9	0.0	73.7
LnGrp LOS		C	C	D	A					F		E
Approach Vol, veh/h		736			1652						1042	
Approach Delay, s/veh		25.5			20.8						192.2	
Approach LOS		C			C						F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	25.0	38.0		27.0		63.0		
Change Period (Y+Rc), s	4.0	5.0		5.0		5.0		
Max Green Setting (Gmax), s	21.0	33.0		22.0		58.0		
Max Q Clear Time (g_c+I1), s	21.3	20.6		24.0		2.0		
Green Ext Time (p_c), s	0.0	4.9		0.0		6.8		

Intersection Summary	
HCM 2010 Ctrl Delay	73.9
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	80	470	0	0	1210	260	510	10	310	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1900	1863	1863			
Adj Flow Rate, veh/h	84	495	0	0	1274	274	537	11	326			
Adj No. of Lanes	1	2	0	0	3	1	0	1	1			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	108	2242	0	0	2629	819	445	9	405			
Arrive On Green	0.06	0.63	0.00	0.00	0.52	0.52	0.26	0.26	0.26			
Sat Flow, veh/h	1774	3632	0	0	5253	1583	1740	36	1583			
Grp Volume(v), veh/h	84	495	0	0	1274	274	548	0	326			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1695	1583	1776	0	1583			
Q Serve(g_s), s	4.2	5.4	0.0	0.0	14.5	9.1	23.0	0.0	17.4			
Cycle Q Clear(g_c), s	4.2	5.4	0.0	0.0	14.5	9.1	23.0	0.0	17.4			
Prop In Lane	1.00		0.00	0.00		1.00	0.98		1.00			
Lane Grp Cap(c), veh/h	108	2242	0	0	2629	819	454	0	405			
V/C Ratio(X)	0.78	0.22	0.00	0.00	0.48	0.33	1.21	0.00	0.81			
Avail Cap(c_a), veh/h	197	2242	0	0	2629	819	454	0	405			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.97	0.97	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	41.7	7.0	0.0	0.0	14.0	12.7	33.5	0.0	31.4			
Incr Delay (d2), s/veh	4.4	0.2	0.0	0.0	0.6	1.1	112.6	0.0	10.6			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	2.2	2.7	0.0	0.0	6.9	4.2	25.4	0.0	8.8			
LnGrp Delay(d),s/veh	46.1	7.3	0.0	0.0	14.6	13.8	146.1	0.0	42.0			
LnGrp LOS	D	A			B	B	F		D			
Approach Vol, veh/h		579			1548			874				
Approach Delay, s/veh		12.9			14.5			107.2				
Approach LOS		B			B			F				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		62.0			10.5	51.5		28.0
Change Period (Y+Rc), s		5.0			5.0	5.0		5.0
Max Green Setting (Gmax), s		57.0			10.0	42.0		23.0
Max Q Clear Time (g_c+I1), s		7.4			6.2	16.5		25.0
Green Ext Time (p_c), s		13.5			0.0	11.1		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	41.2
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	320	110	200	110	0	0	0	0	440	620	140
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1900	1863	1863	0				1900	1863	1863
Adj Flow Rate, veh/h	0	337	116	211	116	0				463	653	42
Adj No. of Lanes	0	2	0	1	2	0				0	3	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	538	182	335	1702	0				586	1120	523
Arrive On Green	0.00	0.21	0.21	0.19	0.48	0.00				0.33	0.33	0.33
Sat Flow, veh/h	0	2691	880	1774	3632	0				1774	3390	1583
Grp Volume(v), veh/h	0	228	225	211	116	0				463	653	42
Grp Sat Flow(s),veh/h/ln	0	1770	1708	1774	1770	0				1774	1695	1583
Q Serve(g_s), s	0.0	6.2	6.4	5.8	0.9	0.0				12.5	8.5	1.0
Cycle Q Clear(g_c), s	0.0	6.2	6.4	5.8	0.9	0.0				12.5	8.5	1.0
Prop In Lane	0.00		0.52	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	366	353	335	1702	0				586	1120	523
V/C Ratio(X)	0.00	0.62	0.64	0.63	0.07	0.00				0.79	0.58	0.08
Avail Cap(c_a), veh/h	0	869	838	670	2139	0				670	1280	598
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	19.1	19.2	19.8	7.4	0.0				16.1	14.7	12.2
Incr Delay (d2), s/veh	0.0	1.3	1.4	0.7	0.0	0.0				5.3	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.2	3.1	2.9	0.5	0.0				6.9	4.0	0.4
LnGrp Delay(d),s/veh	0.0	20.4	20.6	20.5	7.4	0.0				21.3	15.1	12.2
LnGrp LOS		C	C	C	A					C	B	B
Approach Vol, veh/h		453			327						1158	
Approach Delay, s/veh		20.5			15.9						17.5	
Approach LOS		C			B						B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	14.5	16.0		22.5		30.5		
Change Period (Y+Rc), s	4.5	5.0		5.0		5.0		
Max Green Setting (Gmax), s	20.0	26.0		20.0		32.0		
Max Q Clear Time (g_c+I1), s	7.8	8.4		14.5		2.9		
Green Ext Time (p_c), s	0.2	2.6		3.0		2.9		

Intersection Summary	
HCM 2010 Ctrl Delay	17.9
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	50	440	0	0	140	110	90	250	150	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1900	1863	1900			
Adj Flow Rate, veh/h	53	463	0	0	131	104	95	263	158			
Adj No. of Lanes	1	2	0	0	2	2	0	2	0			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	2	2	0	0	2	2	0	2	0			
Cap, veh/h	105	1549	0	0	980	833	166	469	297			
Arrive On Green	0.06	0.44	0.00	0.00	0.26	0.26	0.27	0.27	0.27			
Sat Flow, veh/h	1774	3632	0	0	3725	3167	622	1761	1114			
Grp Volume(v), veh/h	53	463	0	0	131	104	280	0	236			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1863	1583	1832	0	1666			
Q Serve(g_s), s	0.9	2.6	0.0	0.0	0.8	0.8	4.0	0.0	3.7			
Cycle Q Clear(g_c), s	0.9	2.6	0.0	0.0	0.8	0.8	4.0	0.0	3.7			
Prop In Lane	1.00		0.00	0.00		1.00	0.34		0.67			
Lane Grp Cap(c), veh/h	105	1549	0	0	980	833	488	0	444			
V/C Ratio(X)	0.50	0.30	0.00	0.00	0.13	0.12	0.57	0.00	0.53			
Avail Cap(c_a), veh/h	1459	4075	0	0	4290	3646	2109	0	1918			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	13.9	5.5	0.0	0.0	8.6	8.5	9.7	0.0	9.5			
Incr Delay (d2), s/veh	1.4	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.4			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.5	1.2	0.0	0.0	0.4	0.3	2.1	0.0	1.7			
LnGrp Delay(d),s/veh	15.2	5.6	0.0	0.0	8.6	8.6	10.1	0.0	9.9			
LnGrp LOS	B	A			A	A	B		A			
Approach Vol, veh/h		516			235			516				
Approach Delay, s/veh		6.6			8.6			10.0				
Approach LOS		A			A			A				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		17.8			5.3	12.5		12.6
Change Period (Y+Rc), s		4.5			3.5	4.5		4.5
Max Green Setting (Gmax), s		35.0			25.0	35.0		35.0
Max Q Clear Time (g_c+I1), s		4.6			2.9	2.8		6.0
Green Ext Time (p_c), s		2.9			0.0	2.9		2.2

Intersection Summary	
HCM 2010 Ctrl Delay	8.3
HCM 2010 LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	620	90	230	290	0	0	0	0	400	80	150
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0				1863	1863	1863
Adj Flow Rate, veh/h	0	653	38	242	305	0				481	0	65
Adj No. of Lanes	0	3	1	2	2	0				2	0	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1991	620	737	2321	0				760	0	339
Arrive On Green	0.00	0.39	0.39	0.21	0.66	0.00				0.21	0.00	0.21
Sat Flow, veh/h	0	5253	1583	3442	3632	0				3548	0	1583
Grp Volume(v), veh/h	0	653	38	242	305	0				481	0	65
Grp Sat Flow(s),veh/h/ln	0	1695	1583	1721	1770	0				1774	0	1583
Q Serve(g_s), s	0.0	6.3	1.0	4.2	2.3	0.0				8.6	0.0	2.4
Cycle Q Clear(g_c), s	0.0	6.3	1.0	4.2	2.3	0.0				8.6	0.0	2.4
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1991	620	737	2321	0				760	0	339
V/C Ratio(X)	0.00	0.33	0.06	0.33	0.13	0.00				0.63	0.00	0.19
Avail Cap(c_a), veh/h	0	1991	620	737	2321	0				760	0	339
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.98	0.98	0.00				0.69	0.00	0.69
Uniform Delay (d), s/veh	0.0	14.9	13.3	23.2	4.5	0.0				25.0	0.0	22.5
Incr Delay (d2), s/veh	0.0	0.4	0.2	1.2	0.0	0.0				2.8	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.0	0.5	2.1	1.1	0.0				4.5	0.0	1.1
LnGrp Delay(d),s/veh	0.0	15.3	13.5	24.4	4.6	0.0				27.7	0.0	23.4
LnGrp LOS		B	B	C	A					C		C
Approach Vol, veh/h		691			547						546	
Approach Delay, s/veh		15.2			13.3						27.2	
Approach LOS		B			B						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	18.5	31.5		20.0		50.0		
Change Period (Y+Rc), s	3.5	4.1		5.0		4.1		
Max Green Setting (Gmax), s	15.0	27.0		15.0		35.0		
Max Q Clear Time (g_c+I1), s	6.2	8.3		10.6		4.3		
Green Ext Time (p_c), s	0.0	5.5		0.6		6.3		

Intersection Summary	
HCM 2010 Ctrl Delay	18.3
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	100	710	0	0	480	110	160	180	1130	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1863	1863	1863			
Adj Flow Rate, veh/h	105	747	0	0	505	41	168	0	1177			
Adj No. of Lanes	2	2	0	0	4	1	1	0	2			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	506	2004	0	0	2356	582	522	0	931			
Arrive On Green	0.15	0.57	0.00	0.00	0.37	0.37	0.29	0.00	0.29			
Sat Flow, veh/h	3442	3632	0	0	6669	1583	1774	0	3167			
Grp Volume(v), veh/h	105	747	0	0	505	41	168	0	1177			
Grp Sat Flow(s),veh/h/ln	1721	1770	0	0	1602	1583	1774	0	1583			
Q Serve(g_s), s	1.8	7.9	0.0	0.0	3.7	1.1	5.0	0.0	20.0			
Cycle Q Clear(g_c), s	1.8	7.9	0.0	0.0	3.7	1.1	5.0	0.0	20.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	506	2004	0	0	2356	582	522	0	931			
V/C Ratio(X)	0.21	0.37	0.00	0.00	0.21	0.07	0.32	0.00	1.26			
Avail Cap(c_a), veh/h	506	2004	0	0	2356	582	522	0	931			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	25.5	8.1	0.0	0.0	14.8	14.0	18.7	0.0	24.0			
Incr Delay (d2), s/veh	0.9	0.5	0.0	0.0	0.2	0.2	1.6	0.0	127.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.9	4.0	0.0	0.0	1.6	0.5	2.7	0.0	25.1			
LnGrp Delay(d),s/veh	26.4	8.6	0.0	0.0	15.0	14.2	20.3	0.0	151.3			
LnGrp LOS	C	A			B	B	C		F			
Approach Vol, veh/h		852			546			1345				
Approach Delay, s/veh		10.8			14.9			135.0				
Approach LOS		B			B			F				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		43.0			13.5	29.5		25.0
Change Period (Y+Rc), s		4.5			3.5	4.5		5.0
Max Green Setting (Gmax), s		30.0			10.0	25.0		20.0
Max Q Clear Time (g_c+I1), s		9.9			3.8	5.7		22.0
Green Ext Time (p_c), s		6.3			0.1	6.2		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	72.5
HCM 2010 LOS	E

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	250	0	170	0	0	0	80	650	0	0	670	120
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	0	1863				1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h	263	0	179				84	684	0	0	705	126
Adj No. of Lanes	2	0	1				1	3	0	0	3	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	0	2				2	2	0	0	2	2
Cap, veh/h	507	0	233				532	3715	0	0	2890	511
Arrive On Green	0.15	0.00	0.15				0.03	0.73	0.00	0.00	0.66	0.66
Sat Flow, veh/h	3442	0	1583				1774	5253	0	0	4516	769
Grp Volume(v), veh/h	263	0	179				84	684	0	0	548	283
Grp Sat Flow(s),veh/h/ln	1721	0	1583				1774	1695	0	0	1695	1727
Q Serve(g_s), s	6.4	0.0	9.8				1.3	3.8	0.0	0.0	5.8	5.9
Cycle Q Clear(g_c), s	6.4	0.0	9.8				1.3	3.8	0.0	0.0	5.8	5.9
Prop In Lane	1.00		1.00				1.00		0.00	0.00		0.45
Lane Grp Cap(c), veh/h	507	0	233				532	3715	0	0	2253	1148
V/C Ratio(X)	0.52	0.00	0.77				0.16	0.18	0.00	0.00	0.24	0.25
Avail Cap(c_a), veh/h	1262	0	581				691	3715	0	0	2253	1148
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.58	0.00	0.58				1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	35.4	0.0	36.9				4.1	3.8	0.0	0.0	6.0	6.1
Incr Delay (d2), s/veh	0.5	0.0	3.1				0.1	0.1	0.0	0.0	0.3	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	0.0	8.4				0.6	1.7	0.0	0.0	2.7	2.9
LnGrp Delay(d),s/veh	35.9	0.0	40.0				4.3	3.9	0.0	0.0	6.3	6.6
LnGrp LOS	D		D				A	A			A	A
Approach Vol, veh/h		442						768			831	
Approach Delay, s/veh		37.6						3.9			6.4	
Approach LOS		D						A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		71.8		18.2	5.9	65.8		
Change Period (Y+Rc), s		6.0		5.0	3.0	6.0		
Max Green Setting (Gmax), s		46.0		33.0	11.0	30.0		
Max Q Clear Time (g_c+I1), s		5.8		11.8	3.3	7.9		
Green Ext Time (p_c), s		13.1		1.5	0.1	10.4		

Intersection Summary	
HCM 2010 Ctrl Delay	12.2
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	0	0	310	1800	790	260
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	Yield
Storage Length	0	-	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	326	1895	832	274

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2432	416	832	0	-	0
Stage 1	832	-	-	-	-	-
Stage 2	1600	-	-	-	-	-
Critical Hdwy	6.29	7.14	5.34	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.67	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	38	500	471	-	-	-
Stage 1	314	-	-	-	-	-
Stage 2	148	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	12	500	471	-	-	-
Mov Cap-2 Maneuver	12	-	-	-	-	-
Stage 1	314	-	-	-	-	-
Stage 2	46	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	4.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	471	-	-	-	-
HCM Lane V/C Ratio	0.693	-	-	-	-
HCM Control Delay (s)	28.1	-	0	-	-
HCM Lane LOS	D	-	A	-	-
HCM 95th %tile Q(veh)	5.2	-	-	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	330	130	200	720	270	360	820	310	20	410	370
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	32	347	137	211	758	284	379	863	260	21	518	245
Adj No. of Lanes	1	2	0	1	2	0	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	72	648	252	197	656	246	656	1699	760	213	857	364
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.37	0.48	0.48	0.12	0.23	0.23
Sat Flow, veh/h	539	2493	968	908	2521	944	1774	3539	1583	1774	3725	1583
Grp Volume(v), veh/h	32	245	239	211	532	510	379	863	260	21	518	245
Grp Sat Flow(s),veh/h/ln	539	1770	1692	908	1770	1696	1774	1770	1583	1774	1863	1583
Q Serve(g_s), s	0.0	11.9	12.2	13.8	26.0	26.0	17.1	16.8	10.2	1.1	12.4	14.1
Cycle Q Clear(g_c), s	26.0	11.9	12.2	26.0	26.0	26.0	17.1	16.8	10.2	1.1	12.4	14.1
Prop In Lane	1.00		0.57	1.00		0.56	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	72	460	440	197	460	441	656	1699	760	213	857	364
V/C Ratio(X)	0.44	0.53	0.54	1.07	1.16	1.16	0.58	0.51	0.34	0.10	0.60	0.67
Avail Cap(c_a), veh/h	72	460	440	197	460	441	656	1699	760	213	857	364
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.09	0.09	0.09	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.0	31.8	31.9	45.6	37.0	37.0	25.2	17.9	16.2	39.2	34.4	35.1
Incr Delay (d2), s/veh	18.6	4.4	4.8	83.7	92.3	93.3	0.3	0.1	0.1	0.9	3.2	9.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	6.3	6.3	10.0	24.5	23.6	8.4	8.2	4.5	0.6	6.8	7.1
LnGrp Delay(d),s/veh	68.6	36.1	36.7	129.3	129.3	130.3	25.6	18.0	16.3	40.1	37.6	44.6
LnGrp LOS	E	D	D	F	F	F	C	B	B	D	D	D
Approach Vol, veh/h		516			1253			1502			784	
Approach Delay, s/veh		38.4			129.7			19.6			39.9	
Approach LOS		D			F			B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	16.0	53.0		31.0	41.0	28.0		31.0
Change Period (Y+Rc), s	4.0	5.0		5.0	4.0	5.0		5.0
Max Green Setting (Gmax), s	12.0	46.0		26.0	37.0	23.0		24.0
Max Q Clear Time (g_c+I1), s	3.1	18.8		28.0	19.1	16.1		28.0
Green Ext Time (p_c), s	0.0	13.1		0.0	1.0	5.1		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	59.9
HCM 2010 LOS	E

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	820	0	520	0	0	0	0	890	250	230	390	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	705	221	547				0	937	162	242	411	0
Adj No. of Lanes	1	1	0				0	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	561	151	373				0	1265	566	325	2059	0
Arrive On Green	0.32	0.32	0.32				0.00	0.36	0.36	0.18	0.58	0.00
Sat Flow, veh/h	1774	476	1179				0	3632	1583	1774	3632	0
Grp Volume(v), veh/h	705	0	768				0	937	162	242	411	0
Grp Sat Flow(s),veh/h/ln	1774	0	1655				0	1770	1583	1774	1770	0
Q Serve(g_s), s	31.0	0.0	31.0				0.0	22.7	7.2	12.6	5.4	0.0
Cycle Q Clear(g_c), s	31.0	0.0	31.0				0.0	22.7	7.2	12.6	5.4	0.0
Prop In Lane	1.00		0.71				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	561	0	523				0	1265	566	325	2059	0
V/C Ratio(X)	1.26	0.00	1.47				0.00	0.74	0.29	0.74	0.20	0.00
Avail Cap(c_a), veh/h	561	0	523				0	1265	566	597	2059	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.34	0.34	0.00
Uniform Delay (d), s/veh	33.5	0.0	33.5				0.0	27.5	22.5	37.8	9.7	0.0
Incr Delay (d2), s/veh	129.3	0.0	220.5				0.0	3.9	1.3	1.2	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	35.3	0.0	46.2				0.0	11.8	3.3	6.3	2.6	0.0
LnGrp Delay(d),s/veh	162.8	0.0	254.0				0.0	31.5	23.8	39.0	9.8	0.0
LnGrp LOS	F		F					C	C	D	A	
Approach Vol, veh/h		1473						1099			653	
Approach Delay, s/veh		210.4						30.3			20.6	
Approach LOS		F						C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	22.0	40.0		36.0		62.0		
Change Period (Y+Rc), s	4.0	5.0		5.0		5.0		
Max Green Setting (Gmax), s	33.0	20.0		31.0		49.0		
Max Q Clear Time (g_c+I1), s	14.6	24.7		33.0		7.4		
Green Ext Time (p_c), s	0.6	0.0		0.0		12.7		

Intersection Summary	
HCM 2010 Ctrl Delay	110.6
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	90	610	160	210	710	200	220	590	170	260	430	280
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	95	642	52	221	747	211	232	621	119	274	453	295
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	136	828	371	253	819	231	488	837	375	559	570	369
Arrive On Green	0.08	0.23	0.23	0.14	0.30	0.29	0.28	0.24	0.24	0.32	0.28	0.27
Sat Flow, veh/h	1774	3539	1583	1774	2726	770	1774	3539	1583	1774	2062	1335
Grp Volume(v), veh/h	95	642	52	221	485	473	232	621	119	274	388	360
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1727	1774	1770	1583	1774	1770	1627
Q Serve(g_s), s	5.9	19.0	1.5	13.7	29.6	29.6	12.2	18.2	4.8	14.0	22.8	23.0
Cycle Q Clear(g_c), s	5.9	19.0	1.5	13.7	29.6	29.6	12.2	18.2	4.8	14.0	22.8	23.0
Prop In Lane	1.00		1.00	1.00		0.45	1.00		1.00	1.00		0.82
Lane Grp Cap(c), veh/h	136	828	371	253	532	519	488	837	375	559	489	450
V/C Ratio(X)	0.70	0.77	0.14	0.87	0.91	0.91	0.48	0.74	0.32	0.49	0.79	0.80
Avail Cap(c_a), veh/h	253	1011	452	253	532	519	488	1422	636	559	711	654
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.90	0.90	0.90	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.5	40.1	9.3	47.0	37.8	38.0	33.8	39.6	17.1	31.1	37.6	38.0
Incr Delay (d2), s/veh	6.4	3.1	0.2	26.5	20.1	20.5	0.6	5.3	2.0	0.7	12.5	13.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	9.6	0.7	8.6	17.4	17.0	6.1	9.5	2.3	7.0	12.8	12.0
LnGrp Delay(d),s/veh	56.8	43.2	9.5	73.5	57.8	58.4	34.5	44.9	19.1	31.7	50.0	51.9
LnGrp LOS	E	D	A	E	E	E	C	D	B	C	D	D
Approach Vol, veh/h		789			1179			972			1022	
Approach Delay, s/veh		42.7			61.0			39.2			45.8	
Approach LOS		D			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	37.3	28.5	18.0	28.2	32.8	33.0	10.6	35.6
Change Period (Y+Rc), s	3.0	5.0	3.0	5.0	3.0	5.0	3.0	5.0
Max Green Setting (Gmax), s	10.0	42.0	15.0	29.0	10.0	42.0	15.0	29.0
Max Q Clear Time (g_c+I1), s	16.0	20.2	15.7	21.0	14.2	25.0	7.9	31.6
Green Ext Time (p_c), s	0.0	3.3	0.0	2.2	0.0	2.9	0.1	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	48.1
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	560	300	510	840	0	0	0	0	300	10	230
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1900	1863	1863	0				1863	1863	1863
Adj Flow Rate, veh/h	0	589	316	537	884	0				340	0	45
Adj No. of Lanes	0	4	0	2	2	0				2	0	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1870	616	717	2376	0				521	0	233
Arrive On Green	0.00	0.39	0.39	0.21	0.67	0.00				0.15	0.00	0.15
Sat Flow, veh/h	0	5067	1583	3442	3632	0				3548	0	1583
Grp Volume(v), veh/h	0	589	316	537	884	0				340	0	45
Grp Sat Flow(s),veh/h/ln	0	1602	1583	1721	1770	0				1774	0	1583
Q Serve(g_s), s	0.0	4.0	7.2	6.9	5.2	0.0				4.3	0.0	1.2
Cycle Q Clear(g_c), s	0.0	4.0	7.2	6.9	5.2	0.0				4.3	0.0	1.2
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1870	616	717	2376	0				521	0	233
V/C Ratio(X)	0.00	0.32	0.51	0.75	0.37	0.00				0.65	0.00	0.19
Avail Cap(c_a), veh/h	0	3556	1172	1819	2619	0				2625	0	1172
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	10.1	11.0	17.6	3.4	0.0				19.0	0.0	17.7
Incr Delay (d2), s/veh	0.0	0.0	0.2	0.6	0.0	0.0				0.5	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.8	3.1	3.3	2.5	0.0				2.1	0.0	0.5
LnGrp Delay(d),s/veh	0.0	10.1	11.3	18.2	3.4	0.0				19.6	0.0	17.9
LnGrp LOS		B	B	B	A					B		B
Approach Vol, veh/h		905			1421						385	
Approach Delay, s/veh		10.5			9.0						19.4	
Approach LOS		B			A						B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	13.4	22.5		11.4		35.9		
Change Period (Y+Rc), s	3.5	4.1		4.5		4.1		
Max Green Setting (Gmax), s	25.0	35.0		35.0		35.0		
Max Q Clear Time (g_c+I1), s	8.9	9.2		6.3		7.2		
Green Ext Time (p_c), s	0.9	9.2		0.7		9.4		

Intersection Summary	
HCM 2010 Ctrl Delay	11.0
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	220	800	0	0	940	370	370	20	650	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1863	1863	1863			
Adj Flow Rate, veh/h	232	842	0	0	989	226	266	0	741			
Adj No. of Lanes	2	2	0	0	4	1	1	0	2			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	367	1896	0	0	2313	571	526	0	940			
Arrive On Green	0.11	0.54	0.00	0.00	0.36	0.36	0.30	0.00	0.30			
Sat Flow, veh/h	3442	3632	0	0	6669	1583	1774	0	3167			
Grp Volume(v), veh/h	232	842	0	0	989	226	266	0	741			
Grp Sat Flow(s),veh/h/ln	1721	1770	0	0	1602	1583	1774	0	1583			
Q Serve(g_s), s	3.3	7.4	0.0	0.0	6.0	5.5	6.4	0.0	11.0			
Cycle Q Clear(g_c), s	3.3	7.4	0.0	0.0	6.0	5.5	6.4	0.0	11.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	367	1896	0	0	2313	571	526	0	940			
V/C Ratio(X)	0.63	0.44	0.00	0.00	0.43	0.40	0.51	0.00	0.79			
Avail Cap(c_a), veh/h	1675	2412	0	0	4492	1110	1209	0	2158			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	22.0	7.3	0.0	0.0	12.4	12.2	14.9	0.0	16.6			
Incr Delay (d2), s/veh	0.7	0.1	0.0	0.0	0.0	0.2	0.3	0.0	0.6			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.6	3.6	0.0	0.0	2.6	2.4	3.1	0.0	4.8			
LnGrp Delay(d),s/veh	22.6	7.3	0.0	0.0	12.4	12.4	15.2	0.0	17.1			
LnGrp LOS	C	A			B	B	B		B			
Approach Vol, veh/h		1074			1215			1007				
Approach Delay, s/veh		10.6			12.4			16.6				
Approach LOS		B			B			B				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		31.6			9.0	22.6		19.7
Change Period (Y+Rc), s		4.1			3.5	4.1		4.5
Max Green Setting (Gmax), s		35.0			25.0	36.0		35.0
Max Q Clear Time (g_c+I1), s		9.4			5.3	8.0		13.0
Green Ext Time (p_c), s		10.2			0.4	10.5		2.2

Intersection Summary	
HCM 2010 Ctrl Delay	13.1
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	80	930	60	100	890	170	170	370	110	60	180	90
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	84	979	63	105	937	179	179	389	116	63	189	95
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	420	1822	117	439	1584	302	324	789	233	229	678	327
Arrive On Green	0.11	0.54	0.53	0.10	0.53	0.52	0.29	0.29	0.28	0.29	0.29	0.28
Sat Flow, veh/h	1774	3377	217	1774	2966	566	1091	2697	795	890	2317	1118
Grp Volume(v), veh/h	84	513	529	105	559	557	179	254	251	63	142	142
Grp Sat Flow(s),veh/h/ln	1774	1770	1824	1774	1770	1763	1091	1770	1722	890	1770	1666
Q Serve(g_s), s	1.7	17.7	17.7	2.2	20.2	20.3	14.3	11.1	11.4	5.9	5.8	6.2
Cycle Q Clear(g_c), s	1.7	17.7	17.7	2.2	20.2	20.3	20.5	11.1	11.4	17.3	5.8	6.2
Prop In Lane	1.00		0.12	1.00		0.32	1.00		0.46	1.00		0.67
Lane Grp Cap(c), veh/h	420	955	984	439	945	941	324	518	504	229	518	487
V/C Ratio(X)	0.20	0.54	0.54	0.24	0.59	0.59	0.55	0.49	0.50	0.28	0.28	0.29
Avail Cap(c_a), veh/h	490	955	984	519	945	941	352	565	550	253	565	532
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.3	14.0	14.1	9.0	14.9	15.1	33.7	27.5	27.7	34.7	25.6	26.0
Incr Delay (d2), s/veh	0.2	2.2	2.1	0.3	2.7	2.7	1.6	0.7	0.8	0.6	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	9.1	9.4	1.1	10.5	10.5	4.4	5.5	5.5	1.5	2.9	2.9
LnGrp Delay(d),s/veh	9.6	16.2	16.2	9.3	17.6	17.8	35.2	28.2	28.5	35.4	25.9	26.3
LnGrp LOS	A	B	B	A	B	B	D	C	C	D	C	C
Approach Vol, veh/h		1126			1221			684			347	
Approach Delay, s/veh		15.7			17.0			30.1			27.8	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.0	52.2		29.8	11.5	52.7		29.8
Change Period (Y+Rc), s	4.0	5.0		5.3	4.0	5.0		5.3
Max Green Setting (Gmax), s	11.7	41.0		27.0	11.7	41.0		27.0
Max Q Clear Time (g_c+I1), s	3.7	22.3		22.5	4.2	19.7		19.3
Green Ext Time (p_c), s	0.1	9.7		2.0	0.2	10.4		2.9

Intersection Summary	
HCM 2010 Ctrl Delay	20.3
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	100	810	40	60	740	100	70	310	60	60	150	70
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	105	853	14	63	779	105	74	326	63	63	158	74
Adj No. of Lanes	1	1	1	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	362	1071	910	227	1803	243	312	455	88	197	360	169
Arrive On Green	0.57	0.57	0.57	0.57	0.57	0.57	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	626	1863	1583	636	3135	423	1144	1518	293	991	1201	562
Grp Volume(v), veh/h	105	853	14	63	440	444	74	0	389	63	0	232
Grp Sat Flow(s),veh/h/ln	626	1863	1583	636	1770	1788	1144	0	1811	991	0	1763
Q Serve(g_s), s	9.1	28.7	0.3	6.9	11.2	11.2	4.5	0.0	15.3	4.8	0.0	8.5
Cycle Q Clear(g_c), s	20.4	28.7	0.3	35.6	11.2	11.2	12.9	0.0	15.3	20.2	0.0	8.5
Prop In Lane	1.00		1.00	1.00		0.24	1.00		0.16	1.00		0.32
Lane Grp Cap(c), veh/h	362	1071	910	227	1018	1028	312	0	543	197	0	529
V/C Ratio(X)	0.29	0.80	0.02	0.28	0.43	0.43	0.24	0.00	0.72	0.32	0.00	0.44
Avail Cap(c_a), veh/h	362	1071	910	227	1018	1028	312	0	543	197	0	529
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.68	0.68	0.68	0.96	0.00	0.96	1.00	0.00	1.00
Uniform Delay (d), s/veh	15.4	13.3	7.3	27.3	9.6	9.6	27.8	0.0	25.0	33.9	0.0	22.6
Incr Delay (d2), s/veh	2.0	6.2	0.0	0.4	0.2	0.2	1.7	0.0	7.6	4.2	0.0	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	16.3	0.1	1.2	5.4	5.5	1.5	0.0	8.8	1.6	0.0	4.5
LnGrp Delay(d),s/veh	17.4	19.5	7.3	27.7	9.8	9.8	29.5	0.0	32.6	38.2	0.0	25.2
LnGrp LOS	B	B	A	C	A	A	C		C	D		C
Approach Vol, veh/h		972			947			463			295	
Approach Delay, s/veh		19.1			11.0			32.1			28.0	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		51.0		29.0		51.0		29.0
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0
Max Green Setting (Gmax), s		46.0		24.0		46.0		24.0
Max Q Clear Time (g_c+I1), s		30.7		22.2		37.6		17.3
Green Ext Time (p_c), s		10.7		0.8		6.6		2.3

Intersection Summary	
HCM 2010 Ctrl Delay	19.5
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	130	540	170	280	510	140	290	480	300	90	530	280
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	137	568	179	295	537	147	305	505	243	95	558	207
Adj No. of Lanes	1	2	0	1	2	0	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	218	705	222	302	861	235	231	1026	459	203	972	435
Arrive On Green	0.12	0.27	0.26	0.17	0.31	0.30	0.17	0.39	0.39	0.11	0.27	0.27
Sat Flow, veh/h	1774	2652	833	1774	2750	750	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	137	378	369	295	345	339	305	505	243	95	558	207
Grp Sat Flow(s),veh/h/ln	1774	1770	1716	1774	1770	1730	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	7.3	20.0	20.1	16.6	16.6	16.8	13.0	10.8	6.0	5.0	13.6	10.9
Cycle Q Clear(g_c), s	7.3	20.0	20.1	16.6	16.6	16.8	13.0	10.8	6.0	5.0	13.6	10.9
Prop In Lane	1.00		0.49	1.00		0.43	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	218	471	456	302	554	542	231	1026	459	203	972	435
V/C Ratio(X)	0.63	0.80	0.81	0.98	0.62	0.63	1.32	0.49	0.53	0.47	0.57	0.48
Avail Cap(c_a), veh/h	302	531	515	302	554	542	231	1026	459	284	1133	507
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(I)	0.47	0.47	0.47	0.97	0.97	0.97	1.00	1.00	1.00	0.66	0.66	0.66
Uniform Delay (d), s/veh	41.7	34.3	34.5	41.3	29.3	29.5	41.4	25.1	6.6	41.4	31.2	30.3
Incr Delay (d2), s/veh	1.4	3.9	4.1	44.9	2.1	2.2	172.1	1.7	4.3	1.1	0.4	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	10.3	10.1	11.9	8.5	8.4	17.3	5.5	3.1	2.5	6.7	4.8
LnGrp Delay(d),s/veh	43.1	38.1	38.6	86.2	31.4	31.7	213.5	26.8	10.9	42.5	31.6	30.8
LnGrp LOS	D	D	D	F	C	C	F	C	B	D	C	C
Approach Vol, veh/h		884			979			1053			860	
Approach Delay, s/veh		39.1			48.0			77.2			32.6	
Approach LOS		D			D			E			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	28.6	15.0	29.5	14.3	33.3	13.5	31.0
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	14.0	27.0	10.0	29.0	14.0	27.0	13.0	26.0
Max Q Clear Time (g_c+I1), s	18.6	22.1	15.0	15.6	9.3	18.8	7.0	12.8
Green Ext Time (p_c), s	0.0	1.5	0.0	3.3	0.2	3.9	2.1	2.9

Intersection Summary	
HCM 2010 Ctrl Delay	50.6
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	550	170	150	540	10	310	10	320	10	10	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1863	1863	1900	1900	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	11	579	179	158	568	11	326	11	222	11	11	11
Adj No. of Lanes	0	2	0	1	2	0	0	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	48	1165	355	192	2139	41	453	13	454	134	245	245
Arrive On Green	0.45	0.45	0.45	0.22	1.00	1.00	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	16	2591	790	1774	3551	69	1306	44	1583	1143	856	856
Grp Volume(v), veh/h	417	0	352	158	283	296	337	0	222	11	0	22
Grp Sat Flow(s),veh/h/ln	1842	0	1556	1774	1770	1851	1351	0	1583	1143	0	1712
Q Serve(g_s), s	0.0	0.0	14.5	7.6	0.0	0.0	20.7	0.0	10.5	0.8	0.0	0.8
Cycle Q Clear(g_c), s	14.3	0.0	14.5	7.6	0.0	0.0	21.5	0.0	10.5	22.4	0.0	0.8
Prop In Lane	0.03		0.51	1.00		0.04	0.97		1.00	1.00		0.50
Lane Grp Cap(c), veh/h	870	0	700	192	1066	1114	466	0	454	134	0	491
V/C Ratio(X)	0.48	0.00	0.50	0.82	0.27	0.27	0.72	0.00	0.49	0.08	0.00	0.04
Avail Cap(c_a), veh/h	870	0	700	394	1066	1114	546	0	545	188	0	571
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.93	0.93	0.93	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.6	0.0	17.6	34.5	0.0	0.0	31.0	0.0	26.6	41.2	0.0	23.2
Incr Delay (d2), s/veh	1.9	0.0	2.6	8.0	0.1	0.1	3.9	0.0	0.8	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.7	0.0	6.7	4.1	0.0	0.0	8.5	0.0	4.7	0.3	0.0	0.4
LnGrp Delay(d),s/veh	19.4	0.0	20.2	42.5	0.1	0.1	34.9	0.0	27.4	41.5	0.0	23.2
LnGrp LOS	B		C	D	A	A	C		C	D		C
Approach Vol, veh/h		769			737			559			33	
Approach Delay, s/veh		19.8			9.2			31.9			29.3	
Approach LOS		B			A			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		8
Phs Duration (G+Y+Rc), s	13.7	45.5		30.8		59.2		30.8
Change Period (Y+Rc), s	4.0	5.0		5.0		5.0		5.0
Max Green Setting (Gmax), s	20.0	25.0		30.0		49.0		31.0
Max Q Clear Time (g_c+I1), s	9.6	16.5		24.4		2.0		23.5
Green Ext Time (p_c), s	0.3	4.8		1.4		10.4		1.7

Intersection Summary	
HCM 2010 Ctrl Delay	19.5
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	130	450	130	230	350	260	190	870	270	90	650	190
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	137	474	137	242	368	274	200	916	284	95	684	200
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	217	641	184	284	534	392	266	1236	382	172	1111	325
Arrive On Green	0.12	0.24	0.23	0.16	0.27	0.26	0.15	0.46	0.45	0.10	0.41	0.40
Sat Flow, veh/h	1774	2715	780	1774	1949	1431	1774	2664	823	1774	2703	790
Grp Volume(v), veh/h	137	308	303	242	334	308	200	608	592	95	448	436
Grp Sat Flow(s),veh/h/ln	1774	1770	1725	1774	1770	1610	1774	1770	1717	1774	1770	1723
Q Serve(g_s), s	7.3	16.1	16.3	13.3	16.9	17.3	10.8	28.0	28.3	5.1	20.0	20.0
Cycle Q Clear(g_c), s	7.3	16.1	16.3	13.3	16.9	17.3	10.8	28.0	28.3	5.1	20.0	20.0
Prop In Lane	1.00		0.45	1.00		0.89	1.00		0.48	1.00		0.46
Lane Grp Cap(c), veh/h	217	418	407	284	485	441	266	821	797	172	727	708
V/C Ratio(X)	0.63	0.74	0.74	0.85	0.69	0.70	0.75	0.74	0.74	0.55	0.62	0.62
Avail Cap(c_a), veh/h	248	455	443	284	490	446	266	821	797	266	727	708
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.82	0.82	0.82	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.8	35.3	35.6	40.9	32.5	33.0	40.7	21.9	22.2	43.1	23.2	23.4
Incr Delay (d2), s/veh	4.1	5.7	6.2	21.3	4.0	4.7	9.4	4.9	5.1	2.8	3.9	4.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	8.5	8.5	8.2	8.8	8.2	6.0	14.8	14.5	2.6	10.5	10.3
LnGrp Delay(d),s/veh	45.9	41.0	41.8	62.2	36.4	37.7	50.1	26.8	27.3	45.8	27.1	27.4
LnGrp LOS	D	D	D	E	D	D	D	C	C	D	C	C
Approach Vol, veh/h		748			884			1400			979	
Approach Delay, s/veh		42.2			43.9			30.3			29.1	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	25.9	15.0	43.1	12.2	29.7	9.7	48.4
Change Period (Y+Rc), s	3.0	5.3	3.0	5.0	3.0	5.3	3.0	5.0
Max Green Setting (Gmax), s	13.0	22.7	12.0	36.0	11.0	24.7	12.0	36.0
Max Q Clear Time (g_c+I1), s	15.3	18.3	12.8	22.0	9.3	19.3	7.1	30.3
Green Ext Time (p_c), s	0.0	2.3	0.0	8.2	0.1	2.7	0.1	4.2

Intersection Summary	
HCM 2010 Ctrl Delay	35.2
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	500	420	530	710	0	0	0	0	240	0	160
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1900	1863	1863	0				1863	1863	1863
Adj Flow Rate, veh/h	0	526	442	558	747	0				265	0	26
Adj No. of Lanes	0	4	0	2	2	0				2	0	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	2099	692	710	2493	0				491	0	219
Arrive On Green	0.00	0.44	0.44	0.21	0.70	0.00				0.14	0.00	0.14
Sat Flow, veh/h	0	5067	1583	3442	3632	0				3548	0	1583
Grp Volume(v), veh/h	0	526	442	558	747	0				265	0	26
Grp Sat Flow(s),veh/h/ln	0	1602	1583	1721	1770	0				1774	0	1583
Q Serve(g_s), s	0.0	4.0	12.5	8.8	4.5	0.0				4.0	0.0	0.8
Cycle Q Clear(g_c), s	0.0	4.0	12.5	8.8	4.5	0.0				4.0	0.0	0.8
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2099	692	710	2493	0				491	0	219
V/C Ratio(X)	0.00	0.25	0.64	0.79	0.30	0.00				0.54	0.00	0.12
Avail Cap(c_a), veh/h	0	2099	692	2105	2493	0				2170	0	968
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	10.2	12.6	21.5	3.2	0.0				23.0	0.0	21.6
Incr Delay (d2), s/veh	0.0	0.3	4.5	0.7	0.3	0.0				0.3	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.8	6.3	4.3	2.3	0.0				2.0	0.0	0.4
LnGrp Delay(d),s/veh	0.0	10.5	17.1	22.2	3.5	0.0				23.3	0.0	21.7
LnGrp LOS		B	B	C	A					C		C
Approach Vol, veh/h		968			1305						291	
Approach Delay, s/veh		13.5			11.5						23.2	
Approach LOS		B			B						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	15.3	29.5		12.4		44.8		
Change Period (Y+Rc), s	3.5	4.5		4.5		4.5		
Max Green Setting (Gmax), s	35.0	25.0		35.0		25.0		
Max Q Clear Time (g_c+I1), s	10.8	14.5		6.0		6.5		
Green Ext Time (p_c), s	1.0	5.6		0.5		7.7		

Intersection Summary	
HCM 2010 Ctrl Delay	13.6
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	190	610	0	0	1260	840	450	0	390	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1863	1863	1863			
Adj Flow Rate, veh/h	200	642	0	0	1326	797	580	0	226			
Adj No. of Lanes	2	2	0	0	4	1	2	0	1			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	320	2166	0	0	2918	721	763	0	340			
Arrive On Green	0.09	0.61	0.00	0.00	0.46	0.46	0.21	0.00	0.21			
Sat Flow, veh/h	3442	3632	0	0	6669	1583	3548	0	1583			
Grp Volume(v), veh/h	200	642	0	0	1326	797	580	0	226			
Grp Sat Flow(s),veh/h/ln	1721	1770	0	0	1602	1583	1774	0	1583			
Q Serve(g_s), s	3.1	4.7	0.0	0.0	7.8	25.0	8.4	0.0	7.2			
Cycle Q Clear(g_c), s	3.1	4.7	0.0	0.0	7.8	25.0	8.4	0.0	7.2			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	320	2166	0	0	2918	721	763	0	340			
V/C Ratio(X)	0.62	0.30	0.00	0.00	0.45	1.11	0.76	0.00	0.66			
Avail Cap(c_a), veh/h	1254	2166	0	0	2918	721	1583	0	706			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	24.0	5.0	0.0	0.0	10.3	15.0	20.2	0.0	19.7			
Incr Delay (d2), s/veh	0.7	0.0	0.0	0.0	0.0	66.3	0.6	0.0	0.8			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.5	2.2	0.0	0.0	3.4	24.1	4.2	0.0	3.2			
LnGrp Delay(d),s/veh	24.7	5.1	0.0	0.0	10.3	81.2	20.8	0.0	20.6			
LnGrp LOS	C	A			B	F	C		C			
Approach Vol, veh/h		842			2123			806				
Approach Delay, s/veh		9.7			36.9			20.8				
Approach LOS		A			D			C				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		38.1			8.6	29.5		16.8
Change Period (Y+Rc), s		4.5			3.5	4.5		5.0
Max Green Setting (Gmax), s		25.0			20.0	25.0		24.5
Max Q Clear Time (g_c+I1), s		6.7			5.1	27.0		10.4
Green Ext Time (p_c), s		11.1			0.3	0.0		1.4

Intersection Summary	
HCM 2010 Ctrl Delay	27.4
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	70	520	150	230	320	130	170	400	60	50	440	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	74	547	158	242	337	137	179	421	63	53	463	84
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	471	1266	364	325	1153	461	351	1305	194	380	1265	228
Arrive On Green	0.47	0.47	0.47	0.78	0.78	0.78	0.42	0.42	0.42	0.42	0.42	0.42
Sat Flow, veh/h	916	2714	781	740	2471	987	856	3092	460	908	2996	540
Grp Volume(v), veh/h	74	356	349	242	240	234	179	240	244	53	272	275
Grp Sat Flow(s),veh/h/ln	916	1770	1725	740	1770	1689	856	1770	1782	908	1770	1767
Q Serve(g_s), s	4.5	12.1	12.2	29.0	3.5	3.6	16.3	8.2	8.3	3.7	9.5	9.6
Cycle Q Clear(g_c), s	8.1	12.1	12.2	41.2	3.5	3.6	25.8	8.2	8.3	12.0	9.5	9.6
Prop In Lane	1.00		0.45	1.00		0.58	1.00		0.26	1.00		0.31
Lane Grp Cap(c), veh/h	471	826	805	325	826	788	351	747	752	380	747	746
V/C Ratio(X)	0.16	0.43	0.43	0.74	0.29	0.30	0.51	0.32	0.32	0.14	0.36	0.37
Avail Cap(c_a), veh/h	471	826	805	325	826	788	351	747	752	380	747	746
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.94	0.94	0.94	0.92	0.92	0.92	1.00	1.00	1.00	0.94	0.94	0.94
Uniform Delay (d), s/veh	16.1	16.0	16.0	15.8	5.7	5.7	26.6	17.4	17.4	21.4	17.8	17.8
Incr Delay (d2), s/veh	0.1	0.3	0.3	8.3	0.2	0.2	5.2	1.1	1.1	0.7	1.3	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	5.9	5.8	6.6	1.7	1.7	4.3	4.2	4.3	1.0	4.9	4.9
LnGrp Delay(d),s/veh	16.2	16.4	16.4	24.1	5.9	5.9	31.9	18.5	18.6	22.1	19.0	19.1
LnGrp LOS	B	B	B	C	A	A	C	B	B	C	B	B
Approach Vol, veh/h		779			716			663			600	
Approach Delay, s/veh		16.4			12.0			22.1			19.3	
Approach LOS		B			B			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		43.0		47.0		43.0		47.0
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0
Max Green Setting (Gmax), s		38.0		42.0		38.0		42.0
Max Q Clear Time (g_c+I1), s		27.8		14.2		14.0		43.2
Green Ext Time (p_c), s		5.1		10.9		8.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	17.3
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	190	500	170	70	260	80	160	760	280	40	690	160
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	200	526	179	74	274	69	168	800	273	42	726	168
Adj No. of Lanes	1	2	0	1	2	1	1	2	1	1	3	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	620	1232	418	367	1524	682	220	1048	469	101	1087	249
Arrive On Green	0.03	0.16	0.15	0.05	0.43	0.43	0.12	0.30	0.30	0.06	0.26	0.26
Sat Flow, veh/h	1774	2597	880	1774	3539	1583	1774	3539	1583	1774	4139	947
Grp Volume(v), veh/h	200	358	347	74	274	69	168	800	273	42	593	301
Grp Sat Flow(s),veh/h/ln	1774	1770	1707	1774	1770	1583	1774	1770	1583	1774	1695	1696
Q Serve(g_s), s	5.4	16.4	16.6	2.1	4.3	2.3	8.2	18.5	8.9	2.1	14.1	14.3
Cycle Q Clear(g_c), s	5.4	16.4	16.6	2.1	4.3	2.3	8.2	18.5	8.9	2.1	14.1	14.3
Prop In Lane	1.00		0.52	1.00		1.00	1.00		1.00	1.00		0.56
Lane Grp Cap(c), veh/h	620	840	810	367	1524	682	220	1048	469	101	891	445
V/C Ratio(X)	0.32	0.43	0.43	0.20	0.18	0.10	0.77	0.76	0.58	0.42	0.67	0.68
Avail Cap(c_a), veh/h	669	840	810	456	1524	682	237	1140	510	217	1055	528
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.91	0.91	0.91	0.91	0.91	0.91	1.00	1.00	1.00	0.68	0.68	0.68
Uniform Delay (d), s/veh	12.5	26.9	27.0	14.8	15.8	15.3	38.2	28.8	12.3	41.0	29.7	29.7
Incr Delay (d2), s/veh	0.3	1.4	1.5	0.2	0.2	0.3	13.0	2.9	1.4	1.9	0.9	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	8.4	8.2	1.1	2.1	1.1	4.9	9.4	4.0	1.1	6.7	6.9
LnGrp Delay(d),s/veh	12.8	28.3	28.5	15.0	16.1	15.5	51.2	31.7	13.8	42.9	30.5	31.6
LnGrp LOS	B	C	C	B	B	B	D	C	B	D	C	C
Approach Vol, veh/h		905			417			1241			936	
Approach Delay, s/veh		25.0			15.8			30.4			31.4	
Approach LOS		C			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.1	28.7	10.5	40.7	13.1	25.6	6.5	44.7
Change Period (Y+Rc), s	6.0	* 6	3.0	5.0	3.0	6.0	3.0	5.0
Max Green Setting (Gmax), s	10.0	* 25	10.0	28.0	11.0	24.0	8.0	30.0
Max Q Clear Time (g_c+I1), s	4.1	20.5	7.4	6.3	10.2	16.3	4.1	18.6
Green Ext Time (p_c), s	2.3	2.2	0.2	4.4	0.0	2.7	0.1	3.5

Intersection Summary	
HCM 2010 Ctrl Delay	27.5
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	60	400	80	40	250	50	150	700	210	30	350	140
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	63	421	21	42	263	37	158	737	221	32	368	147
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	275	553	470	166	553	470	516	1530	459	318	1415	557
Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.57	0.57	0.57	0.57	0.57	0.57
Sat Flow, veh/h	1075	1863	1583	944	1863	1583	882	2685	805	584	2483	977
Grp Volume(v), veh/h	63	421	21	42	263	37	158	486	472	32	261	254
Grp Sat Flow(s),veh/h/ln	1075	1863	1583	944	1863	1583	882	1770	1721	584	1770	1690
Q Serve(g_s), s	4.6	18.5	0.9	3.8	10.4	1.5	9.9	14.6	14.6	3.1	6.7	6.9
Cycle Q Clear(g_c), s	15.0	18.5	0.9	22.3	10.4	1.5	16.8	14.6	14.6	17.7	6.7	6.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.47	1.00		0.58
Lane Grp Cap(c), veh/h	275	553	470	166	553	470	516	1008	981	318	1008	963
V/C Ratio(X)	0.23	0.76	0.04	0.25	0.48	0.08	0.31	0.48	0.48	0.10	0.26	0.26
Avail Cap(c_a), veh/h	422	807	686	295	807	686	516	1008	981	318	1008	963
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.89	0.89	0.89	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.1	28.8	22.6	38.9	25.9	22.8	14.1	11.5	11.5	16.7	9.8	9.8
Incr Delay (d2), s/veh	0.4	2.3	0.0	0.3	0.2	0.0	1.5	1.6	1.7	0.6	0.6	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	9.8	0.4	1.0	5.4	0.7	2.6	7.6	7.4	0.6	3.4	3.4
LnGrp Delay(d),s/veh	32.4	31.0	22.6	39.2	26.1	22.8	15.6	13.1	13.2	17.4	10.4	10.5
LnGrp LOS	C	C	C	D	C	C	B	B	B	B	B	B
Approach Vol, veh/h		505			342			1116			547	
Approach Delay, s/veh		30.8			27.4			13.5			10.8	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		57.3		32.7		57.3		32.7
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0
Max Green Setting (Gmax), s		39.0		39.0		39.0		39.0
Max Q Clear Time (g_c+I1), s		18.8		20.5		19.7		24.3
Green Ext Time (p_c), s		7.3		2.6		7.2		2.4

Intersection Summary	
HCM 2010 Ctrl Delay	18.3
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	1080	480	330	440	0	0	0	0	360	350	170
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0				1900	1863	1863
Adj Flow Rate, veh/h	0	1137	505	347	463	0				379	368	179
Adj No. of Lanes	0	2	1	2	2	0				0	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1298	581	803	2281	0				225	219	387
Arrive On Green	0.00	0.37	0.37	0.47	1.00	0.00				0.24	0.24	0.24
Sat Flow, veh/h	0	3632	1583	3442	3632	0				922	895	1583
Grp Volume(v), veh/h	0	1137	505	347	463	0				747	0	179
Grp Sat Flow(s),veh/h/ln	0	1770	1583	1721	1770	0				1817	0	1583
Q Serve(g_s), s	0.0	27.0	26.7	6.1	0.0	0.0				22.0	0.0	8.7
Cycle Q Clear(g_c), s	0.0	27.0	26.7	6.1	0.0	0.0				22.0	0.0	8.7
Prop In Lane	0.00		1.00	1.00		0.00				0.51		1.00
Lane Grp Cap(c), veh/h	0	1298	581	803	2281	0				444	0	387
V/C Ratio(X)	0.00	0.88	0.87	0.43	0.20	0.00				1.68	0.00	0.46
Avail Cap(c_a), veh/h	0	1298	581	803	2281	0				444	0	387
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.98	0.98	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	26.6	26.5	20.0	0.0	0.0				34.0	0.0	29.0
Incr Delay (d2), s/veh	0.0	8.5	16.2	1.7	0.2	0.0				316.7	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	14.6	14.3	3.0	0.1	0.0				50.0	0.0	3.8
LnGrp Delay(d),s/veh	0.0	35.1	42.7	21.7	0.2	0.0				350.7	0.0	29.3
LnGrp LOS		D	D	C	A					F		C
Approach Vol, veh/h		1642			810						926	
Approach Delay, s/veh		37.5			9.4						288.5	
Approach LOS		D			A						F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	25.0	38.0		27.0		63.0		
Change Period (Y+Rc), s	4.0	5.0		5.0		5.0		
Max Green Setting (Gmax), s	21.0	33.0		22.0		58.0		
Max Q Clear Time (g_c+I1), s	8.1	29.0		24.0		2.0		
Green Ext Time (p_c), s	0.5	2.8		0.0		10.5		

Intersection Summary	
HCM 2010 Ctrl Delay	99.6
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	130	1340	0	0	520	220	270	10	860	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1900	1863	1863			
Adj Flow Rate, veh/h	137	1411	0	0	547	232	284	11	905			
Adj No. of Lanes	1	2	0	0	3	1	0	1	1			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	166	2242	0	0	2462	767	437	17	405			
Arrive On Green	0.19	1.00	0.00	0.00	0.48	0.48	0.26	0.26	0.26			
Sat Flow, veh/h	1774	3632	0	0	5253	1583	1711	66	1583			
Grp Volume(v), veh/h	137	1411	0	0	547	232	295	0	905			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1695	1583	1777	0	1583			
Q Serve(g_s), s	6.7	0.0	0.0	0.0	5.6	8.0	13.3	0.0	23.0			
Cycle Q Clear(g_c), s	6.7	0.0	0.0	0.0	5.6	8.0	13.3	0.0	23.0			
Prop In Lane	1.00		0.00	0.00		1.00	0.96		1.00			
Lane Grp Cap(c), veh/h	166	2242	0	0	2462	767	454	0	405			
V/C Ratio(X)	0.83	0.63	0.00	0.00	0.22	0.30	0.65	0.00	2.24			
Avail Cap(c_a), veh/h	197	2242	0	0	2462	767	454	0	405			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.36	0.36	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	35.9	0.0	0.0	0.0	13.4	14.0	29.9	0.0	33.5			
Incr Delay (d2), s/veh	7.4	0.5	0.0	0.0	0.2	1.0	2.6	0.0	564.4			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	3.6	0.2	0.0	0.0	2.6	3.7	6.9	0.0	73.4			
LnGrp Delay(d),s/veh	43.3	0.5	0.0	0.0	13.6	15.0	32.5	0.0	597.9			
LnGrp LOS	D	A			B	B	C		F			
Approach Vol, veh/h		1548			779			1200				
Approach Delay, s/veh		4.3			14.0			458.9				
Approach LOS		A			B			F				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		62.0			13.4	48.6		28.0
Change Period (Y+Rc), s		5.0			5.0	5.0		5.0
Max Green Setting (Gmax), s		57.0			10.0	42.0		23.0
Max Q Clear Time (g_c+I1), s		2.0			8.7	10.0		25.0
Green Ext Time (p_c), s		16.8			0.0	14.3		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	161.1
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	150	90	200	100	0	0	0	0	90	220	110
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1900	1863	1863	0				1900	1863	1863
Adj Flow Rate, veh/h	0	158	95	211	105	0				95	232	11
Adj No. of Lanes	0	2	0	1	2	0				0	3	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	409	233	417	1874	0				417	798	373
Arrive On Green	0.00	0.19	0.19	0.24	0.53	0.00				0.24	0.24	0.24
Sat Flow, veh/h	0	2268	1239	1774	3632	0				1774	3390	1583
Grp Volume(v), veh/h	0	127	126	211	105	0				95	232	11
Grp Sat Flow(s),veh/h/ln	0	1770	1644	1774	1770	0				1774	1695	1583
Q Serve(g_s), s	0.0	2.7	2.9	4.4	0.6	0.0				1.8	2.4	0.2
Cycle Q Clear(g_c), s	0.0	2.7	2.9	4.4	0.6	0.0				1.8	2.4	0.2
Prop In Lane	0.00		0.75	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	333	309	417	1874	0				417	798	373
V/C Ratio(X)	0.00	0.38	0.41	0.51	0.06	0.00				0.23	0.29	0.03
Avail Cap(c_a), veh/h	0	1083	1006	835	2665	0				835	1595	745
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	15.1	15.2	14.1	4.8	0.0				13.1	13.3	12.5
Incr Delay (d2), s/veh	0.0	0.5	0.6	0.4	0.0	0.0				0.2	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.4	1.4	2.2	0.3	0.0				0.9	1.1	0.1
LnGrp Delay(d),s/veh	0.0	15.6	15.8	14.5	4.9	0.0				13.3	13.5	12.5
LnGrp LOS		B	B	B	A					B	B	B
Approach Vol, veh/h		253			316						338	
Approach Delay, s/veh		15.7			11.3						13.4	
Approach LOS		B			B						B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	14.5	13.0		15.0		27.5		
Change Period (Y+Rc), s	4.5	5.0		5.0		5.0		
Max Green Setting (Gmax), s	20.0	26.0		20.0		32.0		
Max Q Clear Time (g_c+I1), s	6.4	4.9		4.4		2.6		
Green Ext Time (p_c), s	0.2	1.6		1.5		1.8		

Intersection Summary	
HCM 2010 Ctrl Delay	13.3
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	120	180	0	0	360	340	20	530	90	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1900	1863	1900			
Adj Flow Rate, veh/h	126	189	0	0	379	335	21	558	95			
Adj No. of Lanes	1	2	0	0	2	2	0	2	0			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	2	2	0	0	2	2	0	2	0			
Cap, veh/h	178	1556	0	0	893	759	33	908	163			
Arrive On Green	0.10	0.44	0.00	0.00	0.24	0.24	0.30	0.30	0.30			
Sat Flow, veh/h	1774	3632	0	0	3725	3167	108	2982	536			
Grp Volume(v), veh/h	126	189	0	0	379	335	360	0	314			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1863	1583	1857	0	1768			
Q Serve(g_s), s	2.4	1.1	0.0	0.0	3.0	3.2	5.9	0.0	5.3			
Cycle Q Clear(g_c), s	2.4	1.1	0.0	0.0	3.0	3.2	5.9	0.0	5.3			
Prop In Lane	1.00		0.00	0.00		1.00	0.06		0.30			
Lane Grp Cap(c), veh/h	178	1556	0	0	893	759	566	0	539			
V/C Ratio(X)	0.71	0.12	0.00	0.00	0.42	0.44	0.64	0.00	0.58			
Avail Cap(c_a), veh/h	1260	3518	0	0	3703	3148	1846	0	1758			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	15.3	5.8	0.0	0.0	11.3	11.4	10.6	0.0	10.3			
Incr Delay (d2), s/veh	1.9	0.0	0.0	0.0	0.1	0.2	0.4	0.0	0.4			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.3	0.5	0.0	0.0	1.5	1.4	3.1	0.0	2.6			
LnGrp Delay(d),s/veh	17.2	5.9	0.0	0.0	11.4	11.5	11.0	0.0	10.7			
LnGrp LOS	B	A			B	B	B		B			
Approach Vol, veh/h		315			714			674				
Approach Delay, s/veh		10.4			11.5			10.9				
Approach LOS		B			B			B				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		20.0			7.0	12.9		15.2
Change Period (Y+Rc), s		4.5			3.5	4.5		4.5
Max Green Setting (Gmax), s		35.0			25.0	35.0		35.0
Max Q Clear Time (g_c+I1), s		3.1			4.4	5.2		7.9
Green Ext Time (p_c), s		3.3			0.1	3.3		2.8

Intersection Summary	
HCM 2010 Ctrl Delay	11.0
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	510	170	920	630	0	0	0	0	180	290	180
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0				1863	1863	1863
Adj Flow Rate, veh/h	0	537	122	968	663	0				189	305	96
Adj No. of Lanes	0	3	1	2	2	0				1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1991	620	737	2321	0				380	399	339
Arrive On Green	0.00	0.39	0.39	0.21	0.66	0.00				0.21	0.21	0.21
Sat Flow, veh/h	0	5253	1583	3442	3632	0				1774	1863	1583
Grp Volume(v), veh/h	0	537	122	968	663	0				189	305	96
Grp Sat Flow(s),veh/h/ln	0	1695	1583	1721	1770	0				1774	1863	1583
Q Serve(g_s), s	0.0	5.0	3.6	15.0	5.6	0.0				6.6	10.8	3.5
Cycle Q Clear(g_c), s	0.0	5.0	3.6	15.0	5.6	0.0				6.6	10.8	3.5
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1991	620	737	2321	0				380	399	339
V/C Ratio(X)	0.00	0.27	0.20	1.31	0.29	0.00				0.50	0.76	0.28
Avail Cap(c_a), veh/h	0	1991	620	737	2321	0				380	399	339
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.77	0.77	0.00				0.94	0.94	0.94
Uniform Delay (d), s/veh	0.0	14.5	14.0	27.5	5.1	0.0				24.2	25.8	23.0
Incr Delay (d2), s/veh	0.0	0.3	0.7	148.2	0.0	0.0				4.3	12.3	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.4	1.7	22.2	2.7	0.0				3.7	6.9	1.7
LnGrp Delay(d),s/veh	0.0	14.8	14.8	175.7	5.1	0.0				28.5	38.1	24.9
LnGrp LOS		B	B	F	A					C	D	C
Approach Vol, veh/h		659			1631						590	
Approach Delay, s/veh		14.8			106.4						32.9	
Approach LOS		B			F						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	18.5	31.5		20.0		50.0		
Change Period (Y+Rc), s	3.5	4.1		5.0		4.1		
Max Green Setting (Gmax), s	15.0	27.0		15.0		35.0		
Max Q Clear Time (g_c+I1), s	17.0	7.0		12.8		7.6		
Green Ext Time (p_c), s	0.0	7.5		0.5		8.4		

Intersection Summary	
HCM 2010 Ctrl Delay	70.4
HCM 2010 LOS	E

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	160	490	0	0	1280	400	380	80	480	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1863	1863	1863			
Adj Flow Rate, veh/h	168	516	0	0	1347	346	289	327	273			
Adj No. of Lanes	2	2	0	0	4	1	1	1	1			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	506	2004	0	0	2356	582	522	548	466			
Arrive On Green	0.15	0.57	0.00	0.00	0.37	0.37	0.29	0.29	0.29			
Sat Flow, veh/h	3442	3632	0	0	6669	1583	1774	1863	1583			
Grp Volume(v), veh/h	168	516	0	0	1347	346	289	327	273			
Grp Sat Flow(s),veh/h/ln	1721	1770	0	0	1602	1583	1774	1863	1583			
Q Serve(g_s), s	3.0	5.0	0.0	0.0	11.4	12.0	9.3	10.2	10.0			
Cycle Q Clear(g_c), s	3.0	5.0	0.0	0.0	11.4	12.0	9.3	10.2	10.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	506	2004	0	0	2356	582	522	548	466			
V/C Ratio(X)	0.33	0.26	0.00	0.00	0.57	0.59	0.55	0.60	0.59			
Avail Cap(c_a), veh/h	506	2004	0	0	2356	582	522	548	466			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	26.0	7.5	0.0	0.0	17.2	17.4	20.2	20.5	20.5			
Incr Delay (d2), s/veh	1.8	0.3	0.0	0.0	1.0	4.4	4.2	4.7	5.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.5	2.5	0.0	0.0	5.2	5.9	5.2	6.0	5.0			
LnGrp Delay(d),s/veh	27.8	7.8	0.0	0.0	18.2	21.8	24.4	25.3	25.8			
LnGrp LOS	C	A			B	C	C	C	C			
Approach Vol, veh/h		684			1693			889				
Approach Delay, s/veh		12.7			19.0			25.2				
Approach LOS		B			B			C				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		43.0			13.5	29.5		25.0
Change Period (Y+Rc), s		4.5			3.5	4.5		5.0
Max Green Setting (Gmax), s		30.0			10.0	25.0		20.0
Max Q Clear Time (g_c+I1), s		7.0			5.0	14.0		12.2
Green Ext Time (p_c), s		11.5			0.1	7.2		2.5

Intersection Summary	
HCM 2010 Ctrl Delay	19.3
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	280	0	170	0	0	0	160	1120	0	10	780	170
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	0	1863				1863	1863	0	1900	1863	1900
Adj Flow Rate, veh/h	295	0	179				168	1179	0	11	821	179
Adj No. of Lanes	2	0	1				1	3	0	0	3	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	0	2				2	2	0	2	2	2
Cap, veh/h	511	0	235				483	3709	0	52	2583	555
Arrive On Green	0.15	0.00	0.15				0.05	0.73	0.00	0.64	0.64	0.64
Sat Flow, veh/h	3442	0	1583				1774	5253	0	17	4017	863
Grp Volume(v), veh/h	295	0	179				168	1179	0	374	317	320
Grp Sat Flow(s),veh/h/ln	1721	0	1583				1774	1695	0	1812	1543	1543
Q Serve(g_s), s	7.2	0.0	9.8				2.7	7.4	0.0	0.0	8.3	8.4
Cycle Q Clear(g_c), s	7.2	0.0	9.8				2.7	7.4	0.0	8.1	8.3	8.4
Prop In Lane	1.00		1.00				1.00		0.00	0.03		0.56
Lane Grp Cap(c), veh/h	511	0	235				483	3709	0	1206	992	992
V/C Ratio(X)	0.58	0.00	0.76				0.35	0.32	0.00	0.31	0.32	0.32
Avail Cap(c_a), veh/h	1262	0	581				605	3709	0	1206	992	992
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.95	0.00	0.95				1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.7	0.0	36.8				4.8	4.3	0.0	7.2	7.2	7.2
Incr Delay (d2), s/veh	1.0	0.0	4.8				0.4	0.2	0.0	0.7	0.9	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	0.0	8.6				1.3	3.5	0.0	4.4	3.8	3.8
LnGrp Delay(d),s/veh	36.7	0.0	41.6				5.2	4.5	0.0	7.8	8.1	8.1
LnGrp LOS	D		D				A	A		A	A	A
Approach Vol, veh/h		474						1347			1011	
Approach Delay, s/veh		38.5						4.6			8.0	
Approach LOS		D						A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		71.6		18.4	7.8	63.9		
Change Period (Y+Rc), s		6.0		5.0	3.0	6.0		
Max Green Setting (Gmax), s		46.0		33.0	11.0	30.0		
Max Q Clear Time (g_c+I1), s		9.4		11.8	4.7	10.4		
Green Ext Time (p_c), s		20.4		1.6	0.2	13.7		

Intersection Summary	
HCM 2010 Ctrl Delay	11.5
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	74.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	0	0	450	1480	1540	760
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	Yield
Storage Length	0	-	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	474	1558	1621	800

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	3347	811	1621	0	-	0
Stage 1	1621	-	-	-	-	-
Stage 2	1726	-	-	-	-	-
Critical Hdwy	6.29	7.14	5.34	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.67	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	10	277	~ 194	-	-	-
Stage 1	101	-	-	-	-	-
Stage 2	127	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	10	277	~ 194	-	-	-
Mov Cap-2 Maneuver	10	-	-	-	-	-
Stage 1	101	-	-	-	-	-
Stage 2	127	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	163.8	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	~ 194	-	-	-	-
HCM Lane V/C Ratio	2.442	-	-	-	-
HCM Control Delay (s)	$ 702.3	-	0	-	-
HCM Lane LOS	F	-	A	-	-
HCM 95th %tile Q(veh)	39.5	-	-	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

APPENDIX F: BUILD-OUT (2035) PLUS PROJECT LEVEL OF SERVICE AND SYNCHRO WORKSHEETS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	20	180	220	456	590	200	441	454	130	20	688	640
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	21	189	232	480	621	211	464	478	71	21	949	437
Adj No. of Lanes	1	2	0	1	2	0	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	103	472	422	215	692	235	493	1691	756	177	1118	475
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.28	0.48	0.48	0.10	0.30	0.30
Sat Flow, veh/h	657	1770	1583	962	2596	881	1774	3539	1583	1774	3725	1583
Grp Volume(v), veh/h	21	189	232	480	423	409	464	478	71	21	949	437
Grp Sat Flow(s),veh/h/ln	657	1770	1583	962	1770	1707	1774	1770	1583	1774	1863	1583
Q Serve(g_s), s	2.9	7.9	11.3	12.7	20.7	20.8	23.0	7.3	2.2	1.0	21.5	24.0
Cycle Q Clear(g_c), s	23.7	7.9	11.3	24.0	20.7	20.8	23.0	7.3	2.2	1.0	21.5	24.0
Prop In Lane	1.00		1.00	1.00		0.52	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	103	472	422	215	472	455	493	1691	756	177	1118	475
V/C Ratio(X)	0.20	0.40	0.55	2.23	0.90	0.90	0.94	0.28	0.09	0.12	0.85	0.92
Avail Cap(c_a), veh/h	103	472	422	215	472	455	493	1691	756	177	1118	475
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.47	0.47	0.47	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.2	27.1	28.4	41.0	31.8	31.8	31.8	14.2	12.8	36.9	29.6	30.5
Incr Delay (d2), s/veh	4.4	2.5	5.1	567.5	22.3	23.2	16.8	0.2	0.1	1.4	8.1	25.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	4.2	5.6	39.3	13.0	12.7	13.5	3.6	1.0	0.5	12.3	13.8
LnGrp Delay(d),s/veh	47.6	29.6	33.4	608.5	54.1	55.0	48.6	14.4	13.0	38.2	37.7	56.0
LnGrp LOS	D	C	C	F	D	D	D	B	B	D	D	E
Approach Vol, veh/h		442			1312			1013			1407	
Approach Delay, s/veh		32.5			257.2			30.0			43.4	
Approach LOS		C			F			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	13.0	48.0		29.0	29.0	32.0		29.0
Change Period (Y+Rc), s	4.0	5.0		5.0	4.0	5.0		5.0
Max Green Setting (Gmax), s	9.0	41.0		24.0	25.0	27.0		24.0
Max Q Clear Time (g_c+I1), s	3.0	9.3		25.7	25.0	26.0		26.0
Green Ext Time (p_c), s	0.0	14.7		0.0	0.0	0.8		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	106.2
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	380	0	755	0	0	0	0	615	468	700	595	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	400	0	795				0	647	392	737	626	0
Adj No. of Lanes	1	1	0				0	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	561	0	501				0	722	323	597	2059	0
Arrive On Green	0.32	0.00	0.32				0.00	0.20	0.20	0.34	0.58	0.00
Sat Flow, veh/h	1774	0	1583				0	3632	1583	1774	3632	0
Grp Volume(v), veh/h	400	0	795				0	647	392	737	626	0
Grp Sat Flow(s),veh/h/ln	1774	0	1583				0	1770	1583	1774	1770	0
Q Serve(g_s), s	19.5	0.0	31.0				0.0	17.4	20.0	33.0	8.8	0.0
Cycle Q Clear(g_c), s	19.5	0.0	31.0				0.0	17.4	20.0	33.0	8.8	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	561	0	501				0	722	323	597	2059	0
V/C Ratio(X)	0.71	0.00	1.59				0.00	0.90	1.21	1.23	0.30	0.00
Avail Cap(c_a), veh/h	561	0	501				0	722	323	597	2059	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.09	0.09	0.00
Uniform Delay (d), s/veh	29.6	0.0	33.5				0.0	38.0	39.0	32.5	10.4	0.0
Incr Delay (d2), s/veh	4.6	0.0	273.7				0.0	16.0	121.0	106.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.3	0.0	51.6				0.0	10.1	19.6	33.8	4.3	0.0
LnGrp Delay(d),s/veh	34.2	0.0	307.2				0.0	54.0	160.0	139.1	10.5	0.0
LnGrp LOS	C		F					D	F	F	B	
Approach Vol, veh/h		1195						1039			1363	
Approach Delay, s/veh		215.8						94.0			80.0	
Approach LOS		F						F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	37.0	25.0		36.0		62.0		
Change Period (Y+Rc), s	4.0	5.0		5.0		5.0		
Max Green Setting (Gmax), s	33.0	20.0		31.0		49.0		
Max Q Clear Time (g_c+I1), s	35.0	22.0		33.0		10.8		
Green Ext Time (p_c), s	0.0	0.0		0.0		12.9		

Intersection Summary	
HCM 2010 Ctrl Delay	129.2
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	50	420	160	210	300	50	90	553	46	201	901	140
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	53	442	52	221	316	53	95	582	-12	212	948	147
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	84	670	300	253	865	144	422	782	350	666	1102	171
Arrive On Green	0.05	0.19	0.19	0.14	0.28	0.28	0.24	0.22	0.00	0.38	0.36	0.35
Sat Flow, veh/h	1774	3539	1583	1774	3039	504	1774	3539	1583	1774	3072	476
Grp Volume(v), veh/h	53	442	52	221	183	186	95	582	-12	212	546	549
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1774	1774	1770	1583	1774	1770	1779
Q Serve(g_s), s	3.3	13.0	1.8	13.7	9.2	9.4	4.8	17.2	0.0	9.5	32.0	32.1
Cycle Q Clear(g_c), s	3.3	13.0	1.8	13.7	9.2	9.4	4.8	17.2	0.0	9.5	32.0	32.1
Prop In Lane	1.00		1.00	1.00		0.28	1.00		1.00	1.00		0.27
Lane Grp Cap(c), veh/h	84	670	300	253	504	505	422	782	350	666	635	638
V/C Ratio(X)	0.63	0.66	0.17	0.87	0.36	0.37	0.23	0.74	-0.03	0.32	0.86	0.86
Avail Cap(c_a), veh/h	253	1011	452	253	506	507	422	1422	636	666	711	715
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.87	0.87	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.4	42.1	13.5	47.0	32.0	32.1	34.4	40.7	0.0	24.8	33.3	33.4
Incr Delay (d2), s/veh	7.5	1.1	0.3	26.5	0.4	0.5	0.2	5.6	0.0	0.3	14.2	14.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	6.4	0.8	8.6	4.6	4.7	2.4	9.0	0.0	4.7	18.1	18.2
LnGrp Delay(d),s/veh	59.8	43.2	13.8	73.5	32.4	32.6	34.6	46.2	0.0	25.1	47.5	47.6
LnGrp LOS	E	D	B	E	C	C	C	D		C	D	D
Approach Vol, veh/h		547			590			665			1307	
Approach Delay, s/veh		42.0			47.9			45.4			43.9	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	44.0	26.8	18.0	23.2	28.6	42.2	7.3	33.9
Change Period (Y+Rc), s	3.0	5.0	3.0	5.0	3.0	5.0	3.0	5.0
Max Green Setting (Gmax), s	10.0	42.0	15.0	29.0	10.0	42.0	15.0	29.0
Max Q Clear Time (g_c+I1), s	11.5	19.2	15.7	15.0	6.8	34.1	5.3	11.4
Green Ext Time (p_c), s	0.0	2.6	0.0	3.2	0.1	3.1	0.1	3.5

Intersection Summary	
HCM 2010 Ctrl Delay	44.7
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	620	320	518	503	0	0	0	0	970	40	230
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1900	1863	1863	0				1863	1863	1863
Adj Flow Rate, veh/h	0	653	337	545	529	0				1057	0	55
Adj No. of Lanes	0	4	0	2	2	0				2	0	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1416	466	664	1902	0				1207	0	539
Arrive On Green	0.00	0.29	0.29	0.19	0.54	0.00				0.34	0.00	0.34
Sat Flow, veh/h	0	5067	1583	3442	3632	0				3548	0	1583
Grp Volume(v), veh/h	0	653	337	545	529	0				1057	0	55
Grp Sat Flow(s),veh/h/ln	0	1602	1583	1721	1770	0				1774	0	1583
Q Serve(g_s), s	0.0	7.8	13.4	10.7	5.7	0.0				19.7	0.0	1.7
Cycle Q Clear(g_c), s	0.0	7.8	13.4	10.7	5.7	0.0				19.7	0.0	1.7
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1416	466	664	1902	0				1207	0	539
V/C Ratio(X)	0.00	0.46	0.72	0.82	0.28	0.00				0.88	0.00	0.10
Avail Cap(c_a), veh/h	0	2394	789	1225	1902	0				1768	0	789
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	20.2	22.2	27.2	8.8	0.0				21.8	0.0	15.8
Incr Delay (d2), s/veh	0.0	0.1	0.8	1.0	0.0	0.0				2.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.5	5.9	5.2	2.8	0.0				10.0	0.0	0.7
LnGrp Delay(d),s/veh	0.0	20.3	23.0	28.2	8.9	0.0				24.4	0.0	15.9
LnGrp LOS		C	C	C	A					C		B
Approach Vol, veh/h		990			1074						1112	
Approach Delay, s/veh		21.2			18.7						24.0	
Approach LOS		C			B						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	17.1	24.8		28.4		41.9		
Change Period (Y+Rc), s	3.5	4.1		4.5		4.1		
Max Green Setting (Gmax), s	25.0	35.0		35.0		35.0		
Max Q Clear Time (g_c+I1), s	12.7	15.4		21.7		7.7		
Green Ext Time (p_c), s	0.9	5.3		2.2		7.5		

Intersection Summary	
HCM 2010 Ctrl Delay	21.3
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	160	1039	0	0	761	416	240	10	593	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1863	1863	1863			
Adj Flow Rate, veh/h	168	1094	0	0	801	275	172	0	629			
Adj No. of Lanes	2	2	0	0	4	1	1	0	2			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	317	1993	0	0	2558	632	462	0	824			
Arrive On Green	0.09	0.56	0.00	0.00	0.40	0.40	0.26	0.00	0.26			
Sat Flow, veh/h	3442	3632	0	0	6669	1583	1774	0	3167			
Grp Volume(v), veh/h	168	1094	0	0	801	275	172	0	629			
Grp Sat Flow(s),veh/h/ln	1721	1770	0	0	1602	1583	1774	0	1583			
Q Serve(g_s), s	2.3	9.5	0.0	0.0	4.2	6.1	3.9	0.0	8.9			
Cycle Q Clear(g_c), s	2.3	9.5	0.0	0.0	4.2	6.1	3.9	0.0	8.9			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	317	1993	0	0	2558	632	462	0	824			
V/C Ratio(X)	0.53	0.55	0.00	0.00	0.31	0.44	0.37	0.00	0.76			
Avail Cap(c_a), veh/h	1767	2544	0	0	4737	1170	1275	0	2276			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	21.1	6.7	0.0	0.0	10.0	10.6	14.8	0.0	16.6			
Incr Delay (d2), s/veh	0.5	0.1	0.0	0.0	0.0	0.2	0.2	0.0	0.6			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.1	4.6	0.0	0.0	1.8	2.7	1.9	0.0	3.9			
LnGrp Delay(d),s/veh	21.6	6.8	0.0	0.0	10.1	10.8	14.9	0.0	17.2			
LnGrp LOS	C	A			B	B	B		B			
Approach Vol, veh/h		1262			1076			801				
Approach Delay, s/veh		8.8			10.3			16.7				
Approach LOS		A			B			B				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		31.5			8.0	23.5		17.2
Change Period (Y+Rc), s		4.1			3.5	4.1		4.5
Max Green Setting (Gmax), s		35.0			25.0	36.0		35.0
Max Q Clear Time (g_c+I1), s		11.5			4.3	8.1		10.9
Green Ext Time (p_c), s		10.5			0.3	11.3		1.7

Intersection Summary	
HCM 2010 Ctrl Delay	11.3
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	80	1052	60	80	937	80	30	180	40	120	170	130
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	84	1107	63	84	986	84	32	189	42	126	179	137
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	480	2050	117	439	1957	167	237	676	147	281	459	332
Arrive On Green	0.11	0.60	0.59	0.10	0.59	0.58	0.23	0.23	0.22	0.23	0.23	0.22
Sat Flow, veh/h	1774	3404	194	1774	3302	281	1059	2892	629	1145	1963	1419
Grp Volume(v), veh/h	84	575	595	84	528	542	32	114	117	126	160	156
Grp Sat Flow(s),veh/h/ln	1774	1770	1829	1774	1770	1813	1059	1770	1752	1145	1770	1612
Q Serve(g_s), s	1.4	18.0	18.1	1.5	16.3	16.4	2.5	5.0	5.2	9.5	7.2	7.8
Cycle Q Clear(g_c), s	1.4	18.0	18.1	1.5	16.3	16.4	10.2	5.0	5.2	14.7	7.2	7.8
Prop In Lane	1.00		0.11	1.00		0.16	1.00		0.36	1.00		0.88
Lane Grp Cap(c), veh/h	480	1066	1101	439	1049	1075	237	414	410	281	414	377
V/C Ratio(X)	0.18	0.54	0.54	0.19	0.50	0.50	0.14	0.28	0.29	0.45	0.39	0.41
Avail Cap(c_a), veh/h	550	1066	1101	526	1049	1075	327	565	559	379	565	515
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	6.4	11.0	11.1	7.0	11.1	11.2	34.9	29.5	29.7	35.6	30.3	30.9
Incr Delay (d2), s/veh	0.2	2.0	1.9	0.2	1.7	1.7	0.3	0.4	0.4	1.1	0.6	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	9.2	9.5	0.7	8.4	8.6	0.7	2.4	2.6	3.1	3.6	3.5
LnGrp Delay(d),s/veh	6.6	13.0	13.0	7.2	12.8	12.9	35.2	29.8	30.1	36.7	30.9	31.7
LnGrp LOS	A	B	B	A	B	B	D	C	C	D	C	C
Approach Vol, veh/h		1254			1154			263			442	
Approach Delay, s/veh		12.5			12.4			30.6			32.8	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.0	57.7		24.3	11.1	58.6		24.3
Change Period (Y+Rc), s	4.0	5.0		5.3	4.0	5.0		5.3
Max Green Setting (Gmax), s	11.7	41.0		27.0	11.7	41.0		27.0
Max Q Clear Time (g_c+I1), s	3.4	18.4		12.2	3.5	20.1		16.7
Green Ext Time (p_c), s	0.1	11.2		2.6	0.1	10.7		2.3

Intersection Summary	
HCM 2010 Ctrl Delay	16.9
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	40	871	112	90	828	63	99	159	30	40	238	60
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	42	917	90	95	872	66	104	167	32	42	251	63
Adj No. of Lanes	1	1	1	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	343	1071	910	181	1918	145	251	456	87	342	431	108
Arrive On Green	0.57	0.57	0.57	0.57	0.57	0.57	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	595	1863	1583	557	3335	252	1061	1520	291	1179	1438	361
Grp Volume(v), veh/h	42	917	90	95	463	475	104	0	199	42	0	314
Grp Sat Flow(s),veh/h/ln	595	1863	1583	557	1770	1818	1061	0	1811	1179	0	1799
Q Serve(g_s), s	3.5	33.0	2.0	13.0	12.0	12.0	7.4	0.0	6.9	2.3	0.0	11.8
Cycle Q Clear(g_c), s	15.5	33.0	2.0	46.0	12.0	12.0	19.2	0.0	6.9	9.2	0.0	11.8
Prop In Lane	1.00		1.00	1.00		0.14	1.00		0.16	1.00		0.20
Lane Grp Cap(c), veh/h	343	1071	910	181	1018	1045	251	0	543	342	0	540
V/C Ratio(X)	0.12	0.86	0.10	0.53	0.45	0.45	0.41	0.00	0.37	0.12	0.00	0.58
Avail Cap(c_a), veh/h	343	1071	910	181	1018	1045	251	0	543	342	0	540
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.39	0.39	0.39	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.3	14.2	7.7	33.8	9.8	9.8	31.9	0.0	22.0	25.7	0.0	23.7
Incr Delay (d2), s/veh	0.7	8.8	0.2	1.1	0.1	0.1	5.0	0.0	1.9	0.7	0.0	4.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	19.2	0.9	2.1	5.8	6.0	2.5	0.0	3.7	0.8	0.0	6.5
LnGrp Delay(d),s/veh	15.0	23.0	7.9	34.9	9.9	9.9	36.8	0.0	23.9	26.4	0.0	28.3
LnGrp LOS	B	C	A	C	A	A	D		C	C		C
Approach Vol, veh/h		1049			1033			303			356	
Approach Delay, s/veh		21.4			12.2			28.4			28.1	
Approach LOS		C			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		51.0		29.0		51.0		29.0
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0
Max Green Setting (Gmax), s		46.0		24.0		46.0		24.0
Max Q Clear Time (g_c+I1), s		35.0		13.8		48.0		21.2
Green Ext Time (p_c), s		8.7		2.6		0.0		1.0

Intersection Summary	
HCM 2010 Ctrl Delay	19.6
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	124	585	301	360	530	201	330	540	334	132	687	223
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	131	616	317	379	558	212	347	568	279	139	723	147
Adj No. of Lanes	1	2	0	1	2	0	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	346	700	360	284	689	261	249	1159	518	218	1097	491
Arrive On Green	0.20	0.31	0.30	0.16	0.27	0.26	0.05	0.11	0.11	0.12	0.31	0.31
Sat Flow, veh/h	1774	2263	1164	1774	2512	952	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	131	482	451	379	393	377	347	568	279	139	723	147
Grp Sat Flow(s),veh/h/ln	1774	1770	1657	1774	1770	1695	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	6.4	25.8	25.9	16.0	20.7	20.8	14.1	15.1	16.7	7.5	17.7	7.1
Cycle Q Clear(g_c), s	6.4	25.8	25.9	16.0	20.7	20.8	14.1	15.1	16.7	7.5	17.7	7.1
Prop In Lane	1.00		0.70	1.00		0.56	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	346	548	513	284	485	465	249	1159	518	218	1097	491
V/C Ratio(X)	0.38	0.88	0.88	1.34	0.81	0.81	1.39	0.49	0.54	0.64	0.66	0.30
Avail Cap(c_a), veh/h	346	549	514	284	549	525	249	1159	518	248	1097	491
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	0.39	0.39	0.39	0.97	0.97	0.97	1.00	1.00	1.00	0.66	0.66	0.66
Uniform Delay (d), s/veh	35.0	32.8	33.1	42.0	33.8	34.2	47.7	36.7	37.4	41.7	29.9	26.2
Incr Delay (d2), s/veh	0.3	6.8	7.2	172.3	7.7	8.2	198.8	0.3	1.1	2.9	2.1	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	13.6	12.8	21.4	11.2	10.8	20.7	7.5	7.5	3.8	9.0	3.2
LnGrp Delay(d),s/veh	35.2	39.5	40.3	214.3	41.6	42.4	246.5	37.1	38.5	44.6	32.0	27.3
LnGrp LOS	D	D	D	F	D	D	F	D	D	D	C	C
Approach Vol, veh/h		1064			1149			1194			1009	
Approach Delay, s/veh		39.3			98.8			98.3			33.0	
Approach LOS		D			F			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	32.9	16.1	33.0	21.5	29.4	14.3	34.7
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	13.0	28.0	11.0	28.0	13.0	28.0	11.0	28.0
Max Q Clear Time (g_c+I1), s	18.0	27.9	16.1	19.7	8.4	22.8	9.5	18.7
Green Ext Time (p_c), s	0.0	0.1	0.0	2.7	2.0	1.6	0.1	3.8

Intersection Summary	
HCM 2010 Ctrl Delay	69.3
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	403	215	200	569	0	204	7	170	0	22	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1900	1863	1863	1900	1900	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	0	424	226	211	599	0	215	7	64	0	23	11
Adj No. of Lanes	0	2	0	1	2	0	0	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	1119	590	245	2413	0	335	8	328	80	247	118
Arrive On Green	0.00	0.50	0.50	0.28	1.00	0.00	0.21	0.21	0.21	0.00	0.21	0.21
Sat Flow, veh/h	0	2334	1183	1774	3632	0	1236	40	1583	1324	1192	570
Grp Volume(v), veh/h	0	334	316	211	599	0	222	0	64	0	0	34
Grp Sat Flow(s),veh/h/ln	0	1770	1654	1774	1770	0	1277	0	1583	1324	0	1762
Q Serve(g_s), s	0.0	10.5	10.6	10.2	0.0	0.0	13.9	0.0	3.0	0.0	0.0	1.4
Cycle Q Clear(g_c), s	0.0	10.5	10.6	10.2	0.0	0.0	15.3	0.0	3.0	0.0	0.0	1.4
Prop In Lane	0.00		0.72	1.00		0.00	0.97		1.00	1.00		0.32
Lane Grp Cap(c), veh/h	0	883	826	245	2413	0	343	0	328	80	0	365
V/C Ratio(X)	0.00	0.38	0.38	0.86	0.25	0.00	0.65	0.00	0.20	0.00	0.00	0.09
Avail Cap(c_a), veh/h	0	883	826	394	2413	0	533	0	545	247	0	587
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.93	0.93	0.00	1.00	0.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	13.9	14.0	31.7	0.0	0.0	35.1	0.0	29.5	0.0	0.0	28.9
Incr Delay (d2), s/veh	0.0	1.2	1.3	9.9	0.0	0.0	2.1	0.0	0.3	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.4	5.1	5.6	0.0	0.0	5.5	0.0	1.3	0.0	0.0	0.7
LnGrp Delay(d),s/veh	0.0	15.1	15.3	41.6	0.0	0.0	37.1	0.0	29.8	0.0	0.0	29.0
LnGrp LOS		B	B	D	A		D		C			C
Approach Vol, veh/h		650			810			286			34	
Approach Delay, s/veh		15.2			10.9			35.5			29.0	
Approach LOS		B			B			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		8
Phs Duration (G+Y+Rc), s	16.4	49.9		23.6		66.4		23.6
Change Period (Y+Rc), s	4.0	5.0		5.0		5.0		5.0
Max Green Setting (Gmax), s	20.0	25.0		30.0		49.0		31.0
Max Q Clear Time (g_c+I1), s	12.2	12.6		3.4		2.0		17.3
Green Ext Time (p_c), s	0.3	6.0		1.6		9.9		1.3

Intersection Summary	
HCM 2010 Ctrl Delay	16.8
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	84	458	159	303	351	204	196	543	360	196	768	174
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	88	482	167	319	369	215	206	572	379	206	808	183
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	164	603	208	284	652	374	248	857	568	597	1825	413
Arrive On Green	0.09	0.23	0.22	0.16	0.30	0.29	0.14	0.42	0.41	0.34	0.64	0.63
Sat Flow, veh/h	1774	2585	890	1774	2169	1244	1774	2041	1352	1774	2868	650
Grp Volume(v), veh/h	88	329	320	319	300	284	206	496	455	206	499	492
Grp Sat Flow(s),veh/h/ln	1774	1770	1706	1774	1770	1643	1774	1770	1624	1774	1770	1748
Q Serve(g_s), s	4.7	17.5	17.7	16.0	14.3	14.7	11.3	22.6	22.7	8.7	14.3	14.4
Cycle Q Clear(g_c), s	4.7	17.5	17.7	16.0	14.3	14.7	11.3	22.6	22.7	8.7	14.3	14.4
Prop In Lane	1.00		0.52	1.00		0.76	1.00		0.83	1.00		0.37
Lane Grp Cap(c), veh/h	164	413	398	284	532	494	248	743	682	597	1126	1112
V/C Ratio(X)	0.54	0.80	0.80	1.12	0.56	0.57	0.83	0.67	0.67	0.35	0.44	0.44
Avail Cap(c_a), veh/h	284	437	421	284	532	494	248	743	682	597	1126	1112
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.86	0.86	0.86	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.3	36.1	36.4	42.0	29.4	29.9	41.8	23.4	23.7	24.9	9.2	9.3
Incr Delay (d2), s/veh	2.7	9.5	10.3	91.0	1.4	1.6	18.0	4.1	4.4	0.3	1.3	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	9.6	9.5	15.0	7.2	6.9	6.8	11.9	11.0	4.3	7.3	7.3
LnGrp Delay(d),s/veh	46.0	45.6	46.8	133.0	30.8	31.5	59.8	27.4	28.2	25.3	10.5	10.6
LnGrp LOS	D	D	D	F	C	C	E	C	C	C	B	B
Approach Vol, veh/h		737			903			1157			1197	
Approach Delay, s/veh		46.1			67.1			33.5			13.1	
Approach LOS		D			E			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	25.6	14.0	66.3	9.3	32.4	36.3	44.0
Change Period (Y+Rc), s	3.0	5.3	3.0	5.0	3.0	5.3	5.0	* 5
Max Green Setting (Gmax), s	13.0	21.7	11.0	38.0	13.0	21.7	10.0	* 39
Max Q Clear Time (g_c+I1), s	18.0	19.7	13.3	16.4	6.7	16.7	10.7	24.7
Green Ext Time (p_c), s	0.0	0.6	0.0	5.4	0.1	2.5	0.0	3.8

Intersection Summary	
HCM 2010 Ctrl Delay	37.3
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	822	390	315	410	0	0	0	0	929	0	210
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1900	1863	1863	0				1863	1863	1863
Adj Flow Rate, veh/h	0	865	411	332	432	0				1007	0	62
Adj No. of Lanes	0	4	0	2	2	0				2	0	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1743	574	448	1924	0				1156	0	516
Arrive On Green	0.00	0.36	0.36	0.13	0.54	0.00				0.33	0.00	0.33
Sat Flow, veh/h	0	5067	1583	3442	3632	0				3548	0	1583
Grp Volume(v), veh/h	0	865	411	332	432	0				1007	0	62
Grp Sat Flow(s),veh/h/ln	0	1602	1583	1721	1770	0				1774	0	1583
Q Serve(g_s), s	0.0	9.6	15.4	6.4	4.4	0.0				18.4	0.0	1.9
Cycle Q Clear(g_c), s	0.0	9.6	15.4	6.4	4.4	0.0				18.4	0.0	1.9
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1743	574	448	1924	0				1156	0	516
V/C Ratio(X)	0.00	0.50	0.72	0.74	0.22	0.00				0.87	0.00	0.12
Avail Cap(c_a), veh/h	0	1743	574	1748	1924	0				1802	0	804
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	17.1	18.9	28.9	8.2	0.0				21.9	0.0	16.3
Incr Delay (d2), s/veh	0.0	1.0	7.5	0.9	0.3	0.0				1.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.4	7.9	3.1	2.2	0.0				9.3	0.0	0.8
LnGrp Delay(d),s/veh	0.0	18.1	26.4	29.8	8.4	0.0				23.8	0.0	16.3
LnGrp LOS		B	C	C	A					C		B
Approach Vol, veh/h		1276			764						1069	
Approach Delay, s/veh		20.7			17.7						23.4	
Approach LOS		C			B						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	12.5	29.5		27.0		42.0		
Change Period (Y+Rc), s	3.5	4.5		4.5		4.5		
Max Green Setting (Gmax), s	35.0	25.0		35.0		25.0		
Max Q Clear Time (g_c+I1), s	8.4	17.4		20.4		6.4		
Green Ext Time (p_c), s	0.6	4.5		2.0		7.7		

Intersection Summary	
HCM 2010 Ctrl Delay	20.9
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	170	1341	0	0	506	234	270	0	850	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1863	1863	1863			
Adj Flow Rate, veh/h	179	1412	0	0	533	159	189	0	925			
Adj No. of Lanes	2	2	0	0	4	1	1	0	2			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	310	1653	0	0	1976	488	616	0	1099			
Arrive On Green	0.09	0.47	0.00	0.00	0.31	0.31	0.35	0.00	0.35			
Sat Flow, veh/h	3442	3632	0	0	6669	1583	1774	0	3167			
Grp Volume(v), veh/h	179	1412	0	0	533	159	189	0	925			
Grp Sat Flow(s),veh/h/ln	1721	1770	0	0	1602	1583	1774	0	1583			
Q Serve(g_s), s	2.6	18.1	0.0	0.0	3.2	3.9	4.0	0.0	13.8			
Cycle Q Clear(g_c), s	2.6	18.1	0.0	0.0	3.2	3.9	4.0	0.0	13.8			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	310	1653	0	0	1976	488	616	0	1099			
V/C Ratio(X)	0.58	0.85	0.00	0.00	0.27	0.33	0.31	0.00	0.84			
Avail Cap(c_a), veh/h	1347	1731	0	0	3134	774	850	0	1518			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	22.3	12.1	0.0	0.0	13.3	13.6	12.2	0.0	15.4			
Incr Delay (d2), s/veh	0.6	4.0	0.0	0.0	0.0	0.1	0.1	0.0	2.4			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.2	9.5	0.0	0.0	1.4	1.7	2.0	0.0	6.3			
LnGrp Delay(d),s/veh	23.0	16.1	0.0	0.0	13.4	13.7	12.3	0.0	17.8			
LnGrp LOS	C	B			B	B	B		B			
Approach Vol, veh/h		1591			692			1114				
Approach Delay, s/veh		16.8			13.4			16.8				
Approach LOS		B			B			B				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		28.4			8.1	20.3		22.7
Change Period (Y+Rc), s		4.5			3.5	4.5		5.0
Max Green Setting (Gmax), s		25.0			20.0	25.0		24.5
Max Q Clear Time (g_c+I1), s		20.1			4.6	5.9		15.8
Green Ext Time (p_c), s		3.7			0.3	9.8		2.0

Intersection Summary	
HCM 2010 Ctrl Delay	16.1
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	598	114	110	449	50	41	176	20	50	272	50
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	32	629	120	116	473	53	43	185	21	53	286	53
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	342	1199	228	253	1297	145	526	1556	175	611	1450	265
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.48	0.48	0.48	0.48	0.48	0.48
Sat Flow, veh/h	873	2967	565	710	3211	358	1037	3209	360	1171	2989	547
Grp Volume(v), veh/h	32	375	374	116	260	266	43	101	105	53	168	171
Grp Sat Flow(s),veh/h/ln	873	1770	1763	710	1770	1800	1037	1770	1799	1171	1770	1766
Q Serve(g_s), s	2.4	14.4	14.5	13.3	9.2	9.3	2.2	2.8	2.9	2.3	4.9	5.0
Cycle Q Clear(g_c), s	11.7	14.4	14.5	27.8	9.2	9.3	7.2	2.8	2.9	5.2	4.9	5.0
Prop In Lane	1.00		0.32	1.00		0.20	1.00		0.20	1.00		0.31
Lane Grp Cap(c), veh/h	342	715	712	253	715	727	526	858	873	611	858	857
V/C Ratio(X)	0.09	0.52	0.53	0.46	0.36	0.37	0.08	0.12	0.12	0.09	0.20	0.20
Avail Cap(c_a), veh/h	397	826	823	297	826	840	526	858	873	611	858	857
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.53	0.53	0.53	0.89	0.89	0.89	1.00	1.00	1.00	0.84	0.84	0.84
Uniform Delay (d), s/veh	22.9	20.3	20.3	30.8	18.7	18.8	15.3	12.7	12.7	14.1	13.2	13.2
Incr Delay (d2), s/veh	0.1	0.3	0.3	1.2	0.3	0.3	0.3	0.3	0.3	0.2	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	7.0	7.0	2.7	4.5	4.6	0.7	1.4	1.5	0.8	2.5	2.5
LnGrp Delay(d),s/veh	22.9	20.6	20.6	32.0	19.0	19.0	15.6	12.9	13.0	14.3	13.6	13.7
LnGrp LOS	C	C	C	C	B	B	B	B	B	B	B	B
Approach Vol, veh/h		781			642			249			392	
Approach Delay, s/veh		20.7			21.4			13.4			13.7	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		48.6		41.4		48.6		41.4
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0
Max Green Setting (Gmax), s		38.0		42.0		38.0		42.0
Max Q Clear Time (g_c+I1), s		9.2		16.5		7.2		29.8
Green Ext Time (p_c), s		3.5		9.7		3.6		6.6

Intersection Summary	
HCM 2010 Ctrl Delay	18.7
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	309	241	211	172	254	147	149	593	173	94	814	274
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	325	254	222	181	267	140	157	624	160	99	857	288
Adj No. of Lanes	1	2	0	1	2	1	1	2	1	1	3	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	418	422	356	338	814	364	177	1729	773	145	1771	592
Arrive On Green	0.04	0.08	0.07	0.11	0.23	0.23	0.10	0.49	0.49	0.08	0.47	0.47
Sat Flow, veh/h	1774	1825	1536	1774	3539	1583	1774	3539	1583	1774	3770	1261
Grp Volume(v), veh/h	325	246	230	181	267	140	157	624	160	99	770	375
Grp Sat Flow(s),veh/h/ln	1774	1770	1592	1774	1770	1583	1774	1770	1583	1774	1695	1640
Q Serve(g_s), s	10.0	12.1	12.6	7.0	5.7	6.7	7.9	9.9	5.2	4.9	14.0	14.1
Cycle Q Clear(g_c), s	10.0	12.1	12.6	7.0	5.7	6.7	7.9	9.9	5.2	4.9	14.0	14.1
Prop In Lane	1.00		0.97	1.00		1.00	1.00		1.00	1.00		0.77
Lane Grp Cap(c), veh/h	418	410	368	338	814	364	177	1729	773	145	1593	771
V/C Ratio(X)	0.78	0.60	0.62	0.54	0.33	0.38	0.88	0.36	0.21	0.69	0.48	0.49
Avail Cap(c_a), veh/h	418	610	548	340	1219	545	177	1729	773	177	1593	771
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.73	0.73	0.73	0.58	0.58	0.58	1.00	1.00	1.00	0.51	0.51	0.51
Uniform Delay (d), s/veh	29.5	37.5	37.9	24.4	28.8	29.3	40.0	14.3	13.1	40.2	16.4	16.4
Incr Delay (d2), s/veh	6.6	1.0	1.3	1.0	0.1	0.4	37.2	0.6	0.6	4.2	0.5	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	6.1	5.7	3.5	2.8	3.0	5.7	4.9	2.4	2.6	6.6	6.6
LnGrp Delay(d),s/veh	36.2	38.6	39.2	25.4	29.0	29.6	77.2	14.9	13.7	44.4	16.9	17.5
LnGrp LOS	D	D	D	C	C	C	E	B	B	D	B	B
Approach Vol, veh/h		801			588			941			1244	
Approach Delay, s/veh		37.8			28.0			25.1			19.3	
Approach LOS		D			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.3	46.0	12.0	22.7	11.0	44.3	11.9	22.8
Change Period (Y+Rc), s	3.0	6.0	3.0	5.0	3.0	6.0	3.0	5.0
Max Green Setting (Gmax), s	8.0	28.0	9.0	28.0	8.0	28.0	9.0	28.0
Max Q Clear Time (g_c+I1), s	6.9	11.9	12.0	8.7	9.9	16.1	9.0	14.6
Green Ext Time (p_c), s	0.0	8.6	0.0	3.6	0.0	7.1	0.0	3.2

Intersection Summary	
HCM 2010 Ctrl Delay	26.4
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	40	267	130	50	443	53	150	329	90	43	562	150
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	42	281	74	53	466	40	158	346	95	45	592	158
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	158	589	500	279	589	500	384	1517	411	538	1523	406
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.55	0.55	0.55	0.55	0.55	0.55
Sat Flow, veh/h	889	1863	1583	1022	1863	1583	709	2755	746	944	2766	736
Grp Volume(v), veh/h	42	281	74	53	466	40	158	221	220	45	378	372
Grp Sat Flow(s),veh/h/ln	889	1863	1583	1022	1863	1583	709	1770	1731	944	1770	1733
Q Serve(g_s), s	4.1	10.9	3.0	4.0	20.5	1.6	14.8	5.8	5.9	2.3	11.0	11.0
Cycle Q Clear(g_c), s	24.6	10.9	3.0	14.9	20.5	1.6	25.8	5.8	5.9	8.2	11.0	11.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.43	1.00		0.43
Lane Grp Cap(c), veh/h	158	589	500	279	589	500	384	974	953	538	974	954
V/C Ratio(X)	0.27	0.48	0.15	0.19	0.79	0.08	0.41	0.23	0.23	0.08	0.39	0.39
Avail Cap(c_a), veh/h	262	807	686	399	807	686	384	974	953	538	974	954
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.89	0.89	0.89	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.3	24.8	22.1	30.8	28.1	21.6	18.9	10.4	10.4	12.5	11.6	11.6
Incr Delay (d2), s/veh	0.8	0.5	0.1	0.1	2.5	0.0	3.2	0.5	0.6	0.3	1.2	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	5.7	1.3	1.1	10.9	0.7	3.2	3.0	3.0	0.6	5.7	5.6
LnGrp Delay(d),s/veh	40.1	25.3	22.2	30.9	30.6	21.6	22.2	10.9	11.0	12.8	12.7	12.8
LnGrp LOS	D	C	C	C	C	C	C	B	B	B	B	B
Approach Vol, veh/h		397			559			599			795	
Approach Delay, s/veh		26.3			30.0			13.9			12.7	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		55.6		34.4		55.6		34.4
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0
Max Green Setting (Gmax), s		39.0		39.0		39.0		39.0
Max Q Clear Time (g_c+I1), s		27.8		26.6		13.0		22.5
Green Ext Time (p_c), s		3.3		1.8		4.1		2.0

Intersection Summary	
HCM 2010 Ctrl Delay	19.4
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	395	425	730	947	0	0	0	0	170	460	450
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0				1900	1863	1863
Adj Flow Rate, veh/h	0	416	447	768	997	0				179	484	474
Adj No. of Lanes	0	2	1	2	2	0				0	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1298	581	803	2281	0				121	328	387
Arrive On Green	0.00	0.37	0.37	0.47	1.00	0.00				0.24	0.24	0.24
Sat Flow, veh/h	0	3632	1583	3442	3632	0				496	1342	1583
Grp Volume(v), veh/h	0	416	447	768	997	0				663	0	474
Grp Sat Flow(s),veh/h/ln	0	1770	1583	1721	1770	0				1838	0	1583
Q Serve(g_s), s	0.0	7.6	22.4	19.3	0.0	0.0				22.0	0.0	22.0
Cycle Q Clear(g_c), s	0.0	7.6	22.4	19.3	0.0	0.0				22.0	0.0	22.0
Prop In Lane	0.00		1.00	1.00		0.00				0.27		1.00
Lane Grp Cap(c), veh/h	0	1298	581	803	2281	0				449	0	387
V/C Ratio(X)	0.00	0.32	0.77	0.96	0.44	0.00				1.48	0.00	1.22
Avail Cap(c_a), veh/h	0	1298	581	803	2281	0				449	0	387
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.83	0.83	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	20.5	25.2	23.6	0.0	0.0				34.0	0.0	34.0
Incr Delay (d2), s/veh	0.0	0.7	9.5	20.1	0.5	0.0				225.9	0.0	122.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.8	11.3	11.2	0.2	0.0				39.3	0.0	22.7
LnGrp Delay(d),s/veh	0.0	21.1	34.7	43.7	0.5	0.0				259.9	0.0	156.1
LnGrp LOS		C	C	D	A					F		F
Approach Vol, veh/h		863			1765						1137	
Approach Delay, s/veh		28.1			19.3						216.6	
Approach LOS		C			B						F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	25.0	38.0		27.0		63.0		
Change Period (Y+Rc), s	4.0	5.0		5.0		5.0		
Max Green Setting (Gmax), s	21.0	33.0		22.0		58.0		
Max Q Clear Time (g_c+I1), s	21.3	24.4		24.0		2.0		
Green Ext Time (p_c), s	0.0	4.6		0.0		8.5		

Intersection Summary	
HCM 2010 Ctrl Delay	80.9
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	135	480	0	0	1227	260	600	10	310	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1900	1863	1863			
Adj Flow Rate, veh/h	142	505	0	0	1292	274	632	11	326			
Adj No. of Lanes	1	2	0	0	3	1	0	1	1			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	174	2242	0	0	2440	760	446	8	405			
Arrive On Green	0.10	0.63	0.00	0.00	0.48	0.48	0.26	0.26	0.26			
Sat Flow, veh/h	1774	3632	0	0	5253	1583	1745	30	1583			
Grp Volume(v), veh/h	142	505	0	0	1292	274	643	0	326			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1695	1583	1775	0	1583			
Q Serve(g_s), s	7.1	5.5	0.0	0.0	15.9	9.8	23.0	0.0	17.4			
Cycle Q Clear(g_c), s	7.1	5.5	0.0	0.0	15.9	9.8	23.0	0.0	17.4			
Prop In Lane	1.00		0.00	0.00		1.00	0.98		1.00			
Lane Grp Cap(c), veh/h	174	2242	0	0	2440	760	454	0	405			
V/C Ratio(X)	0.82	0.23	0.00	0.00	0.53	0.36	1.42	0.00	0.81			
Avail Cap(c_a), veh/h	197	2242	0	0	2440	760	454	0	405			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.96	0.96	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	39.8	7.1	0.0	0.0	16.3	14.7	33.5	0.0	31.4			
Incr Delay (d2), s/veh	17.7	0.2	0.0	0.0	0.8	1.3	200.3	0.0	10.6			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	4.3	2.7	0.0	0.0	7.6	4.5	36.5	0.0	8.8			
LnGrp Delay(d),s/veh	57.5	7.3	0.0	0.0	17.2	16.1	233.8	0.0	42.0			
LnGrp LOS	E	A			B	B	F		D			
Approach Vol, veh/h		647			1566			969				
Approach Delay, s/veh		18.3			17.0			169.3				
Approach LOS		B			B			F				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		62.0			13.8	48.2		28.0
Change Period (Y+Rc), s		5.0			5.0	5.0		5.0
Max Green Setting (Gmax), s		57.0			10.0	42.0		23.0
Max Q Clear Time (g_c+I1), s		7.5			9.1	17.9		25.0
Green Ext Time (p_c), s		13.8			0.0	11.1		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	63.6
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	320	110	210	110	0	0	0	0	460	627	140
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1900	1863	1863	0				1900	1863	1863
Adj Flow Rate, veh/h	0	337	116	221	116	0				484	660	42
Adj No. of Lanes	0	2	0	1	2	0				0	3	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	535	181	331	1688	0				597	1140	532
Arrive On Green	0.00	0.21	0.21	0.19	0.48	0.00				0.34	0.34	0.34
Sat Flow, veh/h	0	2691	880	1774	3632	0				1774	3390	1583
Grp Volume(v), veh/h	0	228	225	221	116	0				484	660	42
Grp Sat Flow(s),veh/h/ln	0	1770	1708	1774	1770	0				1774	1695	1583
Q Serve(g_s), s	0.0	6.3	6.5	6.2	0.9	0.0				13.3	8.6	1.0
Cycle Q Clear(g_c), s	0.0	6.3	6.5	6.2	0.9	0.0				13.3	8.6	1.0
Prop In Lane	0.00		0.52	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	365	352	331	1688	0				597	1140	532
V/C Ratio(X)	0.00	0.62	0.64	0.67	0.07	0.00				0.81	0.58	0.08
Avail Cap(c_a), veh/h	0	859	829	663	2115	0				663	1266	591
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	19.4	19.4	20.2	7.6	0.0				16.2	14.6	12.1
Incr Delay (d2), s/veh	0.0	1.3	1.4	0.9	0.0	0.0				6.6	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.2	3.1	3.1	0.5	0.0				7.5	4.0	0.4
LnGrp Delay(d),s/veh	0.0	20.7	20.9	21.1	7.6	0.0				22.8	15.1	12.2
LnGrp LOS		C	C	C	A					C	B	B
Approach Vol, veh/h		453			337						1186	
Approach Delay, s/veh		20.8			16.4						18.1	
Approach LOS		C			B						B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	14.5	16.0		23.0		30.5		
Change Period (Y+Rc), s	4.5	5.0		5.0		5.0		
Max Green Setting (Gmax), s	20.0	26.0		20.0		32.0		
Max Q Clear Time (g_c+I1), s	8.2	8.5		15.3		2.9		
Green Ext Time (p_c), s	0.2	2.6		2.7		2.9		

Intersection Summary	
HCM 2010 Ctrl Delay	18.4
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	50	460	0	0	150	120	90	253	169	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1900	1863	1900			
Adj Flow Rate, veh/h	53	484	0	0	143	113	95	266	178			
Adj No. of Lanes	1	2	0	0	2	2	0	2	0			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	2	2	0	0	2	2	0	2	0			
Cap, veh/h	105	1531	0	0	968	823	163	466	329			
Arrive On Green	0.06	0.43	0.00	0.00	0.26	0.26	0.28	0.28	0.28			
Sat Flow, veh/h	1774	3632	0	0	3725	3167	593	1694	1198			
Grp Volume(v), veh/h	53	484	0	0	143	113	294	0	245			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1863	1583	1833	0	1651			
Q Serve(g_s), s	0.9	2.8	0.0	0.0	0.9	0.8	4.3	0.0	3.9			
Cycle Q Clear(g_c), s	0.9	2.8	0.0	0.0	0.9	0.8	4.3	0.0	3.9			
Prop In Lane	1.00		0.00	0.00		1.00	0.32		0.73			
Lane Grp Cap(c), veh/h	105	1531	0	0	968	823	504	0	454			
V/C Ratio(X)	0.50	0.32	0.00	0.00	0.15	0.14	0.58	0.00	0.54			
Avail Cap(c_a), veh/h	1440	4023	0	0	4235	3600	2084	0	1877			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	14.0	5.7	0.0	0.0	8.8	8.7	9.6	0.0	9.5			
Incr Delay (d2), s/veh	1.4	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.4			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.5	1.4	0.0	0.0	0.5	0.4	2.2	0.0	1.8			
LnGrp Delay(d),s/veh	15.4	5.8	0.0	0.0	8.8	8.8	10.0	0.0	9.9			
LnGrp LOS	B	A			A	A	B		A			
Approach Vol, veh/h		537			256			539				
Approach Delay, s/veh		6.7			8.8			10.0				
Approach LOS		A			A			A				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		17.8			5.3	12.5		13.0
Change Period (Y+Rc), s		4.5			3.5	4.5		4.5
Max Green Setting (Gmax), s		35.0			25.0	35.0		35.0
Max Q Clear Time (g_c+I1), s		4.8			2.9	2.9		6.3
Green Ext Time (p_c), s		3.0			0.0	3.1		2.3

Intersection Summary	
HCM 2010 Ctrl Delay	8.4
HCM 2010 LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	620	90	233	290	0	0	0	0	407	90	150
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0				1863	1863	1863
Adj Flow Rate, veh/h	0	653	38	245	305	0				496	0	65
Adj No. of Lanes	0	3	1	2	2	0				2	0	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1991	620	737	2321	0				760	0	339
Arrive On Green	0.00	0.39	0.39	0.21	0.66	0.00				0.21	0.00	0.21
Sat Flow, veh/h	0	5253	1583	3442	3632	0				3548	0	1583
Grp Volume(v), veh/h	0	653	38	245	305	0				496	0	65
Grp Sat Flow(s),veh/h/ln	0	1695	1583	1721	1770	0				1774	0	1583
Q Serve(g_s), s	0.0	6.3	1.0	4.2	2.3	0.0				8.9	0.0	2.4
Cycle Q Clear(g_c), s	0.0	6.3	1.0	4.2	2.3	0.0				8.9	0.0	2.4
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1991	620	737	2321	0				760	0	339
V/C Ratio(X)	0.00	0.33	0.06	0.33	0.13	0.00				0.65	0.00	0.19
Avail Cap(c_a), veh/h	0	1991	620	737	2321	0				760	0	339
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.98	0.98	0.00				0.67	0.00	0.67
Uniform Delay (d), s/veh	0.0	14.9	13.3	23.3	4.5	0.0				25.1	0.0	22.5
Incr Delay (d2), s/veh	0.0	0.4	0.2	1.2	0.0	0.0				2.9	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.0	0.5	2.1	1.1	0.0				4.6	0.0	1.1
LnGrp Delay(d),s/veh	0.0	15.3	13.5	24.4	4.6	0.0				28.0	0.0	23.4
LnGrp LOS		B	B	C	A					C		C
Approach Vol, veh/h		691			550						561	
Approach Delay, s/veh		15.2			13.4						27.5	
Approach LOS		B			B						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	18.5	31.5		20.0		50.0		
Change Period (Y+Rc), s	3.5	4.1		5.0		4.1		
Max Green Setting (Gmax), s	15.0	27.0		15.0		35.0		
Max Q Clear Time (g_c+I1), s	6.2	8.3		10.9		4.3		
Green Ext Time (p_c), s	0.0	5.5		0.5		6.3		

Intersection Summary	
HCM 2010 Ctrl Delay	18.5
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	100	717	0	0	483	113	160	199	1137	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1863	1863	1863			
Adj Flow Rate, veh/h	105	755	0	0	508	44	168	0	1198			
Adj No. of Lanes	2	2	0	0	4	1	1	0	2			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	506	2004	0	0	2356	582	522	0	931			
Arrive On Green	0.15	0.57	0.00	0.00	0.37	0.37	0.29	0.00	0.29			
Sat Flow, veh/h	3442	3632	0	0	6669	1583	1774	0	3167			
Grp Volume(v), veh/h	105	755	0	0	508	44	168	0	1198			
Grp Sat Flow(s),veh/h/ln	1721	1770	0	0	1602	1583	1774	0	1583			
Q Serve(g_s), s	1.8	8.0	0.0	0.0	3.7	1.2	5.0	0.0	20.0			
Cycle Q Clear(g_c), s	1.8	8.0	0.0	0.0	3.7	1.2	5.0	0.0	20.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	506	2004	0	0	2356	582	522	0	931			
V/C Ratio(X)	0.21	0.38	0.00	0.00	0.22	0.08	0.32	0.00	1.29			
Avail Cap(c_a), veh/h	506	2004	0	0	2356	582	522	0	931			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	25.5	8.1	0.0	0.0	14.8	14.0	18.7	0.0	24.0			
Incr Delay (d2), s/veh	0.9	0.5	0.0	0.0	0.2	0.3	1.6	0.0	137.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.9	4.0	0.0	0.0	1.7	0.6	2.7	0.0	26.4			
LnGrp Delay(d),s/veh	26.4	8.7	0.0	0.0	15.0	14.2	20.3	0.0	161.0			
LnGrp LOS	C	A			B	B	C		F			
Approach Vol, veh/h		860			552			1366				
Approach Delay, s/veh		10.8			14.9			143.7				
Approach LOS		B			B			F				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		43.0			13.5	29.5		25.0
Change Period (Y+Rc), s		4.5			3.5	4.5		5.0
Max Green Setting (Gmax), s		30.0			10.0	25.0		20.0
Max Q Clear Time (g_c+I1), s		10.0			3.8	5.7		22.0
Green Ext Time (p_c), s		6.3			0.1	6.2		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	77.0
HCM 2010 LOS	E

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	262	0	170	0	0	0	80	817	0	0	826	127
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	0	1863				1863	1863	0	0	1863	1900
Adj Flow Rate, veh/h	276	0	179				84	860	0	0	869	134
Adj No. of Lanes	2	0	1				1	3	0	0	3	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	0	2				2	2	0	0	2	2
Cap, veh/h	508	0	234				464	3713	0	0	2955	454
Arrive On Green	0.15	0.00	0.15				0.03	0.73	0.00	0.00	0.66	0.66
Sat Flow, veh/h	3442	0	1583				1774	5253	0	0	4617	683
Grp Volume(v), veh/h	276	0	179				84	860	0	0	661	342
Grp Sat Flow(s),veh/h/ln	1721	0	1583				1774	1695	0	0	1695	1742
Q Serve(g_s), s	6.7	0.0	9.8				1.3	4.9	0.0	0.0	7.3	7.4
Cycle Q Clear(g_c), s	6.7	0.0	9.8				1.3	4.9	0.0	0.0	7.3	7.4
Prop In Lane	1.00		1.00				1.00		0.00	0.00		0.39
Lane Grp Cap(c), veh/h	508	0	234				464	3713	0	0	2252	1157
V/C Ratio(X)	0.54	0.00	0.77				0.18	0.23	0.00	0.00	0.29	0.30
Avail Cap(c_a), veh/h	1262	0	581				623	3713	0	0	2252	1157
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.54	0.00	0.54				1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	35.5	0.0	36.9				4.3	3.9	0.0	0.0	6.3	6.3
Incr Delay (d2), s/veh	0.5	0.0	2.9				0.2	0.1	0.0	0.0	0.3	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	0.0	8.4				0.6	2.4	0.0	0.0	3.5	3.7
LnGrp Delay(d),s/veh	36.0	0.0	39.7				4.5	4.1	0.0	0.0	6.6	7.0
LnGrp LOS	D		D				A	A			A	A
Approach Vol, veh/h		455						944			1003	
Approach Delay, s/veh		37.5						4.1			6.7	
Approach LOS		D						A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		71.7		18.3	5.9	65.8		
Change Period (Y+Rc), s		6.0		5.0	3.0	6.0		
Max Green Setting (Gmax), s		46.0		33.0	11.0	30.0		
Max Q Clear Time (g_c+I1), s		6.9		11.8	3.3	9.4		
Green Ext Time (p_c), s		17.4		1.5	0.1	12.4		

Intersection Summary	
HCM 2010 Ctrl Delay	11.5
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	0	0	310	1967	879	327
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	Yield
Storage Length	0	-	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	326	2071	925	344

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2613	463	925	0	-	0
Stage 1	925	-	-	-	-	-
Stage 2	1688	-	-	-	-	-
Critical Hdwy	6.29	7.14	5.34	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.67	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	29	467	425	-	-	-
Stage 1	275	-	-	-	-	-
Stage 2	133	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	7	467	425	-	-	-
Mov Cap-2 Maneuver	7	-	-	-	-	-
Stage 1	275	-	-	-	-	-
Stage 2	31	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	5	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	425	-	-	-	-
HCM Lane V/C Ratio	0.768	-	-	-	-
HCM Control Delay (s)	36.4	-	0	-	-
HCM Lane LOS	E	-	A	-	-
HCM 95th %tile Q(veh)	6.5	-	-	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	330	130	279	720	270	456	796	310	20	393	370
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	32	347	137	294	758	284	480	838	260	21	509	239
Adj No. of Lanes	1	2	0	1	2	0	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	72	648	252	197	656	246	656	1699	760	213	857	364
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.37	0.48	0.48	0.12	0.23	0.23
Sat Flow, veh/h	539	2493	968	908	2521	944	1774	3539	1583	1774	3725	1583
Grp Volume(v), veh/h	32	245	239	294	532	510	480	838	260	21	509	239
Grp Sat Flow(s),veh/h/ln	539	1770	1692	908	1770	1696	1774	1770	1583	1774	1863	1583
Q Serve(g_s), s	0.0	11.9	12.2	13.8	26.0	26.0	23.4	16.1	10.2	1.1	12.2	13.7
Cycle Q Clear(g_c), s	26.0	11.9	12.2	26.0	26.0	26.0	23.4	16.1	10.2	1.1	12.2	13.7
Prop In Lane	1.00		0.57	1.00		0.56	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	72	460	440	197	460	441	656	1699	760	213	857	364
V/C Ratio(X)	0.44	0.53	0.54	1.49	1.16	1.16	0.73	0.49	0.34	0.10	0.59	0.66
Avail Cap(c_a), veh/h	72	460	440	197	460	441	656	1699	760	213	857	364
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.09	0.09	0.09	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.0	31.8	31.9	45.6	37.0	37.0	27.2	17.7	16.2	39.2	34.3	34.9
Incr Delay (d2), s/veh	18.6	4.4	4.8	245.5	92.3	93.3	0.7	0.1	0.1	0.9	3.0	8.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	6.3	6.3	18.9	24.5	23.6	11.5	7.8	4.5	0.6	6.7	6.9
LnGrp Delay(d),s/veh	68.6	36.1	36.7	291.1	129.3	130.3	27.9	17.8	16.3	40.1	37.4	43.8
LnGrp LOS	E	D	D	F	F	F	C	B	B	D	D	D
Approach Vol, veh/h		516			1336			1578			769	
Approach Delay, s/veh		38.4			165.3			20.6			39.4	
Approach LOS		D			F			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	16.0	53.0		31.0	41.0	28.0		31.0
Change Period (Y+Rc), s	4.0	5.0		5.0	4.0	5.0		5.0
Max Green Setting (Gmax), s	12.0	46.0		26.0	37.0	23.0		24.0
Max Q Clear Time (g_c+I1), s	3.1	18.1		28.0	25.4	15.7		28.0
Green Ext Time (p_c), s	0.0	12.8		0.0	1.2	5.3		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	72.3
HCM 2010 LOS	E

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	820	0	639	0	0	0	0	962	304	230	452	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	768	133	673				0	1013	219	242	476	0
Adj No. of Lanes	1	1	0				0	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	561	85	429				0	1265	566	325	2059	0
Arrive On Green	0.32	0.32	0.32				0.00	0.36	0.36	0.18	0.58	0.00
Sat Flow, veh/h	1774	268	1356				0	3632	1583	1774	3632	0
Grp Volume(v), veh/h	768	0	806				0	1013	219	242	476	0
Grp Sat Flow(s),veh/h/ln	1774	0	1624				0	1770	1583	1774	1770	0
Q Serve(g_s), s	31.0	0.0	31.0				0.0	25.3	10.1	12.6	6.4	0.0
Cycle Q Clear(g_c), s	31.0	0.0	31.0				0.0	25.3	10.1	12.6	6.4	0.0
Prop In Lane	1.00		0.83				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	561	0	514				0	1265	566	325	2059	0
V/C Ratio(X)	1.37	0.00	1.57				0.00	0.80	0.39	0.74	0.23	0.00
Avail Cap(c_a), veh/h	561	0	514				0	1265	566	597	2059	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.09	0.09	0.00
Uniform Delay (d), s/veh	33.5	0.0	33.5				0.0	28.3	23.5	37.8	9.9	0.0
Incr Delay (d2), s/veh	177.0	0.0	265.6				0.0	5.4	2.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	42.7	0.0	51.7				0.0	13.2	4.7	6.2	3.1	0.0
LnGrp Delay(d),s/veh	210.5	0.0	299.1				0.0	33.7	25.5	38.1	9.9	0.0
LnGrp LOS	F		F					C	C	D	A	
Approach Vol, veh/h		1574						1232			718	
Approach Delay, s/veh		255.9						32.3			19.4	
Approach LOS		F						C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	22.0	40.0		36.0		62.0		
Change Period (Y+Rc), s	4.0	5.0		5.0		5.0		
Max Green Setting (Gmax), s	33.0	20.0		31.0		49.0		
Max Q Clear Time (g_c+I1), s	14.6	27.3		33.0		8.4		
Green Ext Time (p_c), s	0.6	0.0		0.0		14.9		

Intersection Summary	
HCM 2010 Ctrl Delay	129.5
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	90	610	160	117	710	82	220	819	93	174	684	280
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	95	642	52	123	747	86	232	862	38	183	720	295
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	136	925	414	166	892	103	404	1072	479	480	848	347
Arrive On Green	0.08	0.26	0.26	0.09	0.28	0.27	0.23	0.30	0.30	0.27	0.35	0.34
Sat Flow, veh/h	1774	3539	1583	1774	3199	368	1774	3539	1583	1774	2451	1004
Grp Volume(v), veh/h	95	642	52	123	413	420	232	862	38	183	520	495
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1798	1774	1770	1583	1774	1770	1686
Q Serve(g_s), s	5.9	18.3	1.6	7.6	24.6	24.6	13.0	25.1	1.4	9.4	30.5	30.5
Cycle Q Clear(g_c), s	5.9	18.3	1.6	7.6	24.6	24.6	13.0	25.1	1.4	9.4	30.5	30.5
Prop In Lane	1.00		1.00	1.00		0.20	1.00		1.00	1.00		0.60
Lane Grp Cap(c), veh/h	136	925	414	166	493	501	404	1072	479	480	612	583
V/C Ratio(X)	0.70	0.69	0.13	0.74	0.84	0.84	0.57	0.80	0.08	0.38	0.85	0.85
Avail Cap(c_a), veh/h	253	1011	452	253	506	514	404	1422	636	480	711	677
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.70	0.70	0.70	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.5	37.3	10.3	49.4	38.0	38.1	38.5	36.0	15.2	33.2	33.9	34.2
Incr Delay (d2), s/veh	6.4	1.9	0.1	6.3	11.6	11.5	1.4	4.6	0.2	0.5	13.8	14.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	9.2	0.7	4.0	13.6	13.9	6.5	12.9	0.6	4.6	17.2	16.5
LnGrp Delay(d),s/veh	56.8	39.2	10.4	55.7	49.6	49.6	39.8	40.6	15.4	33.7	47.7	48.6
LnGrp LOS	E	D	B	E	D	D	D	D	B	C	D	D
Approach Vol, veh/h		789			956			1132			1198	
Approach Delay, s/veh		39.4			50.4			39.6			45.9	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	32.3	35.9	12.5	31.3	27.5	40.7	10.6	33.2
Change Period (Y+Rc), s	3.0	5.0	3.0	5.0	3.0	5.0	3.0	5.0
Max Green Setting (Gmax), s	10.0	42.0	15.0	29.0	10.0	42.0	15.0	29.0
Max Q Clear Time (g_c+I1), s	11.4	27.1	9.6	20.3	15.0	32.5	7.9	26.6
Green Ext Time (p_c), s	0.0	3.8	0.2	4.5	0.0	3.2	0.1	1.6

Intersection Summary	
HCM 2010 Ctrl Delay	43.9
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	566	300	539	843	0	0	0	0	471	10	230
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1900	1863	1863	0				1863	1863	1863
Adj Flow Rate, veh/h	0	596	316	567	887	0				520	0	45
Adj No. of Lanes	0	4	0	2	2	0				2	0	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1760	580	727	2276	0				695	0	310
Arrive On Green	0.00	0.37	0.37	0.21	0.64	0.00				0.20	0.00	0.20
Sat Flow, veh/h	0	5067	1583	3442	3632	0				3548	0	1583
Grp Volume(v), veh/h	0	596	316	567	887	0				520	0	45
Grp Sat Flow(s),veh/h/ln	0	1602	1583	1721	1770	0				1774	0	1583
Q Serve(g_s), s	0.0	4.8	8.4	8.3	6.4	0.0				7.4	0.0	1.3
Cycle Q Clear(g_c), s	0.0	4.8	8.4	8.3	6.4	0.0				7.4	0.0	1.3
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1760	580	727	2276	0				695	0	310
V/C Ratio(X)	0.00	0.34	0.55	0.78	0.39	0.00				0.75	0.00	0.15
Avail Cap(c_a), veh/h	0	3151	1038	1612	2320	0				2326	0	1038
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	12.2	13.4	19.9	4.5	0.0				20.2	0.0	17.8
Incr Delay (d2), s/veh	0.0	0.0	0.3	0.7	0.0	0.0				0.6	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.1	3.7	4.0	3.1	0.0				3.7	0.0	0.6
LnGrp Delay(d),s/veh	0.0	12.3	13.7	20.6	4.6	0.0				20.8	0.0	17.8
LnGrp LOS		B	B	C	A					C		B
Approach Vol, veh/h		912			1454						565	
Approach Delay, s/veh		12.8			10.8						20.6	
Approach LOS		B			B						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	14.8	23.6		15.0		38.4		
Change Period (Y+Rc), s	3.5	4.1		4.5		4.1		
Max Green Setting (Gmax), s	25.0	35.0		35.0		35.0		
Max Q Clear Time (g_c+I1), s	10.3	10.4		9.4		8.4		
Green Ext Time (p_c), s	1.0	9.1		1.1		9.4		

Intersection Summary	
HCM 2010 Ctrl Delay	13.3
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	220	977	0	0	972	510	370	20	711	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1863	1863	1863			
Adj Flow Rate, veh/h	232	1028	0	0	1023	374	266	0	805			
Adj No. of Lanes	2	2	0	0	4	1	1	0	2			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	347	1972	0	0	2567	634	542	0	968			
Arrive On Green	0.10	0.56	0.00	0.00	0.40	0.40	0.31	0.00	0.31			
Sat Flow, veh/h	3442	3632	0	0	6669	1583	1774	0	3167			
Grp Volume(v), veh/h	232	1028	0	0	1023	374	266	0	805			
Grp Sat Flow(s),veh/h/ln	1721	1770	0	0	1602	1583	1774	0	1583			
Q Serve(g_s), s	4.1	11.4	0.0	0.0	7.2	11.6	7.7	0.0	14.9			
Cycle Q Clear(g_c), s	4.1	11.4	0.0	0.0	7.2	11.6	7.7	0.0	14.9			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	347	1972	0	0	2567	634	542	0	968			
V/C Ratio(X)	0.67	0.52	0.00	0.00	0.40	0.59	0.49	0.00	0.83			
Avail Cap(c_a), veh/h	1370	1972	0	0	3673	907	989	0	1765			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	27.2	8.7	0.0	0.0	13.4	14.8	17.8	0.0	20.3			
Incr Delay (d2), s/veh	0.8	0.1	0.0	0.0	0.0	0.3	0.3	0.0	0.7			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	2.0	5.5	0.0	0.0	3.1	5.1	3.8	0.0	6.6			
LnGrp Delay(d),s/veh	28.1	8.8	0.0	0.0	13.5	15.1	18.1	0.0	21.0			
LnGrp LOS	C	A			B	B	B		C			
Approach Vol, veh/h		1260			1397			1071				
Approach Delay, s/veh		12.3			13.9			20.3				
Approach LOS		B			B			C				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		39.1			9.8	29.3		23.7
Change Period (Y+Rc), s		4.1			3.5	4.1		4.5
Max Green Setting (Gmax), s		35.0			25.0	36.0		35.0
Max Q Clear Time (g_c+I1), s		13.4			6.1	13.6		16.9
Green Ext Time (p_c), s		11.3			0.4	11.5		2.3

Intersection Summary	
HCM 2010 Ctrl Delay	15.2
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	80	1168	60	100	1062	170	170	370	110	60	180	90
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	84	1229	63	105	1118	179	179	389	116	63	189	95
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	372	1848	95	371	1633	261	324	789	233	229	678	327
Arrive On Green	0.11	0.54	0.53	0.10	0.53	0.52	0.29	0.29	0.28	0.29	0.29	0.28
Sat Flow, veh/h	1774	3426	175	1774	3058	488	1091	2697	795	890	2317	1118
Grp Volume(v), veh/h	84	634	658	105	646	651	179	254	251	63	142	142
Grp Sat Flow(s),veh/h/ln	1774	1770	1832	1774	1770	1777	1091	1770	1722	890	1770	1666
Q Serve(g_s), s	1.7	24.2	24.3	2.2	25.2	25.4	14.3	11.1	11.4	5.9	5.8	6.2
Cycle Q Clear(g_c), s	1.7	24.2	24.3	2.2	25.2	25.4	20.5	11.1	11.4	17.3	5.8	6.2
Prop In Lane	1.00		0.10	1.00		0.27	1.00		0.46	1.00		0.67
Lane Grp Cap(c), veh/h	372	955	988	371	945	949	324	518	504	229	518	487
V/C Ratio(X)	0.23	0.66	0.67	0.28	0.68	0.69	0.55	0.49	0.50	0.28	0.28	0.29
Avail Cap(c_a), veh/h	442	955	988	450	945	949	352	565	550	253	565	532
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.0	15.5	15.6	11.0	16.1	16.2	33.7	27.5	27.7	34.7	25.6	26.0
Incr Delay (d2), s/veh	0.3	3.6	3.5	0.4	4.0	4.0	1.6	0.7	0.8	0.6	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	12.6	13.2	1.1	13.2	13.4	4.4	5.5	5.5	1.5	2.9	2.9
LnGrp Delay(d),s/veh	11.3	19.2	19.1	11.5	20.1	20.3	35.2	28.2	28.5	35.4	25.9	26.3
LnGrp LOS	B	B	B	B	C	C	D	C	C	D	C	C
Approach Vol, veh/h		1376			1402			684			347	
Approach Delay, s/veh		18.7			19.5			30.1			27.8	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.0	52.2		29.8	11.5	52.7		29.8
Change Period (Y+Rc), s	4.0	5.0		5.3	4.0	5.0		5.3
Max Green Setting (Gmax), s	11.7	41.0		27.0	11.7	41.0		27.0
Max Q Clear Time (g_c+I1), s	3.7	27.4		22.5	4.2	26.3		19.3
Green Ext Time (p_c), s	0.1	9.6		2.0	0.2	10.1		2.9

Intersection Summary	
HCM 2010 Ctrl Delay	21.9
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	100	1017	71	60	894	103	87	306	60	66	148	70
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	105	1071	47	63	941	108	92	322	63	69	156	74
Adj No. of Lanes	1	1	1	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	303	1071	910	90	1840	211	313	454	89	200	359	170
Arrive On Green	0.57	0.57	0.57	0.57	0.57	0.57	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	536	1863	1583	502	3200	367	1146	1514	296	994	1196	567
Grp Volume(v), veh/h	105	1071	47	63	520	529	92	0	385	69	0	230
Grp Sat Flow(s),veh/h/ln	536	1863	1583	502	1770	1798	1146	0	1810	994	0	1763
Q Serve(g_s), s	11.7	46.0	1.0	0.0	14.2	14.2	5.6	0.0	15.1	5.3	0.0	8.4
Cycle Q Clear(g_c), s	25.9	46.0	1.0	46.0	14.2	14.2	14.0	0.0	15.1	20.4	0.0	8.4
Prop In Lane	1.00		1.00	1.00		0.20	1.00		0.16	1.00		0.32
Lane Grp Cap(c), veh/h	303	1071	910	90	1018	1034	313	0	543	200	0	529
V/C Ratio(X)	0.35	1.00	0.05	0.70	0.51	0.51	0.29	0.00	0.71	0.34	0.00	0.43
Avail Cap(c_a), veh/h	303	1071	910	90	1018	1034	313	0	543	200	0	529
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.09	0.09	0.09	0.91	0.00	0.91	1.00	0.00	1.00
Uniform Delay (d), s/veh	18.0	17.0	7.4	40.0	10.2	10.2	28.2	0.0	24.9	34.0	0.0	22.5
Incr Delay (d2), s/veh	3.1	27.5	0.1	2.2	0.0	0.0	2.1	0.0	6.9	4.6	0.0	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	31.4	0.5	1.4	6.8	6.9	2.0	0.0	8.5	1.7	0.0	4.5
LnGrp Delay(d),s/veh	21.1	44.5	7.6	42.2	10.3	10.3	30.3	0.0	31.8	38.6	0.0	25.1
LnGrp LOS	C	D	A	D	B	B	C		C	D		C
Approach Vol, veh/h		1223			1112			477			299	
Approach Delay, s/veh		41.1			12.1			31.5			28.2	
Approach LOS		D			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		51.0		29.0		51.0		29.0
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0
Max Green Setting (Gmax), s		46.0		24.0		46.0		24.0
Max Q Clear Time (g_c+I1), s		48.0		22.4		48.0		17.1
Green Ext Time (p_c), s		0.0		0.7		0.0		2.4

Intersection Summary	
HCM 2010 Ctrl Delay	28.0
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	84	666	303	378	633	211	428	681	405	169	707	221
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	88	701	319	398	666	222	451	717	353	178	744	145
Adj No. of Lanes	1	2	0	1	2	0	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	164	710	323	302	985	328	231	1026	459	270	1104	494
Arrive On Green	0.09	0.30	0.29	0.17	0.38	0.37	0.22	0.48	0.48	0.15	0.31	0.31
Sat Flow, veh/h	1774	2366	1076	1774	2609	869	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	88	524	496	398	452	436	451	717	353	178	744	145
Grp Sat Flow(s),veh/h/ln	1774	1770	1673	1774	1770	1709	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	4.7	29.5	29.5	17.0	21.3	21.4	13.0	15.8	11.1	9.5	18.3	6.9
Cycle Q Clear(g_c), s	4.7	29.5	29.5	17.0	21.3	21.4	13.0	15.8	11.1	9.5	18.3	6.9
Prop In Lane	1.00		0.64	1.00		0.51	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	164	531	502	302	668	645	231	1026	459	270	1104	494
V/C Ratio(X)	0.54	0.99	0.99	1.32	0.68	0.68	1.96	0.70	0.77	0.66	0.67	0.29
Avail Cap(c_a), veh/h	302	531	502	302	668	645	231	1026	459	284	1133	507
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00
Upstream Filter(I)	0.18	0.18	0.18	0.97	0.97	0.97	1.00	1.00	1.00	0.67	0.67	0.67
Uniform Delay (d), s/veh	43.3	34.8	35.1	41.5	26.0	26.3	39.1	22.4	8.5	40.0	30.0	26.0
Incr Delay (d2), s/veh	0.5	13.5	14.0	164.7	2.6	2.7	445.4	3.9	11.7	3.5	1.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	16.4	15.6	22.1	10.9	10.6	34.8	8.2	6.2	4.9	9.0	3.0
LnGrp Delay(d),s/veh	43.8	48.4	49.2	206.2	28.7	29.0	484.6	26.3	20.2	43.5	31.0	26.3
LnGrp LOS	D	D	D	F	C	C	F	C	C	D	C	C
Approach Vol, veh/h		1108			1286			1521			1067	
Approach Delay, s/veh		48.4			83.7			160.8			32.4	
Approach LOS		D			F			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	32.0	15.0	33.2	11.3	39.7	17.2	31.0
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	14.0	27.0	10.0	29.0	14.0	27.0	13.0	26.0
Max Q Clear Time (g_c+I1), s	19.0	31.5	15.0	20.3	6.7	23.4	11.5	17.8
Green Ext Time (p_c), s	0.0	0.0	0.0	3.4	0.1	2.6	0.8	3.3

Intersection Summary	
HCM 2010 Ctrl Delay	88.4
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	647	174	150	652	10	315	30	320	10	27	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1863	1863	1900	1900	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	11	681	183	158	686	11	332	32	222	11	28	11
Adj No. of Lanes	0	2	0	1	2	0	0	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	47	1148	305	192	2070	33	449	36	488	129	393	154
Arrive On Green	0.43	0.43	0.43	0.22	1.00	1.00	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	15	2682	713	1774	3565	57	1209	117	1583	1121	1274	500
Grp Volume(v), veh/h	472	0	403	158	340	357	364	0	222	11	0	39
Grp Sat Flow(s),veh/h/ln	1841	0	1569	1774	1770	1853	1325	0	1583	1121	0	1774
Q Serve(g_s), s	0.0	0.0	17.8	7.6	0.0	0.0	22.5	0.0	10.2	0.9	0.0	1.4
Cycle Q Clear(g_c), s	17.5	0.0	17.8	7.6	0.0	0.0	23.9	0.0	10.2	24.7	0.0	1.4
Prop In Lane	0.02		0.45	1.00		0.03	0.91		1.00	1.00		0.28
Lane Grp Cap(c), veh/h	829	0	672	192	1027	1076	485	0	488	129	0	547
V/C Ratio(X)	0.57	0.00	0.60	0.82	0.33	0.33	0.75	0.00	0.45	0.09	0.00	0.07
Avail Cap(c_a), veh/h	829	0	672	394	1027	1076	536	0	545	157	0	591
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.93	0.93	0.93	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.7	0.0	19.8	34.5	0.0	0.0	30.4	0.0	25.0	41.6	0.0	22.0
Incr Delay (d2), s/veh	2.8	0.0	3.9	8.0	0.2	0.2	5.3	0.0	0.7	0.3	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.6	0.0	8.3	4.1	0.0	0.0	9.3	0.0	4.5	0.3	0.0	0.7
LnGrp Delay(d),s/veh	22.6	0.0	23.7	42.5	0.2	0.2	35.7	0.0	25.7	41.9	0.0	22.1
LnGrp LOS	C		C	D	A	A	D		C	D		C
Approach Vol, veh/h		875			855			586			50	
Approach Delay, s/veh		23.1			8.0			31.9			26.4	
Approach LOS		C			A			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		8
Phs Duration (G+Y+Rc), s	13.7	43.5		32.7		57.3		32.7
Change Period (Y+Rc), s	4.0	5.0		5.0		5.0		5.0
Max Green Setting (Gmax), s	20.0	25.0		30.0		49.0		31.0
Max Q Clear Time (g_c+I1), s	9.6	19.8		26.7		2.0		25.9
Green Ext Time (p_c), s	0.3	3.7		1.0		13.2		1.5

Intersection Summary	
HCM 2010 Ctrl Delay	19.9
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	140	475	160	361	380	422	230	1095	387	235	836	200
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	147	500	168	380	400	444	242	1153	407	247	880	211
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	226	642	214	284	493	441	266	1035	358	266	1136	272
Arrive On Green	0.13	0.25	0.24	0.16	0.28	0.27	0.15	0.40	0.39	0.15	0.40	0.39
Sat Flow, veh/h	1774	2607	871	1774	1770	1583	1774	2582	892	1774	2834	679
Grp Volume(v), veh/h	147	338	330	380	400	444	242	782	778	247	549	542
Grp Sat Flow(s),veh/h/ln	1774	1770	1709	1774	1770	1583	1774	1770	1705	1774	1770	1743
Q Serve(g_s), s	7.9	17.8	18.0	16.0	21.1	27.8	13.4	40.1	40.1	13.7	27.0	27.1
Cycle Q Clear(g_c), s	7.9	17.8	18.0	16.0	21.1	27.8	13.4	40.1	40.1	13.7	27.0	27.1
Prop In Lane	1.00		0.51	1.00		1.00	1.00		0.52	1.00		0.39
Lane Grp Cap(c), veh/h	226	436	421	284	493	441	266	709	684	266	709	699
V/C Ratio(X)	0.65	0.78	0.78	1.34	0.81	1.01	0.91	1.10	1.14	0.93	0.77	0.78
Avail Cap(c_a), veh/h	248	455	439	284	493	441	266	709	684	266	709	699
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.55	0.55	0.55	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.5	35.1	35.5	42.0	33.6	36.6	41.8	30.0	30.2	42.0	26.0	26.2
Incr Delay (d2), s/veh	5.1	8.0	8.7	174.3	9.9	44.6	21.2	58.2	72.3	36.5	8.1	8.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	9.6	9.5	21.6	11.6	17.6	8.2	31.0	32.5	9.4	14.7	14.6
LnGrp Delay(d),s/veh	46.6	43.1	44.1	216.3	43.6	81.2	63.1	88.2	102.5	78.4	34.1	34.4
LnGrp LOS	D	D	D	F	D	F	E	F	F	E	C	C
Approach Vol, veh/h		815			1224			1802			1338	
Approach Delay, s/veh		44.2			110.9			91.0			42.4	
Approach LOS		D			F			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	26.9	15.0	42.1	12.8	30.1	15.0	42.1
Change Period (Y+Rc), s	3.0	5.3	3.0	5.0	3.0	5.3	3.0	5.0
Max Green Setting (Gmax), s	13.0	22.7	12.0	36.0	11.0	24.7	12.0	36.0
Max Q Clear Time (g_c+I1), s	18.0	20.0	15.4	29.1	9.9	29.8	15.7	42.1
Green Ext Time (p_c), s	0.0	1.6	0.0	5.8	0.1	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	75.8
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	491	420	631	699	0	0	0	0	380	0	160
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1900	1863	1863	0				1863	1863	1863
Adj Flow Rate, veh/h	0	517	442	664	736	0				412	0	26
Adj No. of Lanes	0	4	0	2	2	0				2	0	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1950	642	810	2470	0				553	0	247
Arrive On Green	0.00	0.41	0.41	0.24	0.70	0.00				0.16	0.00	0.16
Sat Flow, veh/h	0	5067	1583	3442	3632	0				3548	0	1583
Grp Volume(v), veh/h	0	517	442	664	736	0				412	0	26
Grp Sat Flow(s),veh/h/ln	0	1602	1583	1721	1770	0				1774	0	1583
Q Serve(g_s), s	0.0	4.4	14.2	11.3	4.9	0.0				6.8	0.0	0.9
Cycle Q Clear(g_c), s	0.0	4.4	14.2	11.3	4.9	0.0				6.8	0.0	0.9
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1950	642	810	2470	0				553	0	247
V/C Ratio(X)	0.00	0.27	0.69	0.82	0.30	0.00				0.74	0.00	0.11
Avail Cap(c_a), veh/h	0	1950	642	1955	2470	0				2016	0	899
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	12.2	15.1	22.3	3.5	0.0				24.8	0.0	22.3
Incr Delay (d2), s/veh	0.0	0.3	5.9	0.8	0.3	0.0				0.8	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.0	7.2	5.4	2.5	0.0				3.4	0.0	0.4
LnGrp Delay(d),s/veh	0.0	12.5	21.0	23.1	3.9	0.0				25.6	0.0	22.4
LnGrp LOS		B	C	C	A					C		C
Approach Vol, veh/h		959			1400						438	
Approach Delay, s/veh		16.4			13.0						25.4	
Approach LOS		B			B						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	18.0	29.5		14.1		47.5		
Change Period (Y+Rc), s	3.5	4.5		4.5		4.5		
Max Green Setting (Gmax), s	35.0	25.0		35.0		25.0		
Max Q Clear Time (g_c+I1), s	13.3	16.2		8.8		6.9		
Green Ext Time (p_c), s	1.2	4.9		0.8		7.5		

Intersection Summary	
HCM 2010 Ctrl Delay	16.1
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	190	741	0	0	1350	1004	450	0	475	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1863	1863	1863			
Adj Flow Rate, veh/h	200	780	0	0	1421	970	607	0	286			
Adj No. of Lanes	2	2	0	0	4	1	2	0	1			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	318	2121	0	0	2849	704	823	0	367			
Arrive On Green	0.09	0.60	0.00	0.00	0.44	0.44	0.23	0.00	0.23			
Sat Flow, veh/h	3442	3632	0	0	6669	1583	3548	0	1583			
Grp Volume(v), veh/h	200	780	0	0	1421	970	607	0	286			
Grp Sat Flow(s),veh/h/ln	1721	1770	0	0	1602	1583	1774	0	1583			
Q Serve(g_s), s	3.1	6.4	0.0	0.0	8.9	25.0	8.9	0.0	9.5			
Cycle Q Clear(g_c), s	3.1	6.4	0.0	0.0	8.9	25.0	8.9	0.0	9.5			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	318	2121	0	0	2849	704	823	0	367			
V/C Ratio(X)	0.63	0.37	0.00	0.00	0.50	1.38	0.74	0.00	0.78			
Avail Cap(c_a), veh/h	1224	2121	0	0	2849	704	1546	0	690			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	24.6	5.8	0.0	0.0	11.1	15.6	20.0	0.0	20.2			
Incr Delay (d2), s/veh	0.8	0.0	0.0	0.0	0.1	179.0	0.5	0.0	1.4			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.5	3.0	0.0	0.0	3.9	45.8	4.4	0.0	4.3			
LnGrp Delay(d),s/veh	25.4	5.8	0.0	0.0	11.2	194.6	20.5	0.0	21.6			
LnGrp LOS	C	A			B	F	C		C			
Approach Vol, veh/h		980			2391			893				
Approach Delay, s/veh		9.8			85.6			20.9				
Approach LOS		A			F			C				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		38.2			8.7	29.5		18.0
Change Period (Y+Rc), s		4.5			3.5	4.5		5.0
Max Green Setting (Gmax), s		25.0			20.0	25.0		24.5
Max Q Clear Time (g_c+I1), s		8.4			5.1	27.0		11.5
Green Ext Time (p_c), s		11.9			0.3	0.0		1.5

Intersection Summary	
HCM 2010 Ctrl Delay	54.6
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	70	755	132	230	595	128	148	405	60	48	442	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	74	795	139	242	626	135	156	426	63	51	465	84
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	390	1406	246	244	1353	291	350	1308	192	378	1266	227
Arrive On Green	0.47	0.47	0.47	0.93	0.93	0.93	0.42	0.42	0.42	0.42	0.42	0.42
Sat Flow, veh/h	702	3013	527	597	2898	624	855	3097	455	904	2999	539
Grp Volume(v), veh/h	74	467	467	242	382	379	156	242	247	51	273	276
Grp Sat Flow(s),veh/h/ln	702	1770	1770	597	1770	1753	855	1770	1782	904	1770	1768
Q Serve(g_s), s	5.9	17.2	17.2	24.8	2.3	2.3	13.8	8.2	8.4	3.6	9.5	9.6
Cycle Q Clear(g_c), s	8.2	17.2	17.2	42.0	2.3	2.3	23.4	8.2	8.4	12.0	9.5	9.6
Prop In Lane	1.00		0.30	1.00		0.36	1.00		0.26	1.00		0.30
Lane Grp Cap(c), veh/h	390	826	826	244	826	818	350	747	753	378	747	746
V/C Ratio(X)	0.19	0.57	0.57	0.99	0.46	0.46	0.45	0.32	0.33	0.14	0.37	0.37
Avail Cap(c_a), veh/h	390	826	826	244	826	818	350	747	753	378	747	746
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.90	0.90	0.90	0.86	0.86	0.86	1.00	1.00	1.00	0.93	0.93	0.93
Uniform Delay (d), s/veh	15.7	17.4	17.4	15.6	1.7	1.7	25.8	17.4	17.4	21.4	17.8	17.8
Incr Delay (d2), s/veh	0.2	0.8	0.8	50.6	0.3	0.4	4.1	1.2	1.2	0.7	1.3	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	8.5	8.5	9.4	0.9	0.9	3.6	4.3	4.4	1.0	4.9	4.9
LnGrp Delay(d),s/veh	15.9	18.2	18.2	66.2	2.0	2.0	29.9	18.6	18.6	22.1	19.0	19.1
LnGrp LOS	B	B	B	E	A	A	C	B	B	C	B	B
Approach Vol, veh/h		1008			1003			645			600	
Approach Delay, s/veh		18.0			17.5			21.3			19.3	
Approach LOS		B			B			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		43.0		47.0		43.0		47.0
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0
Max Green Setting (Gmax), s		38.0		42.0		38.0		42.0
Max Q Clear Time (g_c+I1), s		25.4		19.2		14.0		44.0
Green Ext Time (p_c), s		5.8		14.5		7.8		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	18.8
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	416	478	191	135	242	203	191	929	360	182	842	429
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	438	503	201	142	255	199	201	978	357	192	886	452
Adj No. of Lanes	1	2	0	1	2	1	1	2	1	1	3	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	892	1924	765	615	2629	1176	237	1140	510	217	1168	545
Arrive On Green	0.03	0.26	0.25	0.05	0.74	0.74	0.13	0.32	0.32	0.12	0.34	0.34
Sat Flow, veh/h	1774	2475	984	1774	3539	1583	1774	3539	1583	1774	3390	1583
Grp Volume(v), veh/h	438	359	345	142	255	199	201	978	357	192	886	452
Grp Sat Flow(s),veh/h/ln	1774	1770	1689	1774	1770	1583	1774	1770	1583	1774	1695	1583
Q Serve(g_s), s	4.3	14.5	14.7	1.8	1.8	3.3	10.0	23.3	22.4	9.6	20.9	23.6
Cycle Q Clear(g_c), s	4.3	14.5	14.7	1.8	1.8	3.3	10.0	23.3	22.4	9.6	20.9	23.6
Prop In Lane	1.00		0.58	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	892	1376	1313	615	2629	1176	237	1140	510	217	1168	545
V/C Ratio(X)	0.49	0.26	0.26	0.23	0.10	0.17	0.85	0.86	0.70	0.89	0.76	0.83
Avail Cap(c_a), veh/h	951	1376	1313	696	2629	1176	237	1140	510	217	1168	545
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.90	0.90	0.90	0.81	0.81	0.81	1.00	1.00	1.00	0.24	0.24	0.24
Uniform Delay (d), s/veh	1.9	12.8	12.9	3.4	3.2	3.4	38.1	28.6	42.4	38.9	26.2	27.1
Incr Delay (d2), s/veh	0.4	0.4	0.4	0.2	0.1	0.3	24.2	6.7	4.2	10.5	0.7	2.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	7.3	7.1	0.9	0.9	1.5	6.4	12.3	10.4	5.3	9.8	10.7
LnGrp Delay(d),s/veh	2.3	13.3	13.4	3.6	3.3	3.7	62.3	35.3	46.6	49.4	26.9	29.8
LnGrp LOS	A	B	B	A	A	A	E	D	D	D	C	C
Approach Vol, veh/h		1142			596			1536			1530	
Approach Delay, s/veh		9.1			3.5			41.4			30.6	
Approach LOS		A			A			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	31.0	10.0	68.9	14.0	33.0	6.9	72.0
Change Period (Y+Rc), s	6.0	* 6	3.0	5.0	3.0	6.0	3.0	5.0
Max Green Setting (Gmax), s	10.0	* 25	10.0	28.0	11.0	24.0	8.0	30.0
Max Q Clear Time (g_c+I1), s	11.6	25.3	6.3	5.3	12.0	25.6	3.8	16.7
Green Ext Time (p_c), s	0.0	0.0	0.7	5.1	0.0	0.0	0.2	4.2

Intersection Summary	
HCM 2010 Ctrl Delay	25.6
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	60	600	80	40	420	83	150	713	210	71	360	140
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	63	632	21	42	442	71	158	751	221	75	379	147
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	273	752	639	156	752	639	399	1249	368	227	1160	444
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.46	0.46	0.46	0.46	0.46	0.46
Sat Flow, veh/h	884	1863	1583	776	1863	1583	873	2698	794	576	2505	958
Grp Volume(v), veh/h	63	632	21	42	442	71	158	493	479	75	266	260
Grp Sat Flow(s),veh/h/ln	884	1863	1583	776	1863	1583	873	1770	1723	576	1770	1694
Q Serve(g_s), s	5.4	27.6	0.7	4.6	16.7	2.5	12.6	18.6	18.6	10.0	8.6	8.8
Cycle Q Clear(g_c), s	22.1	27.6	0.7	32.2	16.7	2.5	21.4	18.6	18.6	28.7	8.6	8.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.46	1.00		0.57
Lane Grp Cap(c), veh/h	273	752	639	156	752	639	399	819	798	227	819	784
V/C Ratio(X)	0.23	0.84	0.03	0.27	0.59	0.11	0.40	0.60	0.60	0.33	0.32	0.33
Avail Cap(c_a), veh/h	299	807	686	179	807	686	399	819	798	227	819	784
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.76	0.76	0.76	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.6	24.2	16.2	38.8	21.0	16.8	22.1	18.0	18.0	28.6	15.3	15.3
Incr Delay (d2), s/veh	0.3	5.9	0.0	0.3	0.6	0.0	2.9	3.3	3.3	3.8	1.1	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	15.3	0.3	1.0	8.7	1.1	3.4	9.8	9.5	1.8	4.4	4.3
LnGrp Delay(d),s/veh	29.9	30.1	16.2	39.1	21.6	16.8	25.0	21.2	21.3	32.5	16.3	16.5
LnGrp LOS	C	C	B	D	C	B	C	C	C	C	B	B
Approach Vol, veh/h		716			555			1130			601	
Approach Delay, s/veh		29.7			22.3			21.8			18.4	
Approach LOS		C			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		47.7		42.3		47.7		42.3
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0
Max Green Setting (Gmax), s		39.0		39.0		39.0		39.0
Max Q Clear Time (g_c+I1), s		23.4		29.6		30.7		34.2
Green Ext Time (p_c), s		6.9		3.3		4.7		2.1

Intersection Summary	
HCM 2010 Ctrl Delay	23.1
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	1216	585	330	554	0	0	0	0	360	350	259
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0				1900	1863	1863
Adj Flow Rate, veh/h	0	1280	616	347	583	0				379	368	273
Adj No. of Lanes	0	2	1	2	2	0				0	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1298	581	803	2281	0				225	219	387
Arrive On Green	0.00	0.37	0.37	0.47	1.00	0.00				0.24	0.24	0.24
Sat Flow, veh/h	0	3632	1583	3442	3632	0				922	895	1583
Grp Volume(v), veh/h	0	1280	616	347	583	0				747	0	273
Grp Sat Flow(s),veh/h/ln	0	1770	1583	1721	1770	0				1817	0	1583
Q Serve(g_s), s	0.0	32.3	33.0	6.1	0.0	0.0				22.0	0.0	14.2
Cycle Q Clear(g_c), s	0.0	32.3	33.0	6.1	0.0	0.0				22.0	0.0	14.2
Prop In Lane	0.00		1.00	1.00		0.00				0.51		1.00
Lane Grp Cap(c), veh/h	0	1298	581	803	2281	0				444	0	387
V/C Ratio(X)	0.00	0.99	1.06	0.43	0.26	0.00				1.68	0.00	0.71
Avail Cap(c_a), veh/h	0	1298	581	803	2281	0				444	0	387
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.98	0.98	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	28.3	28.5	20.0	0.0	0.0				34.0	0.0	31.0
Incr Delay (d2), s/veh	0.0	21.9	54.6	1.7	0.3	0.0				316.7	0.0	4.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	19.6	23.2	3.0	0.1	0.0				50.0	0.0	6.7
LnGrp Delay(d),s/veh	0.0	50.2	83.1	21.7	0.3	0.0				350.7	0.0	36.0
LnGrp LOS		D	F	C	A					F		D
Approach Vol, veh/h		1896			930						1020	
Approach Delay, s/veh		60.9			8.3						266.4	
Approach LOS		E			A						F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	25.0	38.0		27.0		63.0		
Change Period (Y+Rc), s	4.0	5.0		5.0		5.0		
Max Green Setting (Gmax), s	21.0	33.0		22.0		58.0		
Max Q Clear Time (g_c+I1), s	8.1	35.0		24.0		2.0		
Green Ext Time (p_c), s	0.5	0.0		0.0		14.2		

Intersection Summary	
HCM 2010 Ctrl Delay	102.7
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	235	1371	0	0	545	220	359	10	860	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1900	1863	1863			
Adj Flow Rate, veh/h	247	1443	0	0	574	232	378	11	905			
Adj No. of Lanes	1	2	0	0	3	1	0	1	1			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	197	2242	0	0	2373	739	441	13	405			
Arrive On Green	0.22	1.00	0.00	0.00	0.47	0.47	0.26	0.26	0.26			
Sat Flow, veh/h	1774	3632	0	0	5253	1583	1726	50	1583			
Grp Volume(v), veh/h	247	1443	0	0	574	232	389	0	905			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1695	1583	1776	0	1583			
Q Serve(g_s), s	10.0	0.0	0.0	0.0	6.1	8.2	18.8	0.0	23.0			
Cycle Q Clear(g_c), s	10.0	0.0	0.0	0.0	6.1	8.2	18.8	0.0	23.0			
Prop In Lane	1.00		0.00	0.00		1.00	0.97		1.00			
Lane Grp Cap(c), veh/h	197	2242	0	0	2373	739	454	0	405			
V/C Ratio(X)	1.25	0.64	0.00	0.00	0.24	0.31	0.86	0.00	2.24			
Avail Cap(c_a), veh/h	197	2242	0	0	2373	739	454	0	405			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.12	0.12	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	35.0	0.0	0.0	0.0	14.4	15.0	31.9	0.0	33.5			
Incr Delay (d2), s/veh	119.1	0.2	0.0	0.0	0.2	1.1	14.3	0.0	564.4			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	11.3	0.1	0.0	0.0	2.9	3.8	11.0	0.0	73.4			
LnGrp Delay(d),s/veh	154.1	0.2	0.0	0.0	14.7	16.1	46.2	0.0	597.9			
LnGrp LOS	F	A			B	B	D		F			
Approach Vol, veh/h		1690			806			1294				
Approach Delay, s/veh		22.7			15.1			432.1				
Approach LOS		C			B			F				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		62.0			15.0	47.0		28.0
Change Period (Y+Rc), s		5.0			5.0	5.0		5.0
Max Green Setting (Gmax), s		57.0			10.0	42.0		23.0
Max Q Clear Time (g_c+I1), s		2.0			12.0	10.2		25.0
Green Ext Time (p_c), s		17.7			0.0	14.8		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	160.8
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	150	90	224	100	0	0	0	0	102	223	110
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1900	1863	1863	0				1900	1863	1863
Adj Flow Rate, veh/h	0	158	95	236	105	0				107	235	11
Adj No. of Lanes	0	2	0	1	2	0				0	3	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	409	233	417	1874	0				417	798	373
Arrive On Green	0.00	0.19	0.19	0.24	0.53	0.00				0.24	0.24	0.24
Sat Flow, veh/h	0	2268	1239	1774	3632	0				1774	3390	1583
Grp Volume(v), veh/h	0	127	126	236	105	0				107	235	11
Grp Sat Flow(s),veh/h/ln	0	1770	1644	1774	1770	0				1774	1695	1583
Q Serve(g_s), s	0.0	2.7	2.9	5.0	0.6	0.0				2.1	2.4	0.2
Cycle Q Clear(g_c), s	0.0	2.7	2.9	5.0	0.6	0.0				2.1	2.4	0.2
Prop In Lane	0.00		0.75	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	333	309	417	1874	0				417	798	373
V/C Ratio(X)	0.00	0.38	0.41	0.57	0.06	0.00				0.26	0.29	0.03
Avail Cap(c_a), veh/h	0	1083	1006	835	2665	0				835	1595	745
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	15.1	15.2	14.3	4.8	0.0				13.2	13.4	12.5
Incr Delay (d2), s/veh	0.0	0.5	0.6	0.4	0.0	0.0				0.2	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.4	1.4	2.5	0.3	0.0				1.0	1.1	0.1
LnGrp Delay(d),s/veh	0.0	15.6	15.8	14.8	4.9	0.0				13.5	13.5	12.5
LnGrp LOS		B	B	B	A					B	B	B
Approach Vol, veh/h		253			341						353	
Approach Delay, s/veh		15.7			11.7						13.5	
Approach LOS		B			B						B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	14.5	13.0		15.0		27.5		
Change Period (Y+Rc), s	4.5	5.0		5.0		5.0		
Max Green Setting (Gmax), s	20.0	26.0		20.0		32.0		
Max Q Clear Time (g_c+I1), s	7.0	4.9		4.4		2.6		
Green Ext Time (p_c), s	0.3	1.6		1.6		1.8		

Intersection Summary	
HCM 2010 Ctrl Delay	13.4
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	120	192	0	0	384	355	20	534	109	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1900	1863	1900			
Adj Flow Rate, veh/h	126	202	0	0	404	351	21	562	115			
Adj No. of Lanes	1	2	0	0	2	2	0	2	0			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	2	2	0	0	2	2	0	2	0			
Cap, veh/h	176	1562	0	0	916	778	32	896	194			
Arrive On Green	0.10	0.44	0.00	0.00	0.25	0.25	0.31	0.31	0.31			
Sat Flow, veh/h	1774	3632	0	0	3725	3167	104	2883	624			
Grp Volume(v), veh/h	126	202	0	0	404	351	375	0	323			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1863	1583	1858	0	1753			
Q Serve(g_s), s	2.5	1.2	0.0	0.0	3.3	3.4	6.3	0.0	5.7			
Cycle Q Clear(g_c), s	2.5	1.2	0.0	0.0	3.3	3.4	6.3	0.0	5.7			
Prop In Lane	1.00		0.00	0.00		1.00	0.06		0.36			
Lane Grp Cap(c), veh/h	176	1562	0	0	916	778	578	0	545			
V/C Ratio(X)	0.72	0.13	0.00	0.00	0.44	0.45	0.65	0.00	0.59			
Avail Cap(c_a), veh/h	1221	3411	0	0	3590	3052	1790	0	1689			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	15.9	6.0	0.0	0.0	11.6	11.6	10.8	0.0	10.6			
Incr Delay (d2), s/veh	2.0	0.0	0.0	0.0	0.1	0.2	0.5	0.0	0.4			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.3	0.6	0.0	0.0	1.7	1.5	3.3	0.0	2.8			
LnGrp Delay(d),s/veh	17.9	6.0	0.0	0.0	11.7	11.8	11.3	0.0	11.0			
LnGrp LOS	B	A			B	B	B		B			
Approach Vol, veh/h		328			755			698				
Approach Delay, s/veh		10.6			11.7			11.1				
Approach LOS		B			B			B				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		20.5			7.1	13.4		15.8
Change Period (Y+Rc), s		4.5			3.5	4.5		4.5
Max Green Setting (Gmax), s		35.0			25.0	35.0		35.0
Max Q Clear Time (g_c+I1), s		3.2			4.5	5.4		8.3
Green Ext Time (p_c), s		3.5			0.1	3.5		3.0

Intersection Summary	
HCM 2010 Ctrl Delay	11.3
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	510	170	926	630	0	0	0	0	183	314	180
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0				1863	1863	1863
Adj Flow Rate, veh/h	0	537	122	975	663	0				193	331	96
Adj No. of Lanes	0	3	1	2	2	0				1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1991	620	737	2321	0				380	399	339
Arrive On Green	0.00	0.39	0.39	0.21	0.66	0.00				0.21	0.21	0.21
Sat Flow, veh/h	0	5253	1583	3442	3632	0				1774	1863	1583
Grp Volume(v), veh/h	0	537	122	975	663	0				193	331	96
Grp Sat Flow(s),veh/h/ln	0	1695	1583	1721	1770	0				1774	1863	1583
Q Serve(g_s), s	0.0	5.0	3.6	15.0	5.6	0.0				6.7	11.9	3.5
Cycle Q Clear(g_c), s	0.0	5.0	3.6	15.0	5.6	0.0				6.7	11.9	3.5
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1991	620	737	2321	0				380	399	339
V/C Ratio(X)	0.00	0.27	0.20	1.32	0.29	0.00				0.51	0.83	0.28
Avail Cap(c_a), veh/h	0	1991	620	737	2321	0				380	399	339
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.77	0.77	0.00				0.92	0.92	0.92
Uniform Delay (d), s/veh	0.0	14.5	14.0	27.5	5.1	0.0				24.2	26.3	23.0
Incr Delay (d2), s/veh	0.0	0.3	0.7	152.2	0.0	0.0				4.4	16.6	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.4	1.7	22.7	2.7	0.0				3.7	7.9	1.7
LnGrp Delay(d),s/veh	0.0	14.8	14.8	179.7	5.1	0.0				28.7	42.9	24.9
LnGrp LOS		B	B	F	A					C	D	C
Approach Vol, veh/h		659			1638						620	
Approach Delay, s/veh		14.8			109.1						35.7	
Approach LOS		B			F						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	18.5	31.5		20.0		50.0		
Change Period (Y+Rc), s	3.5	4.1		5.0		4.1		
Max Green Setting (Gmax), s	15.0	27.0		15.0		35.0		
Max Q Clear Time (g_c+I1), s	17.0	7.0		13.9		7.6		
Green Ext Time (p_c), s	0.0	7.5		0.3		8.4		

Intersection Summary	
HCM 2010 Ctrl Delay	72.2
HCM 2010 LOS	E

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	160	493	0	0	1286	404	380	99	485	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1863	1863	1863			
Adj Flow Rate, veh/h	168	519	0	0	1354	350	297	332	283			
Adj No. of Lanes	2	2	0	0	4	1	1	1	1			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	506	2004	0	0	2356	582	522	548	466			
Arrive On Green	0.15	0.57	0.00	0.00	0.37	0.37	0.29	0.29	0.29			
Sat Flow, veh/h	3442	3632	0	0	6669	1583	1774	1863	1583			
Grp Volume(v), veh/h	168	519	0	0	1354	350	297	332	283			
Grp Sat Flow(s),veh/h/ln	1721	1770	0	0	1602	1583	1774	1863	1583			
Q Serve(g_s), s	3.0	5.1	0.0	0.0	11.5	12.2	9.7	10.4	10.4			
Cycle Q Clear(g_c), s	3.0	5.1	0.0	0.0	11.5	12.2	9.7	10.4	10.4			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	506	2004	0	0	2356	582	522	548	466			
V/C Ratio(X)	0.33	0.26	0.00	0.00	0.57	0.60	0.57	0.61	0.61			
Avail Cap(c_a), veh/h	506	2004	0	0	2356	582	522	548	466			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	26.0	7.5	0.0	0.0	17.2	17.5	20.3	20.6	20.6			
Incr Delay (d2), s/veh	1.8	0.3	0.0	0.0	1.0	4.5	4.5	4.9	5.8			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.5	2.5	0.0	0.0	5.2	6.0	5.3	6.1	5.3			
LnGrp Delay(d),s/veh	27.8	7.8	0.0	0.0	18.3	22.0	24.8	25.5	26.4			
LnGrp LOS	C	A			B	C	C	C	C			
Approach Vol, veh/h		687			1704			912				
Approach Delay, s/veh		12.7			19.0			25.6				
Approach LOS		B			B			C				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		43.0			13.5	29.5		25.0
Change Period (Y+Rc), s		4.5			3.5	4.5		5.0
Max Green Setting (Gmax), s		30.0			10.0	25.0		20.0
Max Q Clear Time (g_c+I1), s		7.1			5.0	14.2		12.4
Green Ext Time (p_c), s		11.6			0.1	7.2		2.5

Intersection Summary	
HCM 2010 Ctrl Delay	19.5
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	293	0	170	0	0	0	160	1251	0	10	897	186
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	0	1863				1863	1863	0	1900	1863	1900
Adj Flow Rate, veh/h	308	0	179				168	1317	0	11	944	196
Adj No. of Lanes	2	0	1				1	3	0	0	3	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	0	2				2	2	0	2	2	2
Cap, veh/h	512	0	236				436	3707	0	50	2605	535
Arrive On Green	0.15	0.00	0.15				0.05	0.73	0.00	0.64	0.64	0.64
Sat Flow, veh/h	3442	0	1583				1774	5253	0	15	4055	833
Grp Volume(v), veh/h	308	0	179				168	1317	0	425	361	364
Grp Sat Flow(s),veh/h/ln	1721	0	1583				1774	1695	0	1812	1543	1548
Q Serve(g_s), s	7.5	0.0	9.8				2.7	8.5	0.0	0.0	9.9	9.9
Cycle Q Clear(g_c), s	7.5	0.0	9.8				2.7	8.5	0.0	9.5	9.9	9.9
Prop In Lane	1.00		1.00				1.00		0.00	0.03		0.54
Lane Grp Cap(c), veh/h	512	0	236				436	3707	0	1205	991	994
V/C Ratio(X)	0.60	0.00	0.76				0.39	0.36	0.00	0.35	0.36	0.37
Avail Cap(c_a), veh/h	1262	0	581				558	3707	0	1205	991	994
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.95	0.00	0.95				1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.8	0.0	36.8				5.2	4.5	0.0	7.5	7.5	7.5
Incr Delay (d2), s/veh	1.1	0.0	4.7				0.6	0.3	0.0	0.8	1.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	0.0	8.5				1.3	4.0	0.0	5.1	4.4	4.4
LnGrp Delay(d),s/veh	36.9	0.0	41.5				5.7	4.7	0.0	8.3	8.6	8.6
LnGrp LOS	D		D				A	A		A	A	A
Approach Vol, veh/h		487						1485			1151	
Approach Delay, s/veh		38.6						4.8			8.5	
Approach LOS		D						A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		71.6		18.4	7.8	63.8		
Change Period (Y+Rc), s		6.0		5.0	3.0	6.0		
Max Green Setting (Gmax), s		46.0		33.0	11.0	30.0		
Max Q Clear Time (g_c+I1), s		10.5		11.8	4.7	11.9		
Green Ext Time (p_c), s		23.2		1.6	0.2	14.1		

Intersection Summary	
HCM 2010 Ctrl Delay	11.4
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	78.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	0	0	450	1611	1596	821
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	Yield
Storage Length	0	-	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	474	1696	1680	864

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	3475	840	1680	0	-	0
Stage 1	1680	-	-	-	-	-
Stage 2	1795	-	-	-	-	-
Critical Hdwy	6.29	7.14	5.34	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.67	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	8	265	~ 181	-	-	-
Stage 1	92	-	-	-	-	-
Stage 2	116	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	8	265	~ 181	-	-	-
Mov Cap-2 Maneuver	8	-	-	-	-	-
Stage 1	92	-	-	-	-	-
Stage 2	116	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	171.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	~ 181	-	-	-	-
HCM Lane V/C Ratio	2.617	-	-	-	-
HCM Control Delay (s)	$ 783.4	-	0	-	-
HCM Lane LOS	F	-	A	-	-
HCM 95th %tile Q(veh)	40.9	-	-	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

APPENDIX G: MITIGATION LEVEL OF SERVICE AND SYNCHRO WORKSHEETS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	378	0	754	0	0	0	0	492	283	493	479	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1765				0	1765	1765	1765	1765	0
Adj Flow Rate, veh/h	546	0	635				0	518	197	519	504	0
Adj No. of Lanes	2	0	2				0	2	1	2	2	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	942	0	840				0	1303	583	614	2072	0
Arrive On Green	0.28	0.00	0.28				0.00	0.39	0.39	0.19	0.62	0.00
Sat Flow, veh/h	3361	0	3000				0	3441	1500	3261	3441	0
Grp Volume(v), veh/h	546	0	635				0	518	197	519	504	0
Grp Sat Flow(s),veh/h/ln	1681	0	1500				0	1676	1500	1630	1676	0
Q Serve(g_s), s	13.7	0.0	18.9				0.0	10.9	9.1	15.1	6.6	0.0
Cycle Q Clear(g_c), s	13.7	0.0	18.9				0.0	10.9	9.1	15.1	6.6	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	942	0	840				0	1303	583	614	2072	0
V/C Ratio(X)	0.58	0.00	0.76				0.00	0.40	0.34	0.85	0.24	0.00
Avail Cap(c_a), veh/h	1235	0	1102				0	1303	583	898	2072	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.22	0.22	0.00
Uniform Delay (d), s/veh	30.3	0.0	32.2				0.0	21.7	21.1	38.4	8.4	0.0
Incr Delay (d2), s/veh	0.8	0.0	2.7				0.0	0.9	1.6	1.2	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.5	0.0	8.2				0.0	5.2	4.0	6.9	3.0	0.0
LnGrp Delay(d),s/veh	31.1	0.0	34.9				0.0	22.6	22.6	39.6	8.5	0.0
LnGrp LOS	C		C					C	C	D	A	
Approach Vol, veh/h		1181						715			1023	
Approach Delay, s/veh		33.1						22.6			24.2	
Approach LOS		C						C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	22.5	43.1		32.5		65.5		
Change Period (Y+Rc), s	4.0	5.0		5.0		5.0		
Max Green Setting (Gmax), s	27.0	21.0		36.0		52.0		
Max Q Clear Time (g_c+I1), s	17.1	12.9		20.9		8.6		
Green Ext Time (p_c), s	1.4	4.2		6.5		8.9		

Intersection Summary	
HCM 2010 Ctrl Delay	27.4
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	93	704	0	0	407	105	110	158	1132	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1765	1765	0	0	1765	1765	1765	1765	1765			
Adj Flow Rate, veh/h	102	774	0	0	447	37	121	0	1216			
Adj No. of Lanes	2	2	0	0	4	1	1	0	2			
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	192	1285	0	0	1733	428	859	0	1533			
Arrive On Green	0.06	0.38	0.00	0.00	0.29	0.29	0.51	0.00	0.51			
Sat Flow, veh/h	3261	3441	0	0	6318	1500	1681	0	3000			
Grp Volume(v), veh/h	102	774	0	0	447	37	121	0	1216			
Grp Sat Flow(s),veh/h/ln	1630	1676	0	0	1518	1500	1681	0	1500			
Q Serve(g_s), s	2.7	16.7	0.0	0.0	5.1	1.6	3.4	0.0	30.0			
Cycle Q Clear(g_c), s	2.7	16.7	0.0	0.0	5.1	1.6	3.4	0.0	30.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	192	1285	0	0	1733	428	859	0	1533			
V/C Ratio(X)	0.53	0.60	0.00	0.00	0.26	0.09	0.14	0.00	0.79			
Avail Cap(c_a), veh/h	192	1285	0	0	1733	428	859	0	1533			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	41.1	22.2	0.0	0.0	24.8	23.6	11.6	0.0	18.1			
Incr Delay (d2), s/veh	10.1	2.1	0.0	0.0	0.4	0.4	0.3	0.0	4.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.5	8.0	0.0	0.0	2.2	0.7	1.7	0.0	13.2			
LnGrp Delay(d),s/veh	51.3	24.3	0.0	0.0	25.2	23.9	11.9	0.0	22.4			
LnGrp LOS	D	C			C	C	B		C			
Approach Vol, veh/h		876			484			1337				
Approach Delay, s/veh		27.5			25.1			21.4				
Approach LOS		C			C			C				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		39.0			8.8	30.2		51.0
Change Period (Y+Rc), s		4.5			3.5	4.5		5.0
Max Green Setting (Gmax), s		34.5			5.3	25.7		46.0
Max Q Clear Time (g_c+I1), s		18.7			4.7	7.1		32.0
Green Ext Time (p_c), s		5.5			0.0	5.9		5.5

Intersection Summary	
HCM 2010 Ctrl Delay	24.1
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	815	0	635	0	0	0	0	563	261	228	415	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1765				0	1765	1765	1765	1765	0
Adj Flow Rate, veh/h	1090	0	420				0	593	174	240	437	0
Adj No. of Lanes	3	0	1				0	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	1561	0	464				0	1221	546	308	1973	0
Arrive On Green	0.31	0.00	0.31				0.00	0.36	0.36	0.18	0.59	0.00
Sat Flow, veh/h	5042	0	1500				0	3441	1500	1681	3441	0
Grp Volume(v), veh/h	1090	0	420				0	593	174	240	437	0
Grp Sat Flow(s),veh/h/ln	1681	0	1500				0	1676	1500	1681	1676	0
Q Serve(g_s), s	18.7	0.0	26.3				0.0	13.4	8.2	13.3	6.0	0.0
Cycle Q Clear(g_c), s	18.7	0.0	26.3				0.0	13.4	8.2	13.3	6.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1561	0	464				0	1221	546	308	1973	0
V/C Ratio(X)	0.70	0.00	0.90				0.00	0.49	0.32	0.78	0.22	0.00
Avail Cap(c_a), veh/h	1595	0	474				0	1221	546	566	1973	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.50	0.50	0.00
Uniform Delay (d), s/veh	29.8	0.0	32.4				0.0	24.1	22.4	38.1	9.5	0.0
Incr Delay (d2), s/veh	1.5	0.0	20.8				0.0	1.4	1.5	2.2	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.9	0.0	13.5				0.0	6.4	3.6	6.4	2.8	0.0
LnGrp Delay(d),s/veh	31.3	0.0	53.3				0.0	25.4	23.9	40.3	9.7	0.0
LnGrp LOS	C		D					C	C	D	A	
Approach Vol, veh/h		1510						767			677	
Approach Delay, s/veh		37.4						25.1			20.5	
Approach LOS		D						C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	22.0	40.7		35.3		62.7		
Change Period (Y+Rc), s	4.0	5.0		5.0		5.0		
Max Green Setting (Gmax), s	33.0	20.0		31.0		49.0		
Max Q Clear Time (g_c+I1), s	15.3	15.4		28.3		8.0		
Green Ext Time (p_c), s	0.6	2.7		2.0		8.8		

Intersection Summary	
HCM 2010 Ctrl Delay	30.3
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	775	582	329	547	0	0	0	0	358	4	208
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1765	1765	1765	1765	0				1800	1765	1765
Adj Flow Rate, veh/h	0	842	633	358	595	0				389	4	226
Adj No. of Lanes	0	2	1	2	2	0				0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1429	639	507	2100	0				437	4	394
Arrive On Green	0.00	0.43	0.43	0.31	1.00	0.00				0.26	0.26	0.26
Sat Flow, veh/h	0	3441	1500	3261	3441	0				1664	17	1500
Grp Volume(v), veh/h	0	842	633	358	595	0				393	0	226
Grp Sat Flow(s),veh/h/ln	0	1676	1500	1630	1676	0				1681	0	1500
Q Serve(g_s), s	0.0	17.3	37.7	8.7	0.0	0.0				20.2	0.0	11.8
Cycle Q Clear(g_c), s	0.0	17.3	37.7	8.7	0.0	0.0				20.2	0.0	11.8
Prop In Lane	0.00		1.00	1.00		0.00				0.99		1.00
Lane Grp Cap(c), veh/h	0	1429	639	507	2100	0				441	0	394
V/C Ratio(X)	0.00	0.59	0.99	0.71	0.28	0.00				0.89	0.00	0.57
Avail Cap(c_a), veh/h	0	1429	639	507	2100	0				560	0	500
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.94	0.94	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	19.8	25.6	29.2	0.0	0.0				31.9	0.0	28.8
Incr Delay (d2), s/veh	0.0	1.8	33.2	7.6	0.3	0.0				12.0	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	8.3	21.4	4.4	0.1	0.0				10.9	0.0	5.0
LnGrp Delay(d),s/veh	0.0	21.6	58.8	36.7	0.3	0.0				43.9	0.0	29.3
LnGrp LOS		C	E	D	A					D		C
Approach Vol, veh/h		1475			953						619	
Approach Delay, s/veh		37.6			14.0						38.6	
Approach LOS		D			B						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	18.0	43.4		28.6		61.4		
Change Period (Y+Rc), s	4.0	5.0		5.0		5.0		
Max Green Setting (Gmax), s	14.0	32.0		30.0		50.0		
Max Q Clear Time (g_c+I1), s	10.7	39.7		22.2		2.0		
Green Ext Time (p_c), s	0.2	0.0		1.4		9.4		

Intersection Summary	
HCM 2010 Ctrl Delay	30.4
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	230	942	0	0	543	215	357	1	605	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1765	1765	0	0	1765	1765	1800	1765	1765			
Adj Flow Rate, veh/h	250	1024	0	0	590	234	388	1	658			
Adj No. of Lanes	2	2	0	0	2	1	0	1	2			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	313	2124	0	0	1615	723	428	1	675			
Arrive On Green	0.19	1.00	0.00	0.00	0.48	0.48	0.26	0.26	0.26			
Sat Flow, veh/h	3261	3441	0	0	3441	1500	1677	4	2640			
Grp Volume(v), veh/h	250	1024	0	0	590	234	389	0	658			
Grp Sat Flow(s),veh/h/ln	1630	1676	0	0	1676	1500	1681	0	1320			
Q Serve(g_s), s	6.6	0.0	0.0	0.0	10.0	8.6	20.2	0.0	22.2			
Cycle Q Clear(g_c), s	6.6	0.0	0.0	0.0	10.0	8.6	20.2	0.0	22.2			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	313	2124	0	0	1615	723	430	0	675			
V/C Ratio(X)	0.80	0.48	0.00	0.00	0.37	0.32	0.91	0.00	0.98			
Avail Cap(c_a), veh/h	362	2124	0	0	1615	723	430	0	675			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.64	0.64	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	35.5	0.0	0.0	0.0	14.7	14.3	32.4	0.0	33.2			
Incr Delay (d2), s/veh	5.9	0.5	0.0	0.0	0.6	1.2	21.9	0.0	28.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	3.2	0.1	0.0	0.0	4.7	3.8	11.9	0.0	10.7			
LnGrp Delay(d),s/veh	41.4	0.5	0.0	0.0	15.3	15.5	54.4	0.0	61.6			
LnGrp LOS	D	A			B	B	D		E			
Approach Vol, veh/h		1274			824			1047				
Approach Delay, s/veh		8.5			15.4			58.9				
Approach LOS		A			B			E				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		62.0			13.6	48.4		28.0
Change Period (Y+Rc), s		5.0			5.0	5.0		5.0
Max Green Setting (Gmax), s		57.0			10.0	42.0		23.0
Max Q Clear Time (g_c+I1), s		2.0			8.6	12.0		24.2
Green Ext Time (p_c), s		11.6			0.1	10.3		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	27.1
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	423	140	706	476	0	0	0	0	142	255	57
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1765	1765	1765	1765	0				1765	1765	1765
Adj Flow Rate, veh/h	0	492	100	821	553	0				165	297	-36
Adj No. of Lanes	0	3	1	2	2	0				1	1	1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86				0.86	0.86	0.86
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1740	542	917	2301	0				336	353	300
Arrive On Green	0.00	0.36	0.36	0.28	0.69	0.00				0.20	0.20	0.00
Sat Flow, veh/h	0	4976	1500	3261	3441	0				1681	1765	1500
Grp Volume(v), veh/h	0	492	100	821	553	0				165	297	-36
Grp Sat Flow(s),veh/h/ln	0	1606	1500	1630	1676	0				1681	1765	1500
Q Serve(g_s), s	0.0	5.8	3.6	19.4	5.0	0.0				7.0	13.0	0.0
Cycle Q Clear(g_c), s	0.0	5.8	3.6	19.4	5.0	0.0				7.0	13.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1740	542	917	2301	0				336	353	300
V/C Ratio(X)	0.00	0.28	0.18	0.90	0.24	0.00				0.49	0.84	-0.12
Avail Cap(c_a), veh/h	0	1740	542	917	2301	0				336	353	300
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.86	0.86	0.00				0.87	0.87	0.00
Uniform Delay (d), s/veh	0.0	18.2	17.5	27.6	4.7	0.0				28.4	30.8	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.8	11.6	0.0	0.0				4.4	18.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.6	1.6	10.1	2.2	0.0				3.6	8.1	0.0
LnGrp Delay(d),s/veh	0.0	18.6	18.2	39.2	4.7	0.0				32.8	49.5	0.0
LnGrp LOS		B	B	D	A					C	D	
Approach Vol, veh/h		592			1374						426	
Approach Delay, s/veh		18.5			25.3						47.2	
Approach LOS		B			C						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	26.0	33.0		21.0		59.0		
Change Period (Y+Rc), s	3.5	4.1		5.0		4.1		
Max Green Setting (Gmax), s	22.5	28.9		16.0		54.9		
Max Q Clear Time (g_c+I1), s	21.4	7.8		15.0		7.0		
Green Ext Time (p_c), s	0.1	6.5		0.2		7.7		

Intersection Summary	
HCM 2010 Ctrl Delay	27.6
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	0	370	1463	1428	665
Number			5	2	6	16
Initial Q (Qb), veh			0	0	0	0
Ped-Bike Adj(A_pbT)			1.00			1.00
Parking Bus, Adj			1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln			1765	1765	1765	1765
Adj Flow Rate, veh/h			394	1556	1519	0
Adj No. of Lanes			1	2	3	1
Peak Hour Factor			0.94	0.94	0.94	0.94
Percent Heavy Veh, %			2	2	2	2
Cap, veh/h			450	3085	2756	858
Arrive On Green			0.27	0.92	0.57	0.00
Sat Flow, veh/h			1681	3441	4976	1500
Grp Volume(v), veh/h			394	1556	1519	0
Grp Sat Flow(s),veh/h/ln			1681	1676	1606	1500
Q Serve(g_s), s			11.2	3.5	9.9	0.0
Cycle Q Clear(g_c), s			11.2	3.5	9.9	0.0
Prop In Lane			1.00			1.00
Lane Grp Cap(c), veh/h			450	3085	2756	858
V/C Ratio(X)			0.87	0.50	0.55	0.00
Avail Cap(c_a), veh/h			504	3085	2756	858
HCM Platoon Ratio			1.00	1.00	1.00	1.00
Upstream Filter(I)			1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh			17.5	0.3	6.7	0.0
Incr Delay (d2), s/veh			14.6	0.6	0.8	0.0
Initial Q Delay(d3),s/veh			0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln			7.0	1.6	4.4	0.0
LnGrp Delay(d),s/veh			32.1	0.9	7.5	0.0
LnGrp LOS			C	A	A	
Approach Vol, veh/h				1950	1519	
Approach Delay, s/veh				7.2	7.5	
Approach LOS				A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		
Phs Duration (G+Y+Rc), s		50.0			17.4	32.6		
Change Period (Y+Rc), s		4.0			4.0	4.0		
Max Green Setting (Gmax), s		46.0			15.0	27.0		
Max Q Clear Time (g_c+I1), s		5.5			13.2	11.9		
Green Ext Time (p_c), s		33.7			0.3	14.0		

Intersection Summary	
HCM 2010 Ctrl Delay	7.3
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	20	180	220	456	590	200	441	454	130	20	688	640
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	21	189	232	480	621	211	464	478	71	21	949	437
Adj No. of Lanes	1	2	1	2	2	1	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	99	197	578	694	714	319	549	1998	1213	40	993	422
Arrive On Green	0.06	0.06	0.06	0.20	0.20	0.20	0.31	0.56	0.56	0.02	0.27	0.27
Sat Flow, veh/h	1774	3539	1583	3442	3539	1583	1774	3539	1583	1774	3725	1583
Grp Volume(v), veh/h	21	189	232	480	621	211	464	478	71	21	949	437
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1721	1770	1583	1774	1770	1583	1774	1863	1583
Q Serve(g_s), s	1.0	4.8	0.0	11.6	15.3	11.0	22.0	6.1	1.0	1.1	22.6	24.0
Cycle Q Clear(g_c), s	1.0	4.8	0.0	11.6	15.3	11.0	22.0	6.1	1.0	1.1	22.6	24.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	99	197	578	694	714	319	549	1998	1213	40	993	422
V/C Ratio(X)	0.21	0.96	0.40	0.69	0.87	0.66	0.85	0.24	0.06	0.52	0.96	1.03
Avail Cap(c_a), veh/h	99	197	578	727	747	334	549	1998	1213	99	993	422
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.70	0.70	0.70	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.6	42.4	21.3	33.3	34.8	33.1	29.1	9.9	2.6	43.5	32.5	33.0
Incr Delay (d2), s/veh	0.4	52.5	0.2	2.2	9.9	3.5	8.5	0.2	0.1	10.1	19.6	53.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	3.8	4.3	5.7	8.4	5.1	12.0	3.0	0.8	0.6	14.3	16.7
LnGrp Delay(d),s/veh	41.0	94.9	21.4	35.5	44.7	36.5	37.5	10.1	2.6	53.6	52.1	86.1
LnGrp LOS	D	F	C	D	D	D	D	B	A	D	D	F
Approach Vol, veh/h		442			1312			1013			1407	
Approach Delay, s/veh		53.8			40.0			22.1			62.7	
Approach LOS		D			D			C			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.0	56.0		10.0	33.0	29.0		23.2
Change Period (Y+Rc), s	4.0	5.0		5.0	5.0	* 5		5.0
Max Green Setting (Gmax), s	5.0	42.0		5.0	23.0	* 24		19.0
Max Q Clear Time (g_c+I1), s	3.1	8.1		6.8	24.0	26.0		17.3
Green Ext Time (p_c), s	0.0	5.1		0.0	0.0	0.0		0.9

Intersection Summary	
HCM 2010 Ctrl Delay	44.8
HCM 2010 LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	380	0	755	0	0	0	0	615	468	700	595	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	267	0	938				0	647	392	737	626	0
Adj No. of Lanes	1	0	2				0	2	2	2	2	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	557	0	995				0	1045	822	853	2066	0
Arrive On Green	0.31	0.00	0.31				0.00	0.30	0.30	0.25	0.58	0.00
Sat Flow, veh/h	1774	0	3167				0	3632	2787	3442	3632	0
Grp Volume(v), veh/h	267	0	938				0	647	392	737	626	0
Grp Sat Flow(s),veh/h/ln	1774	0	1583				0	1770	1393	1721	1770	0
Q Serve(g_s), s	11.9	0.0	28.3				0.0	15.5	11.3	20.1	8.8	0.0
Cycle Q Clear(g_c), s	11.9	0.0	28.3				0.0	15.5	11.3	20.1	8.8	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	557	0	995				0	1045	822	853	2066	0
V/C Ratio(X)	0.48	0.00	0.94				0.00	0.62	0.48	0.86	0.30	0.00
Avail Cap(c_a), veh/h	561	0	1002				0	1045	822	1159	2066	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.38	0.38	0.00
Uniform Delay (d), s/veh	27.1	0.0	32.7				0.0	29.8	28.3	35.3	10.3	0.0
Incr Delay (d2), s/veh	0.9	0.0	16.5				0.0	2.8	2.0	2.1	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	0.0	14.7				0.0	7.9	4.6	9.8	4.3	0.0
LnGrp Delay(d),s/veh	28.0	0.0	49.3				0.0	32.6	30.3	37.4	10.5	0.0
LnGrp LOS	C		D					C	C	D	B	
Approach Vol, veh/h		1205						1039			1363	
Approach Delay, s/veh		44.6						31.7			25.0	
Approach LOS		D						C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	28.3	33.9		35.8		62.2		
Change Period (Y+Rc), s	4.0	5.0		5.0		5.0		
Max Green Setting (Gmax), s	33.0	20.0		31.0		49.0		
Max Q Clear Time (g_c+I1), s	22.1	17.5		30.3		10.8		
Green Ext Time (p_c), s	2.2	2.0		0.5		13.2		

Intersection Summary	
HCM 2010 Ctrl Delay	33.5
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	124	585	301	360	530	201	330	540	334	132	687	223
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	131	616	317	379	558	212	347	568	279	139	723	147
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	357	835	358	337	795	340	380	1312	587	219	991	443
Arrive On Green	0.20	0.24	0.23	0.19	0.22	0.21	0.07	0.12	0.12	0.12	0.28	0.28
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	131	616	317	379	558	212	347	568	279	139	723	147
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	6.4	16.1	11.8	19.0	14.5	8.8	19.4	14.9	16.4	7.5	18.5	7.4
Cycle Q Clear(g_c), s	6.4	16.1	11.8	19.0	14.5	8.8	19.4	14.9	16.4	7.5	18.5	7.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	357	835	358	337	795	340	380	1312	587	219	991	443
V/C Ratio(X)	0.37	0.74	0.89	1.12	0.70	0.62	0.91	0.43	0.48	0.63	0.73	0.33
Avail Cap(c_a), veh/h	357	991	427	337	1168	507	380	1312	587	266	991	443
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	0.39	0.39	0.39	0.97	0.97	0.97	1.00	1.00	1.00	0.66	0.66	0.66
Uniform Delay (d), s/veh	34.4	35.4	13.8	40.5	35.7	18.9	45.5	34.1	34.8	41.7	32.6	28.6
Incr Delay (d2), s/veh	0.2	1.0	7.9	86.3	1.1	1.8	25.9	0.2	0.6	2.3	3.2	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	8.0	5.9	17.3	7.2	4.0	12.3	7.3	7.3	3.8	9.5	3.4
LnGrp Delay(d),s/veh	34.7	36.3	21.7	126.8	36.8	20.7	71.4	34.4	35.4	44.0	35.7	29.9
LnGrp LOS	C	D	C	F	D	C	E	C	D	D	D	C
Approach Vol, veh/h		1064			1149			1194			1009	
Approach Delay, s/veh		31.8			63.5			45.4			36.0	
Approach LOS		C			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.0	25.6	23.4	30.0	22.1	24.5	14.3	39.1
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	16.0	25.0	14.0	25.0	11.0	30.0	12.0	27.0
Max Q Clear Time (g_c+I1), s	21.0	18.1	21.4	20.5	8.4	16.5	9.5	18.4
Green Ext Time (p_c), s	0.0	2.5	0.0	1.8	1.3	3.0	0.1	3.7

Intersection Summary	
HCM 2010 Ctrl Delay	44.7
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	395	425	730	947	0	0	0	0	170	460	450
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0				1863	1863	1863
Adj Flow Rate, veh/h	0	416	447	768	997	0				179	484	474
Adj No. of Lanes	0	3	1	2	2	0				2	1	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1865	581	803	2281	0				841	455	681
Arrive On Green	0.00	0.37	0.37	0.47	1.00	0.00				0.24	0.24	0.24
Sat Flow, veh/h	0	5253	1583	3442	3632	0				3442	1863	2787
Grp Volume(v), veh/h	0	416	447	768	997	0				179	484	474
Grp Sat Flow(s),veh/h/ln	0	1695	1583	1721	1770	0				1721	1863	1393
Q Serve(g_s), s	0.0	5.1	22.4	19.3	0.0	0.0				3.7	22.0	13.9
Cycle Q Clear(g_c), s	0.0	5.1	22.4	19.3	0.0	0.0				3.7	22.0	13.9
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1865	581	803	2281	0				841	455	681
V/C Ratio(X)	0.00	0.22	0.77	0.96	0.44	0.00				0.21	1.06	0.70
Avail Cap(c_a), veh/h	0	1865	581	803	2281	0				841	455	681
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.55	0.55	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	19.7	25.2	23.6	0.0	0.0				27.1	34.0	31.0
Incr Delay (d2), s/veh	0.0	0.3	9.5	15.3	0.3	0.0				0.0	59.9	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.4	11.3	10.7	0.1	0.0				1.8	18.8	5.6
LnGrp Delay(d),s/veh	0.0	19.9	34.7	38.8	0.3	0.0				27.1	93.9	33.6
LnGrp LOS		B	C	D	A					C	F	C
Approach Vol, veh/h		863			1765						1137	
Approach Delay, s/veh		27.6			17.1						58.2	
Approach LOS		C			B						E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	25.0	38.0		27.0		63.0		
Change Period (Y+Rc), s	4.0	5.0		5.0		5.0		
Max Green Setting (Gmax), s	21.0	33.0		22.0		58.0		
Max Q Clear Time (g_c+I1), s	21.3	24.4		24.0		2.0		
Green Ext Time (p_c), s	0.0	4.6		0.0		8.6		

Intersection Summary	
HCM 2010 Ctrl Delay	31.9
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	135	480	0	0	1227	260	600	10	310	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1900	1863	1863			
Adj Flow Rate, veh/h	142	505	0	0	1292	274	632	11	326			
Adj No. of Lanes	1	2	0	0	3	1	0	1	1			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	176	1770	0	0	1757	547	678	12	616			
Arrive On Green	0.03	0.17	0.00	0.00	0.35	0.35	0.39	0.39	0.39			
Sat Flow, veh/h	1774	3632	0	0	5253	1583	1745	30	1583			
Grp Volume(v), veh/h	142	505	0	0	1292	274	643	0	326			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1695	1583	1775	0	1583			
Q Serve(g_s), s	7.2	11.3	0.0	0.0	20.1	12.3	31.2	0.0	14.3			
Cycle Q Clear(g_c), s	7.2	11.3	0.0	0.0	20.1	12.3	31.2	0.0	14.3			
Prop In Lane	1.00		0.00	0.00		1.00	0.98		1.00			
Lane Grp Cap(c), veh/h	176	1770	0	0	1757	547	690	0	616			
V/C Ratio(X)	0.81	0.29	0.00	0.00	0.74	0.50	0.93	0.00	0.53			
Avail Cap(c_a), veh/h	197	1770	0	0	1757	547	750	0	669			
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.98	0.98	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	42.7	23.5	0.0	0.0	25.8	23.3	26.4	0.0	21.2			
Incr Delay (d2), s/veh	17.2	0.4	0.0	0.0	2.8	3.3	16.9	0.0	0.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	4.4	5.6	0.0	0.0	9.8	5.9	18.4	0.0	6.3			
LnGrp Delay(d),s/veh	59.9	23.9	0.0	0.0	28.6	26.6	43.3	0.0	21.4			
LnGrp LOS	E	C			C	C	D		C			
Approach Vol, veh/h		647			1566			969				
Approach Delay, s/veh		31.8			28.3			35.9				
Approach LOS		C			C			D				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		50.0			13.9	36.1		40.0
Change Period (Y+Rc), s		5.0			5.0	5.0		5.0
Max Green Setting (Gmax), s		42.0			10.0	27.0		38.0
Max Q Clear Time (g_c+I1), s		13.3			9.2	22.1		33.2
Green Ext Time (p_c), s		11.9			0.0	3.7		1.8

Intersection Summary	
HCM 2010 Ctrl Delay	31.3
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	100	717	0	0	483	113	160	199	1137	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1863	1863	1863			
Adj Flow Rate, veh/h	105	755	0	0	508	44	168	0	1198			
Adj No. of Lanes	2	2	0	0	4	1	1	0	2			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	203	1357	0	0	1830	452	907	0	1619			
Arrive On Green	0.06	0.38	0.00	0.00	0.29	0.29	0.51	0.00	0.51			
Sat Flow, veh/h	3442	3632	0	0	6669	1583	1774	0	3167			
Grp Volume(v), veh/h	105	755	0	0	508	44	168	0	1198			
Grp Sat Flow(s),veh/h/ln	1721	1770	0	0	1602	1583	1774	0	1583			
Q Serve(g_s), s	2.7	15.1	0.0	0.0	5.5	1.8	4.6	0.0	26.8			
Cycle Q Clear(g_c), s	2.7	15.1	0.0	0.0	5.5	1.8	4.6	0.0	26.8			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	203	1357	0	0	1830	452	907	0	1619			
V/C Ratio(X)	0.52	0.56	0.00	0.00	0.28	0.10	0.19	0.00	0.74			
Avail Cap(c_a), veh/h	203	1357	0	0	1830	452	907	0	1619			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	41.1	21.8	0.0	0.0	24.9	23.6	11.9	0.0	17.3			
Incr Delay (d2), s/veh	9.2	1.7	0.0	0.0	0.4	0.4	0.5	0.0	3.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.5	7.7	0.0	0.0	2.5	0.9	2.4	0.0	12.3			
LnGrp Delay(d),s/veh	50.3	23.4	0.0	0.0	25.3	24.1	12.3	0.0	20.4			
LnGrp LOS	D	C			C	C	B		C			
Approach Vol, veh/h		860			552			1366				
Approach Delay, s/veh		26.7			25.2			19.4				
Approach LOS		C			C			B				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		39.0			8.8	30.2		51.0
Change Period (Y+Rc), s		4.5			3.5	4.5		5.0
Max Green Setting (Gmax), s		34.5			5.3	25.7		46.0
Max Q Clear Time (g_c+I1), s		17.1			4.7	7.5		28.8
Green Ext Time (p_c), s		6.0			0.0	6.1		6.0

Intersection Summary	
HCM 2010 Ctrl Delay	22.8
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	330	130	279	720	270	456	796	310	20	393	370
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	32	347	137	294	758	284	480	838	260	21	509	239
Adj No. of Lanes	1	2	1	2	2	1	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	149	298	583	796	818	366	504	1636	1098	40	708	301
Arrive On Green	0.08	0.08	0.08	0.23	0.23	0.23	0.28	0.46	0.46	0.02	0.19	0.19
Sat Flow, veh/h	1774	3539	1583	3442	3539	1583	1774	3539	1583	1774	3725	1583
Grp Volume(v), veh/h	32	347	137	294	758	284	480	838	260	21	509	239
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1721	1770	1583	1774	1770	1583	1774	1863	1583
Q Serve(g_s), s	1.6	8.0	0.0	6.8	19.9	16.0	25.2	15.8	5.7	1.1	12.2	13.7
Cycle Q Clear(g_c), s	1.6	8.0	0.0	6.8	19.9	16.0	25.2	15.8	5.7	1.1	12.2	13.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	149	298	583	796	818	366	504	1636	1098	40	708	301
V/C Ratio(X)	0.21	1.16	0.23	0.37	0.93	0.78	0.95	0.51	0.24	0.53	0.72	0.79
Avail Cap(c_a), veh/h	149	298	583	797	820	367	504	1636	1098	93	902	383
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.43	0.43	0.43	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.6	43.5	20.8	30.7	35.7	34.2	33.4	18.0	5.3	45.9	36.1	36.7
Incr Delay (d2), s/veh	0.3	104.3	0.1	0.1	16.1	9.1	16.2	0.5	0.2	10.5	6.2	19.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	8.2	2.5	3.2	11.5	7.9	14.5	7.8	4.4	0.7	6.9	7.6
LnGrp Delay(d),s/veh	40.8	147.8	20.8	30.8	51.8	43.4	49.6	18.5	5.6	56.4	42.3	55.8
LnGrp LOS	D	F	C	C	D	D	D	B	A	E	D	E
Approach Vol, veh/h		516			1336			1578			769	
Approach Delay, s/veh		107.4			45.4			25.8			46.9	
Approach LOS		F			D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.1	48.9		13.0	32.0	23.1		27.0
Change Period (Y+Rc), s	4.0	5.0		5.0	5.0	* 5		5.0
Max Green Setting (Gmax), s	5.0	41.0		8.0	23.0	* 23		22.0
Max Q Clear Time (g_c+I1), s	3.1	17.8		10.0	27.2	15.7		21.9
Green Ext Time (p_c), s	0.0	8.7		0.0	0.0	2.4		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	45.9
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	820	0	639	0	0	0	0	962	304	230	452	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863				0	1863	1863	1863	1863	0
Adj Flow Rate, veh/h	989	0	538				0	1013	219	242	476	0
Adj No. of Lanes	3	0	2				0	2	2	2	2	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	1496	0	890				0	1214	956	726	2128	0
Arrive On Green	0.28	0.00	0.28				0.00	0.34	0.34	0.21	0.60	0.00
Sat Flow, veh/h	5322	0	3167				0	3632	2787	3442	3632	0
Grp Volume(v), veh/h	989	0	538				0	1013	219	242	476	0
Grp Sat Flow(s),veh/h/ln	1774	0	1583				0	1770	1393	1721	1770	0
Q Serve(g_s), s	13.9	0.0	12.5				0.0	22.4	4.8	5.1	5.3	0.0
Cycle Q Clear(g_c), s	13.9	0.0	12.5				0.0	22.4	4.8	5.1	5.3	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1496	0	890				0	1214	956	726	2128	0
V/C Ratio(X)	0.66	0.00	0.60				0.00	0.83	0.23	0.33	0.22	0.00
Avail Cap(c_a), veh/h	1878	0	1118				0	1214	956	729	2128	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.80	0.80	0.00
Uniform Delay (d), s/veh	27.0	0.0	26.5				0.0	25.7	19.9	28.5	7.8	0.0
Incr Delay (d2), s/veh	0.8	0.0	0.9				0.0	6.8	0.6	0.2	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.9	0.0	5.6				0.0	12.0	1.9	2.4	2.6	0.0
LnGrp Delay(d),s/veh	27.8	0.0	27.4				0.0	32.5	20.5	28.7	8.0	0.0
LnGrp LOS	C		C					C	C	C	A	
Approach Vol, veh/h		1527						1232			718	
Approach Delay, s/veh		27.6						30.4			15.0	
Approach LOS		C						C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	21.9	34.2		28.9		56.1		
Change Period (Y+Rc), s	4.0	5.0		5.0		5.0		
Max Green Setting (Gmax), s	18.0	23.0		30.0		45.0		
Max Q Clear Time (g_c+I1), s	7.1	24.4		15.9		7.3		
Green Ext Time (p_c), s	0.6	0.0		7.9		14.8		

Intersection Summary	
HCM 2010 Ctrl Delay	26.0
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	84	666	303	378	633	211	428	681	405	169	707	221
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	88	701	319	398	666	222	451	717	353	178	744	145
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	153	826	356	384	1288	563	444	1239	554	237	826	369
Arrive On Green	0.09	0.23	0.22	0.22	0.36	0.36	0.25	0.35	0.35	0.13	0.23	0.23
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	88	701	319	398	666	222	451	717	353	178	744	145
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	5.7	22.7	23.5	26.0	17.7	8.5	30.0	19.8	12.1	11.6	24.5	9.3
Cycle Q Clear(g_c), s	5.7	22.7	23.5	26.0	17.7	8.5	30.0	19.8	12.1	11.6	24.5	9.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	153	826	356	384	1288	563	444	1239	554	237	826	369
V/C Ratio(X)	0.58	0.85	0.90	1.04	0.52	0.39	1.02	0.58	0.64	0.75	0.90	0.39
Avail Cap(c_a), veh/h	177	826	356	384	1288	563	444	1239	554	237	826	369
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.18	0.18	0.18	0.97	0.97	0.97	1.00	1.00	1.00	0.67	0.67	0.67
Uniform Delay (d), s/veh	52.7	44.0	45.1	47.0	29.9	13.3	45.0	31.8	9.5	50.1	44.7	38.8
Incr Delay (d2), s/veh	0.6	1.6	5.7	54.6	0.4	0.4	47.1	2.0	5.5	8.8	9.3	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	11.3	10.8	18.5	8.7	3.8	20.5	10.0	6.0	6.3	13.0	4.1
LnGrp Delay(d),s/veh	53.3	45.6	50.8	101.6	30.3	13.7	92.1	33.8	15.0	58.9	53.9	39.3
LnGrp LOS	D	D	D	F	C	B	F	C	B	E	D	D
Approach Vol, veh/h		1108			1286			1521			1067	
Approach Delay, s/veh		47.7			49.5			46.7			52.8	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	28.0	30.0	32.0	30.0	12.3	45.7	18.0	44.0
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	23.0	25.0	27.0	25.0	9.0	39.0	13.0	39.0
Max Q Clear Time (g_c+I1), s	28.0	25.5	32.0	26.5	7.7	19.7	13.6	21.8
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	9.2	0.0	4.8

Intersection Summary	
HCM 2010 Ctrl Delay	48.9
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	140	475	160	361	380	422	230	1095	387	235	836	200
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	147	500	168	380	400	444	242	1153	407	247	880	211
Adj No. of Lanes	1	2	0	1	2	0	1	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	227	613	205	390	579	518	248	1245	541	266	1025	246
Arrive On Green	0.13	0.24	0.23	0.22	0.33	0.32	0.14	0.35	0.34	0.15	0.36	0.35
Sat Flow, veh/h	1774	2607	871	1774	1770	1583	1774	3539	1583	1774	2834	679
Grp Volume(v), veh/h	147	338	330	380	400	444	242	1153	407	247	549	542
Grp Sat Flow(s),veh/h/ln	1774	1770	1709	1774	1770	1583	1774	1770	1583	1774	1770	1743
Q Serve(g_s), s	7.9	18.1	18.3	21.3	19.7	26.3	13.6	31.3	22.8	13.7	28.7	28.8
Cycle Q Clear(g_c), s	7.9	18.1	18.3	21.3	19.7	26.3	13.6	31.3	22.8	13.7	28.7	28.8
Prop In Lane	1.00		0.51	1.00		1.00	1.00		1.00	1.00		0.39
Lane Grp Cap(c), veh/h	227	416	402	390	579	518	248	1245	541	266	640	631
V/C Ratio(X)	0.65	0.81	0.82	0.97	0.69	0.86	0.97	0.93	0.75	0.93	0.86	0.86
Avail Cap(c_a), veh/h	266	425	410	390	579	518	248	1245	541	266	640	631
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.55	0.55	0.55	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.5	36.2	36.5	38.7	29.2	32.0	42.8	31.2	29.2	42.0	29.5	29.7
Incr Delay (d2), s/veh	4.2	11.3	12.3	38.5	3.5	13.4	35.7	8.1	5.3	36.5	13.9	14.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	10.1	10.0	14.5	10.1	13.4	9.1	16.6	10.7	9.4	16.5	16.3
LnGrp Delay(d),s/veh	45.7	47.5	48.7	77.2	32.7	45.3	78.6	39.2	34.5	78.4	43.5	43.9
LnGrp LOS	D	D	D	E	C	D	E	D	C	E	D	D
Approach Vol, veh/h		815			1224			1802			1338	
Approach Delay, s/veh		47.7			51.1			43.4			50.1	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.0	25.8	14.0	38.2	12.8	35.0	15.0	37.2
Change Period (Y+Rc), s	3.0	5.3	3.0	5.0	3.0	5.3	3.0	5.0
Max Green Setting (Gmax), s	19.0	21.0	11.0	32.7	12.0	28.0	12.0	31.7
Max Q Clear Time (g_c+I1), s	23.3	20.3	15.6	30.8	9.9	28.3	15.7	33.3
Green Ext Time (p_c), s	0.0	0.2	0.0	1.7	0.1	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	47.6
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	190	741	0	0	1350	1004	450	0	475	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1863	1863	1863			
Adj Flow Rate, veh/h	200	780	0	0	1421	970	607	0	286			
Adj No. of Lanes	2	2	0	0	4	2	2	0	1			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	300	2277	0	0	3235	1407	771	0	344			
Arrive On Green	0.09	0.64	0.00	0.00	0.50	0.50	0.22	0.00	0.22			
Sat Flow, veh/h	3442	3632	0	0	6669	2787	3548	0	1583			
Grp Volume(v), veh/h	200	780	0	0	1421	970	607	0	286			
Grp Sat Flow(s),veh/h/ln	1721	1770	0	0	1602	1393	1774	0	1583			
Q Serve(g_s), s	3.8	6.9	0.0	0.0	9.6	18.0	11.0	0.0	11.8			
Cycle Q Clear(g_c), s	3.8	6.9	0.0	0.0	9.6	18.0	11.0	0.0	11.8			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	300	2277	0	0	3235	1407	771	0	344			
V/C Ratio(X)	0.67	0.34	0.00	0.00	0.44	0.69	0.79	0.00	0.83			
Avail Cap(c_a), veh/h	833	3193	0	0	3900	1696	989	0	441			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	30.2	5.6	0.0	0.0	10.7	12.8	25.2	0.0	25.5			
Incr Delay (d2), s/veh	1.0	0.0	0.0	0.0	0.0	0.6	2.4	0.0	8.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.9	3.4	0.0	0.0	4.3	7.0	5.7	0.0	5.9			
LnGrp Delay(d),s/veh	31.1	5.6	0.0	0.0	10.8	13.4	27.6	0.0	33.7			
LnGrp LOS	C	A			B	B	C		C			
Approach Vol, veh/h		980			2391			893				
Approach Delay, s/veh		10.8			11.8			29.6				
Approach LOS		B			B			C				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		48.4			9.4	38.9		19.8
Change Period (Y+Rc), s		4.5			3.5	4.5		5.0
Max Green Setting (Gmax), s		61.5			16.5	41.5		19.0
Max Q Clear Time (g_c+I1), s		8.9			5.8	20.0		13.8
Green Ext Time (p_c), s		23.2			0.2	14.4		1.0

Intersection Summary	
HCM 2010 Ctrl Delay	15.3
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	1216	585	330	554	0	0	0	0	360	350	259
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0				1863	1863	1863
Adj Flow Rate, veh/h	0	1280	616	347	583	0				379	368	273
Adj No. of Lanes	0	3	1	2	2	0				2	1	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1966	612	803	2351	0				773	418	626
Arrive On Green	0.00	0.39	0.39	0.47	1.00	0.00				0.22	0.22	0.22
Sat Flow, veh/h	0	5253	1583	3442	3632	0				3442	1863	2787
Grp Volume(v), veh/h	0	1280	616	347	583	0				379	368	273
Grp Sat Flow(s),veh/h/ln	0	1695	1583	1721	1770	0				1721	1863	1393
Q Serve(g_s), s	0.0	18.6	34.8	6.1	0.0	0.0				8.6	17.2	7.6
Cycle Q Clear(g_c), s	0.0	18.6	34.8	6.1	0.0	0.0				8.6	17.2	7.6
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1966	612	803	2351	0				773	418	626
V/C Ratio(X)	0.00	0.65	1.01	0.43	0.25	0.00				0.49	0.88	0.44
Avail Cap(c_a), veh/h	0	1966	612	803	2351	0				841	455	681
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.97	0.97	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	22.6	27.6	20.0	0.0	0.0				30.4	33.7	30.0
Incr Delay (d2), s/veh	0.0	1.7	37.9	1.6	0.2	0.0				0.2	15.8	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	9.0	21.6	3.0	0.1	0.0				4.1	10.6	2.9
LnGrp Delay(d),s/veh	0.0	24.3	65.6	21.7	0.2	0.0				30.6	49.5	30.2
LnGrp LOS		C	F	C	A					C	D	C
Approach Vol, veh/h		1896			930						1020	
Approach Delay, s/veh		37.7			8.2						37.3	
Approach LOS		D			A						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	25.0	39.8		25.2		64.8		
Change Period (Y+Rc), s	4.0	5.0		5.0		5.0		
Max Green Setting (Gmax), s	21.0	33.0		22.0		58.0		
Max Q Clear Time (g_c+I1), s	8.1	36.8		19.2		2.0		
Green Ext Time (p_c), s	0.5	0.0		1.0		14.0		

Intersection Summary	
HCM 2010 Ctrl Delay	30.5
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	235	1371	0	0	545	220	359	10	860	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1863	1863	1863			
Adj Flow Rate, veh/h	247	1443	0	0	574	232	386	0	905			
Adj No. of Lanes	1	2	0	0	3	1	2	0	3			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	197	2354	0	0	2535	789	794	0	1063			
Arrive On Green	0.22	1.00	0.00	0.00	0.50	0.50	0.22	0.00	0.22			
Sat Flow, veh/h	1774	3632	0	0	5253	1583	3548	0	4750			
Grp Volume(v), veh/h	247	1443	0	0	574	232	386	0	905			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1695	1583	1774	0	1583			
Q Serve(g_s), s	10.0	0.0	0.0	0.0	5.7	7.7	8.5	0.0	16.4			
Cycle Q Clear(g_c), s	10.0	0.0	0.0	0.0	5.7	7.7	8.5	0.0	16.4			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	197	2354	0	0	2535	789	794	0	1063			
V/C Ratio(X)	1.25	0.61	0.00	0.00	0.23	0.29	0.49	0.00	0.85			
Avail Cap(c_a), veh/h	197	2354	0	0	2535	789	907	0	1214			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.72	0.72	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	35.0	0.0	0.0	0.0	12.8	13.3	30.4	0.0	33.5			
Incr Delay (d2), s/veh	140.4	0.9	0.0	0.0	0.2	0.9	0.2	0.0	4.8			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	12.5	0.3	0.0	0.0	2.7	3.6	4.2	0.0	7.7			
LnGrp Delay(d),s/veh	175.4	0.9	0.0	0.0	13.0	14.2	30.6	0.0	38.3			
LnGrp LOS	F	A			B	B	C		D			
Approach Vol, veh/h		1690			806			1291				
Approach Delay, s/veh		26.4			13.3			36.0				
Approach LOS		C			B			D				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		64.9			15.0	49.9		25.1
Change Period (Y+Rc), s		5.0			5.0	5.0		5.0
Max Green Setting (Gmax), s		57.0			10.0	42.0		23.0
Max Q Clear Time (g_c+I1), s		2.0			12.0	9.7		18.4
Green Ext Time (p_c), s		17.7			0.0	14.9		1.7

Intersection Summary	
HCM 2010 Ctrl Delay	26.9
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	510	170	926	630	0	0	0	0	183	314	180
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0				1863	1863	1863
Adj Flow Rate, veh/h	0	537	122	975	663	0				193	331	96
Adj No. of Lanes	0	3	1	2	2	0				1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1576	491	1090	2356	0				414	435	369
Arrive On Green	0.00	0.31	0.31	0.32	0.67	0.00				0.23	0.23	0.23
Sat Flow, veh/h	0	5253	1583	3442	3632	0				1774	1863	1583
Grp Volume(v), veh/h	0	537	122	975	663	0				193	331	96
Grp Sat Flow(s),veh/h/ln	0	1695	1583	1721	1770	0				1774	1863	1583
Q Serve(g_s), s	0.0	7.3	5.2	24.3	6.9	0.0				8.4	14.9	4.5
Cycle Q Clear(g_c), s	0.0	7.3	5.2	24.3	6.9	0.0				8.4	14.9	4.5
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1576	491	1090	2356	0				414	435	369
V/C Ratio(X)	0.00	0.34	0.25	0.89	0.28	0.00				0.47	0.76	0.26
Avail Cap(c_a), veh/h	0	1576	491	1090	2356	0				414	435	369
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.77	0.77	0.00				0.92	0.92	0.92
Uniform Delay (d), s/veh	0.0	24.0	23.2	29.3	6.2	0.0				29.7	32.2	28.2
Incr Delay (d2), s/veh	0.0	0.6	1.2	9.0	0.0	0.0				3.4	11.0	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.5	2.4	12.9	3.3	0.0				4.5	9.0	2.1
LnGrp Delay(d),s/veh	0.0	24.5	24.4	38.4	6.2	0.0				33.1	43.2	29.7
LnGrp LOS		C	C	D	A					C	D	C
Approach Vol, veh/h		659			1638						620	
Approach Delay, s/veh		24.5			25.4						38.0	
Approach LOS		C			C						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	32.0	32.0		26.0		64.0		
Change Period (Y+Rc), s	3.5	4.1		5.0		4.1		
Max Green Setting (Gmax), s	28.5	27.9		21.0		59.9		
Max Q Clear Time (g_c+I1), s	26.3	9.3		16.9		8.9		
Green Ext Time (p_c), s	0.1	7.2		0.8		9.4		

Intersection Summary	
HCM 2010 Ctrl Delay	27.8
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	0	450	1611	1596	821
Number			5	2	6	16
Initial Q (Qb), veh			0	0	0	0
Ped-Bike Adj(A_pbT)			1.00			1.00
Parking Bus, Adj			1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln			1863	1863	1863	1863
Adj Flow Rate, veh/h			474	1696	1680	0
Adj No. of Lanes			1	2	3	1
Peak Hour Factor			0.95	0.95	0.95	0.95
Percent Heavy Veh, %			2	2	2	2
Cap, veh/h			519	3321	2973	926
Arrive On Green			0.29	0.94	0.58	0.00
Sat Flow, veh/h			1774	3632	5253	1583
Grp Volume(v), veh/h			474	1696	1680	0
Grp Sat Flow(s),veh/h/ln			1774	1770	1695	1583
Q Serve(g_s), s			16.8	3.7	13.3	0.0
Cycle Q Clear(g_c), s			16.8	3.7	13.3	0.0
Prop In Lane			1.00			1.00
Lane Grp Cap(c), veh/h			519	3321	2973	926
V/C Ratio(X)			0.91	0.51	0.57	0.00
Avail Cap(c_a), veh/h			546	3321	2973	926
HCM Platoon Ratio			1.00	1.00	1.00	1.00
Upstream Filter(I)			1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh			22.2	0.2	8.4	0.0
Incr Delay (d2), s/veh			19.5	0.6	0.8	0.0
Initial Q Delay(d3),s/veh			0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln			11.0	1.7	6.3	0.0
LnGrp Delay(d),s/veh			41.7	0.8	9.2	0.0
LnGrp LOS			D	A	A	
Approach Vol, veh/h				2170	1680	
Approach Delay, s/veh				9.7	9.2	
Approach LOS				A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		
Phs Duration (G+Y+Rc), s		65.0			23.0	42.0		
Change Period (Y+Rc), s		4.0			4.0	4.0		
Max Green Setting (Gmax), s		61.0			20.0	37.0		
Max Q Clear Time (g_c+I1), s		5.7			18.8	15.3		
Green Ext Time (p_c), s		47.0			0.2	20.2		

Intersection Summary	
HCM 2010 Ctrl Delay	9.5
HCM 2010 LOS	A

APPENDIX H: TRAFFIC SIGNAL WARRANTS

FEHR PEERS

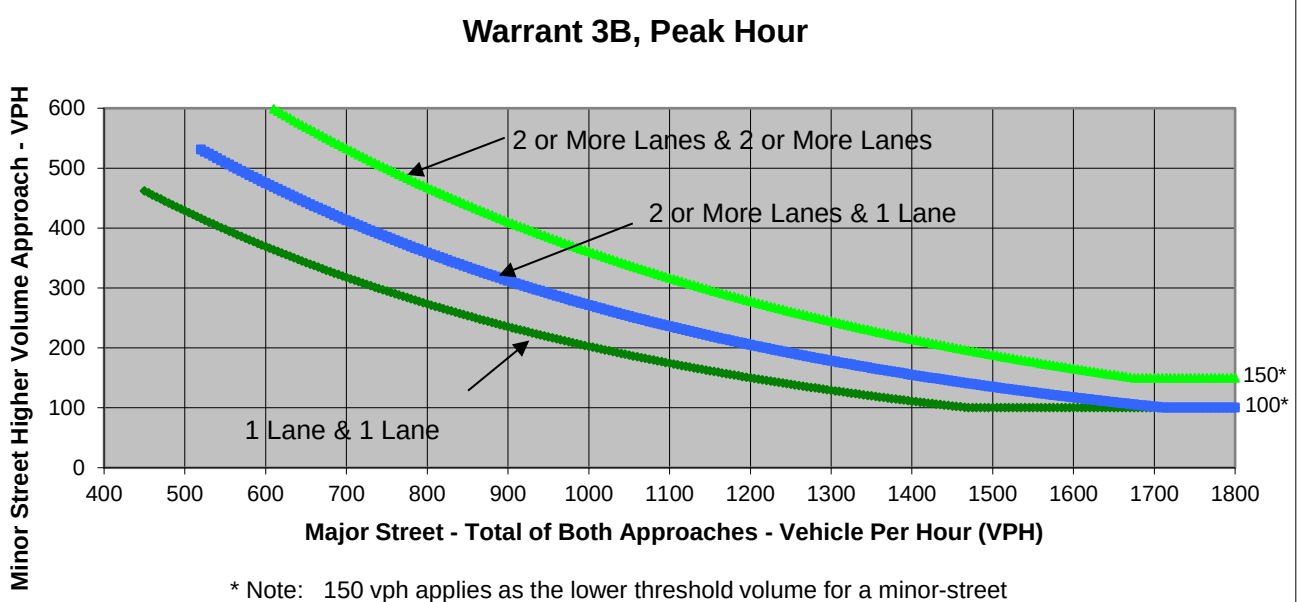
Major Street	Waterman Gardens	Project	Waterman Gardens
Minor Street	I-10 WB Ramp	Scenario	Existing + Project
		Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left		0	0	0
Through	1,907	785	0	257
Right	0	216	0	0
Total	1,907	1,001	0	257

Major Street Direction

x	North/South
	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Waterman Gardens	I-10 WB Ramp	
Number of Approach Lanes	**5**	**1**	**YES**
Traffic Volume (VPH) *	**2,908**	**257**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

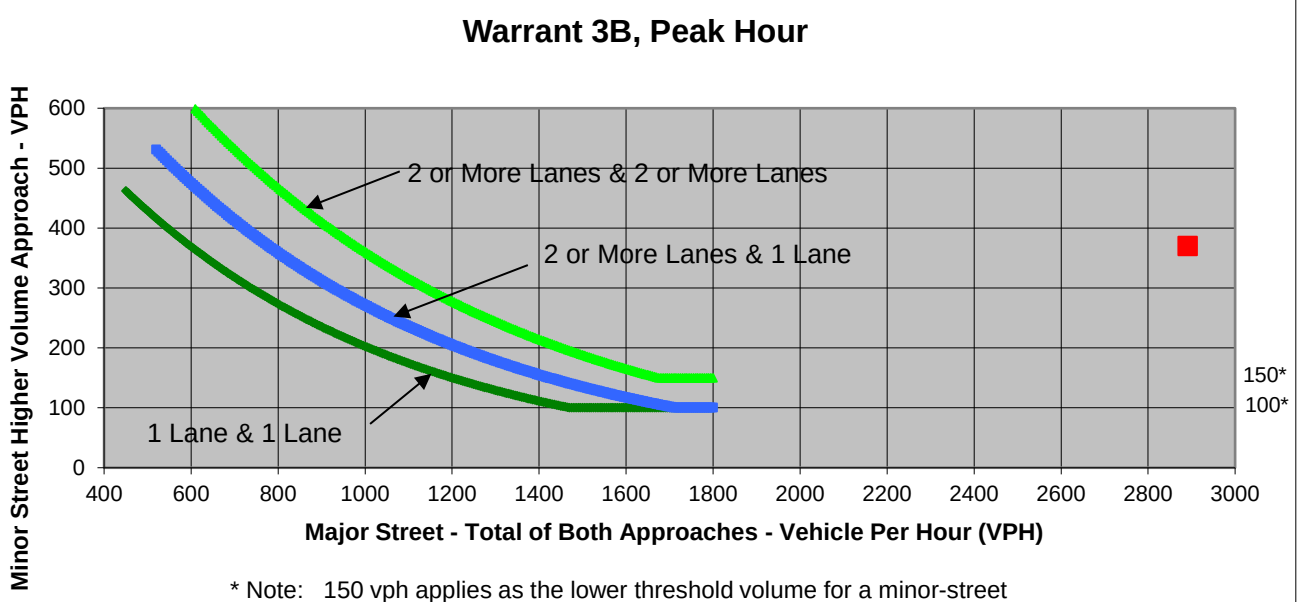
Major Street	Waterman Gardens	Project	Waterman Gardens
Minor Street	I-10 WB Ramp	Scenario	Existing + Project
		Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left		0	0	0
Through	1,463	1,428	0	370
Right	0		0	0
Total	1,463	1,428	0	370

Major Street Direction

x	North/South
	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Waterman Gardens	I-10 WB Ramp	
Number of Approach Lanes	**5**	**1**	**YES**
Traffic Volume (VPH) *	**2,891**	**370**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

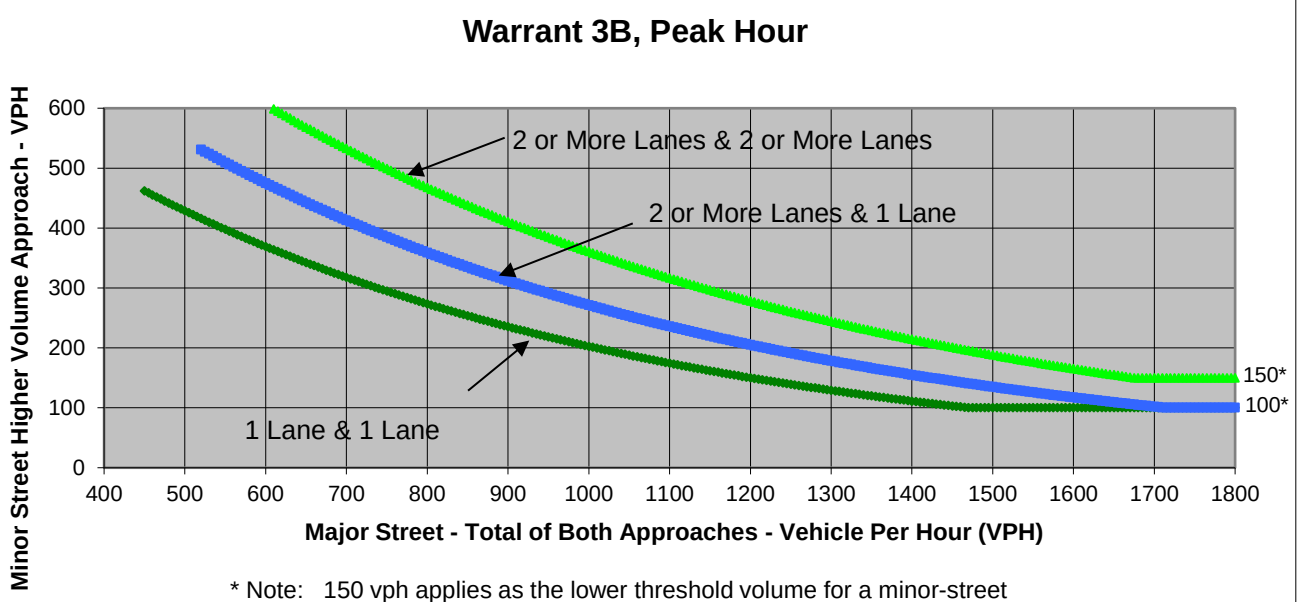
Major Street	Waterman Gardens	Project	Waterman Gardens
Minor Street	I-10 WB Ramp	Scenario	Future Year + Project
		Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left		0	0	0
Through	1,960	875	0	307
Right	0	320	0	0
Total	1,960	1,195	0	307

Major Street Direction

x	North/South
	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Waterman Gardens	I-10 WB Ramp	
Number of Approach Lanes	**5**	**1**	**YES**
Traffic Volume (VPH) *	**3,155**	**307**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

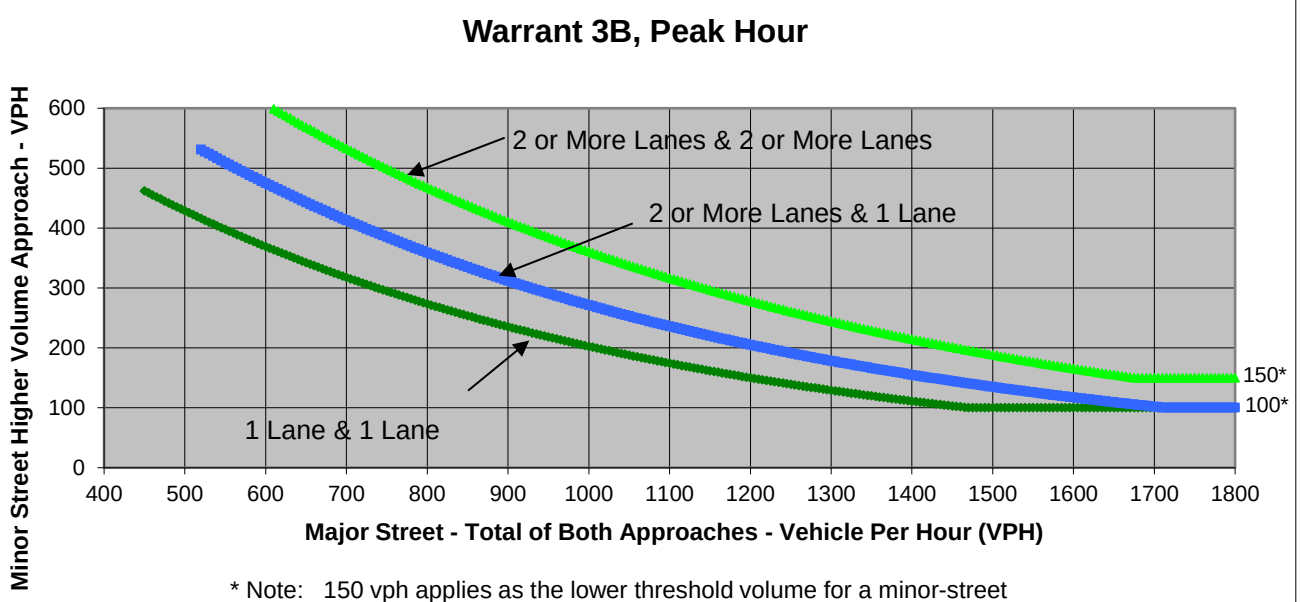
Major Street	Waterman Gardens	Project	Waterman Gardens
Minor Street	I-10 WB Ramp	Scenario	Future Year + Project
		Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left		0	0	0
Through	1,610	1,594	0	450
Right	0	814	0	0
Total	1,610	2,408	0	450

Major Street Direction

x	North/South
	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Waterman Gardens	I-10 WB Ramp	
Number of Approach Lanes	**5**	**1**	**YES**
Traffic Volume (VPH) *	**4,018**	**450**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

APPENDIX I: FURNESS FORECASTING WORKSHEETS

Future Turning Movement Calculation Sheet

N/S Street	Waterman	Time Period	AM
E/W Street	30th	Date	10/26/2015
Project			

Existing

			1306.923	1225		620	933.8538					
				66%	0	34%						
					1845							
1418.935				638	572	15						954.7728
1476	81%		20				194		73%			955
	0	1819	225		3289		583	1300		0		
343	19%		98				178		27%			345
356.3792				255	406	105						256.2758
					1614							
				53%	0	47%						
			871.7922	848		766	862.7824					

Future

				1514.908		940.5266						
				1420	84.4%	624						
				68%	0	32%						
					2044							
1084.349				322	736	8						1136.3862
1128	73%		17				165		76%			1137
	0	1623	215		3608		542	1476		0		
495	27%		237				422		24%			339
514.4478	102.4%			329	478	136			100.8%			252.1604
					2072							
				67%	0	33%						
				1319	112.9%	753						
				1356.452		847.7458						

Future Turning Movement Calculation Sheet

N/S Street	Waterman	Time Period	PM
E/W Street	30th	Date	11/6/2015
Project			

Existing

			1012.556	736		938	1341.721					
				44%	0	56%						
					1674							
1473.707				330	391	15						1030.8256
1321	78%		20				189			64%		998
	0	1694	255		3416		714	1571		0		
373	22%		98				95			36%		573
438.27				277	729	303						476.6748
					1893							
				31%	0	69%						
			722.6296	584		1309	1533.078					

Future

				1045.061		1595.703						
				764	102.1%	1154						
				40%	0	60%						
					1918							
1532.18				373	412	13						1367.394
1376	76%		30				289			69%		1329
	0	1820	354		3915		629	1917		0		
444	24%		133				236			31%		588
515.0208	104.4%			381	840	225				91.0%		490.5096
					2174							
				36%	0	64%						
				778	102.4%	1397						
				936.7932		1627.707						

Future Turning Movement Calculation Sheet

N/S Street	Waterman	Time Period	AM
E/W Street	SR-210 EB Ramps	Date	10/26/2015
Project			

Existing

			871.7922	887		745	862.7824					
				54%	0	46%						
					1632							
0				0	394	493						0
0	0%	←	378				0	←	0%			0
	0	1007	0		2436		0	668	0			
1007	100%	→	629				0	→	100%			668
993.6012				0	367	175						574.5106
					1565							
				65%	0	35%						
			891.6624	1023		542	463.562					

Future

				1356.452		847.7458						
				1380	105.1%	732						
				57%	0	43%						
					2112							
0				0	550	767						0
0	0%	←	380				0	←	-5%			0
	0	991	0		3275		0	1132	0			
991	100%	→	630				0	→	105%			1132
977.379	102.0%			0	524	424			105.3%			973.142
					1533							
				77%	0	23%						
				1056	138.9%	477						
				920.5158		407.5766						

Future Turning Movement Calculation Sheet

N/S Street	Waterman	Time Period	PM
E/W Street	SR-210 EB Ramps	Date	10/26/2015
Project			

Existing

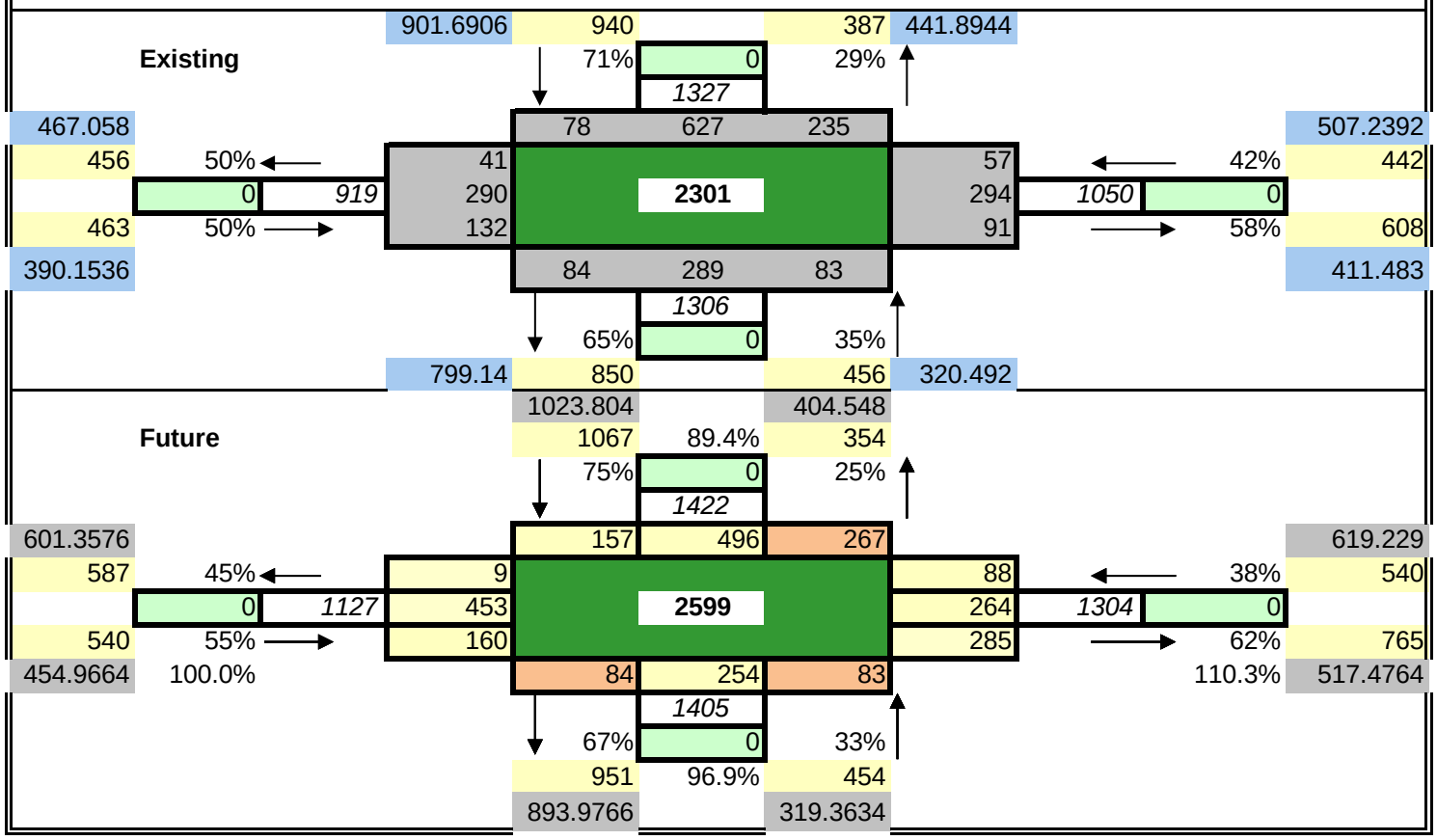
			722.6296	581		1306	1533.078					
				31%	0	69%						
					1887							
0				0	353	228						0
0	0%	←	815				0	←	0%			0
	0	*1331*	0		**2610**		0	*435*	0			
1331	100%	→	516				0	→	100%			435
1171.66				0	491	207						587.4008
					1567							
				55%	0	45%						
			612.2452	869		698	838.4348					

Future

				936.7932		1627.707						
				774	113.7%	1394						
				15%	0	85%						
					2168							
0				0	398	230						0
0	0%	←	820				0	←	28%			0
	0	*1357*	0		**3246**		0	*682*	0			
1357	100%	→	520				0	→	72%			682
1196.191	98.7%			0	1017	261			72.0%			871.3096
					1484							
				62%	0	38%						
				749	148.0%	735						
				512.8816		878.9172						

Future Turning Movement Calculation Sheet

N/S Street	Waterman	Time Period	AM
E/W Street	Highland	Date	10/26/2015
Project			



Future Turning Movement Calculation Sheet

N/S Street	Waterman	Time Period	PM
E/W Street	Highland	Date	10/26/2015
Project			

Existing

			605.6484	766		734	966.3752					
				51%	0	49%						
					1500							
506.5228				81	428	257						544.5636
969	56%		81				166			53%		1016
	0	1717	508		3348		701	1925		0		
748	44%		159				149			47%		909
633.2172				187	487	144						729.2768
					1554							
				47%	0	53%						
			469.8792	736		818	888.6248					

Future

				551.418		1107.05						
				697	119.4%	841						
				45%	0	55%						
					1538							
670.432				349	405	234						811.9272
1283	55%		22				212			60%		1515
	0	2111	634		3808		588	2564		0		
829	45%		131				232			40%		1049
701.4616	92.0%			219	614	169				80.6%		841.9684
					1720							
				45%	0	55%						
				762	102.9%	958						
				486.4524		1041.096						

Future Turning Movement Calculation Sheet

N/S Street	I-215 SB	Time Period	AM
E/W Street	Baseline	Date	11/2/2015
Project			

Existing

			5787.218	714		0	0					
				100%	0	0%						
					714							
368.2694				225	33	456						368.2694
686	47%		0				0		48%			854
	0	1457	476		2339		461	1786		0		
771	53%		295				393		52%			932
597.4018				0	0	0						597.4018
					721							
				100%	0	0%						
			6273.492	721		0	0					

Future

				9541.12		0						
				1177	80.6%	0						
				100%	0	0%						
					1177							
389.9598				196	0	752						389.9598
726	44%		0				0		29%			904
	0	1560	605		2715		488	1912		0		
834	56%		319				354		71%			1008
646.171	103.1%			0	0	0			115.0%			646.171
					1169							
				58%	0	42%						
				1169	57.6%	0						
				10171.66		0						

Future Turning Movement Calculation Sheet

N/S Street	I-215 SB	Time Period	PM
E/W Street	Baseline	Date	11/2/2015
Project			

Existing

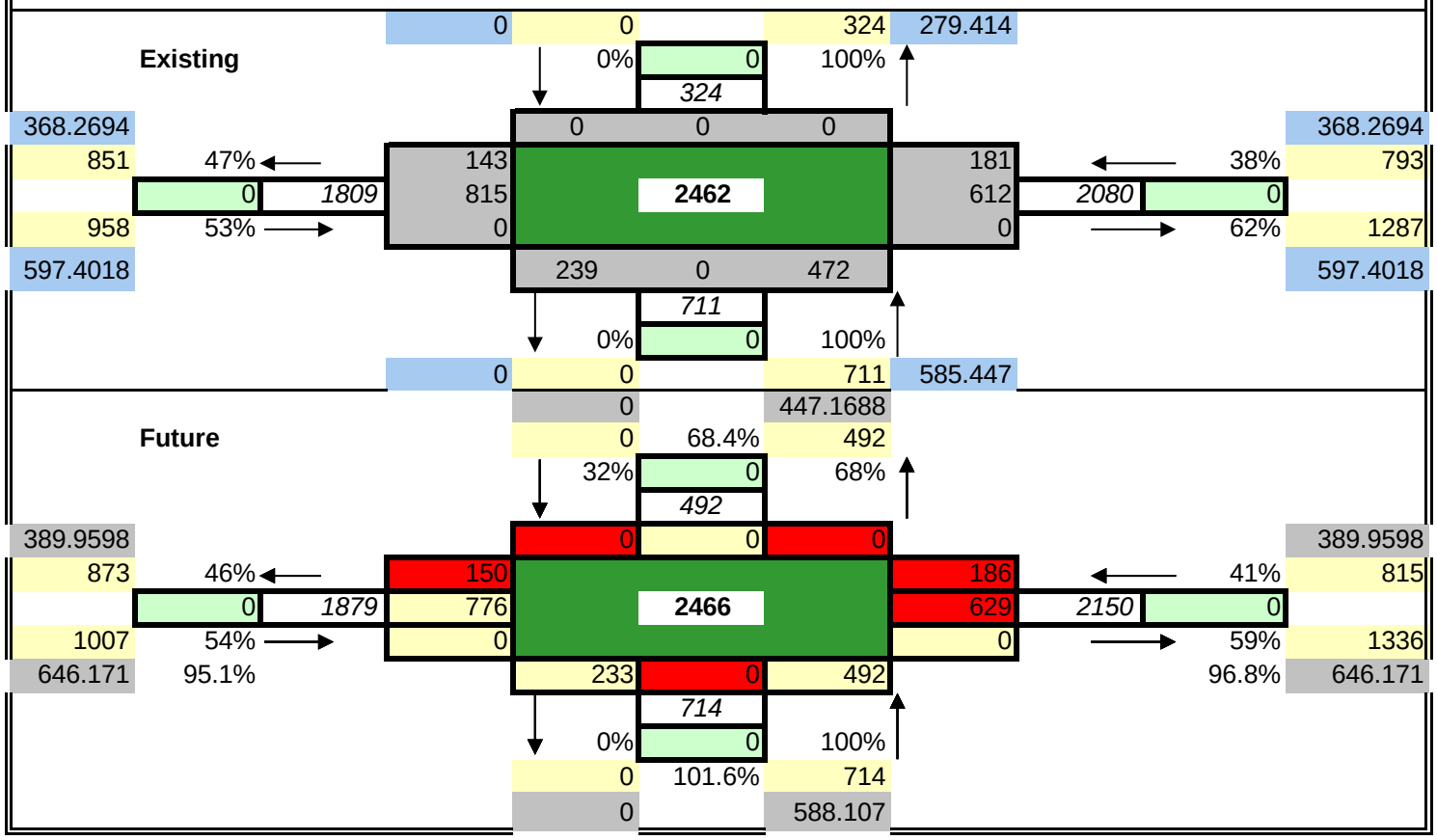
			2859.354	409		0	0					
				100%	0	0%						
					409							
628.026				138	2	269						628.026
889	52%		0				0			59%		1210
	0	1707	557		2437		751	2036			0	
818	48%		261				459			41%		826
521.2788				0	0	0						521.29
					722							
				100%	0	0%						
			5044.376	722		0	0					

Future

				3200		0						
				750	70.6%	0						
				100%	0	0%						
					750							
759.2704				229	0	300						759.2704
1020	54%		0				0			66%		1341
	0	1959	472		2642		832	2288			0	
939	46%		299				509			34%		947
641.9308	93.6%			0	0	0				92.4%		641.9308
					2590							
				31%	0	69%						
				2590	31.2%	0						
				6912.5		0						

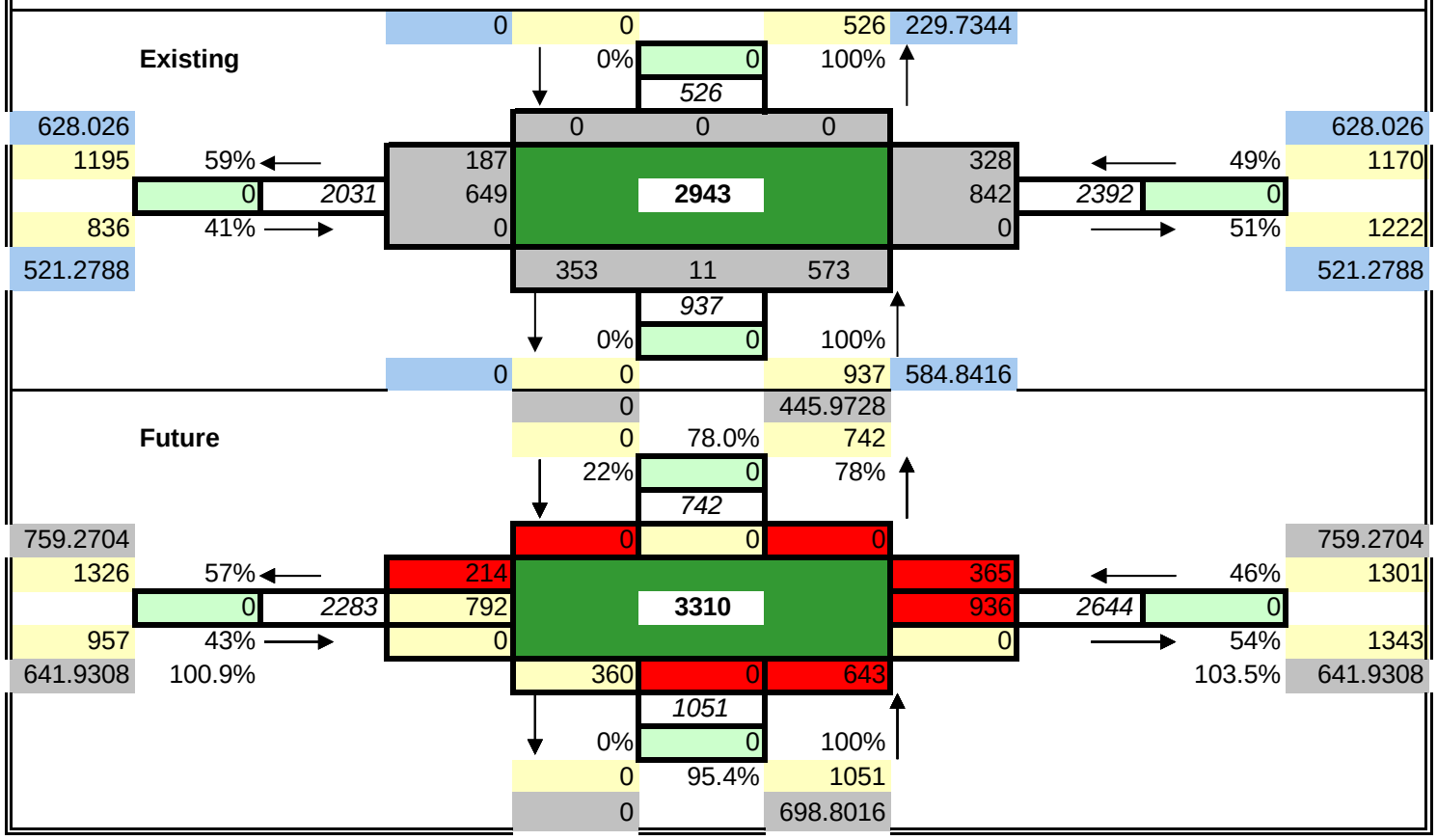
Future Turning Movement Calculation Sheet

N/S Street	I-215 NB	Time Period	AM
E/W Street	Baseline	Date	11/2/2015
Project			



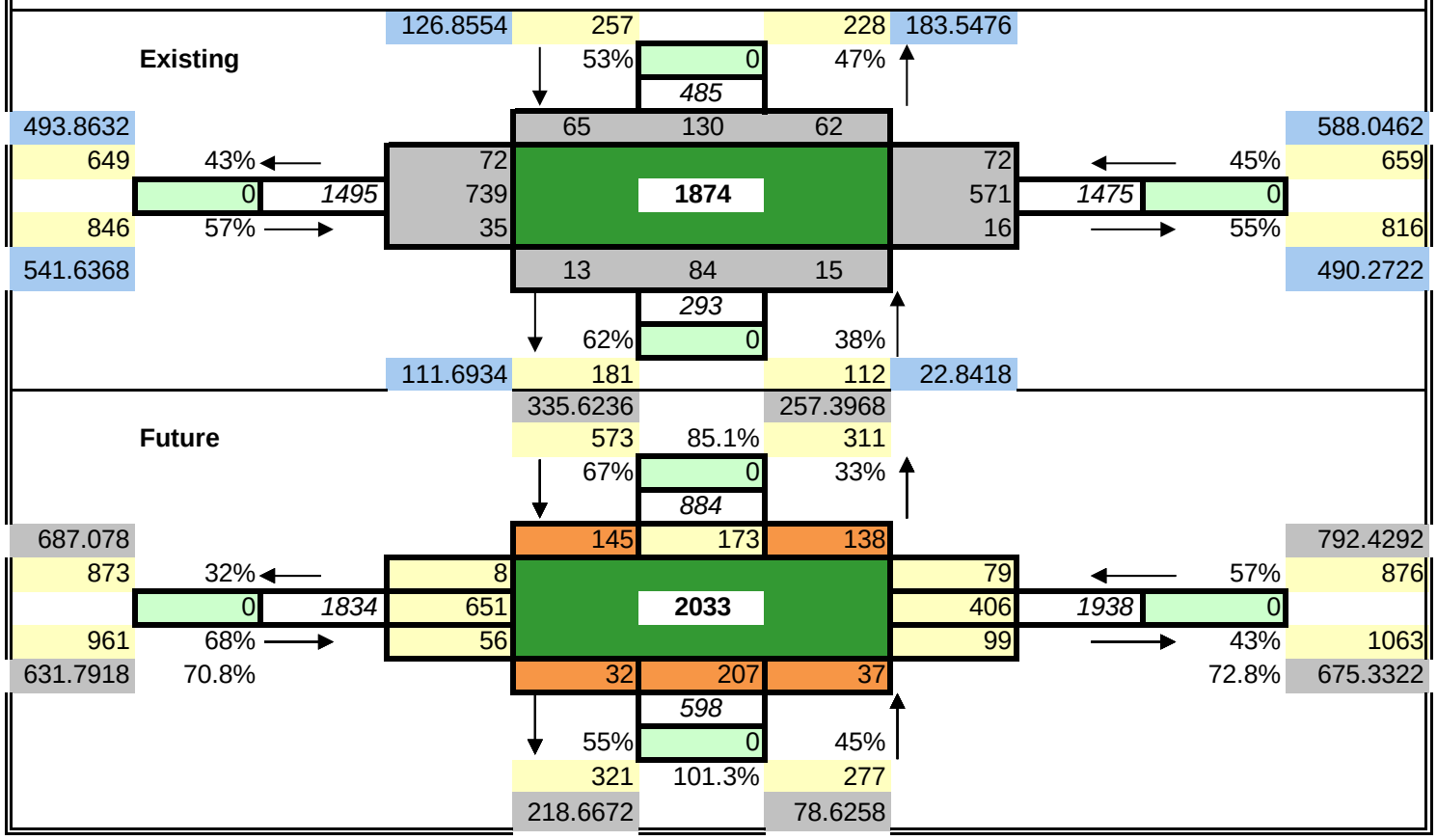
Future Turning Movement Calculation Sheet

N/S Street	I-215 NB	Time Period	PM
E/W Street	Baseline	Date	11/2/2015
Project			



Future Turning Movement Calculation Sheet

N/S Street	E St	Time Period	AM
E/W Street	Baseline	Date	10/26/2015
Project			



Future Turning Movement Calculation Sheet

N/S Street	E St	Time Period	PM
E/W Street	Baseline	Date	10/26/2015
Project			

Existing

			203.7756	203		271	157.5728					
				43%	0	57%						
					474							
793.7188				63	98	42						737.5984
1014	49%		76				54		49%			976
	0	2064	930		2475		888	1990		0		
1050	51%		44				34		51%			1014
618.8308				63	141	42						659.3104
					422							
				42%	0	58%						
			65.1644	176		246	115.5616					

Future

				306.8156		469.476						
				306	91.7%	807						
				40%	0	60%						
					1113							
871.7688				95	197	63						950.138
1114	32%		21				200		61%			1257
	0	2493	872		2903		503	2723		0		
1379	68%		63				113		39%			1466
812.9464	70.3%			198	444	132			69.2%			953.0108
					1150							
				32%	0	68%						
				376	99.8%	774						
				139.2216		363.5772						

Future Turning Movement Calculation Sheet

N/S Street	Sierra Way	Time Period	AM
E/W Street	Baseline	Date	10/26/2015
Project			

Existing

			300.4774	292			187	130.8112				
				61%	0		39%					
					479							
563.1866				46	223	23						428.222
613	49%		39				25			50%		601
	0	1258	562		1710		540		1208		0	
645	51%		44				36			50%		607
405.099				27	123	22						332.8534
					475							
				64%	0		36%					
			236.7476	303			172	129.8004				

Future

				394.6338			147.8808					
				385	79.3%		208					
				65%	0		35%					
					593							
734.008				61	181	22						588.7378
791	24%		5				52			64%		794
	0	1830	626		1657		358		1844		0	
1039	76%		58				104			36%		1051
708.8102	61.8%			23	150	19				63.9%		647.0222
					493							
				69%	0		31%					
				344	108.4%		149					
				272.8932			109.6262					

Future Turning Movement Calculation Sheet

N/S Street	Sierra Way	Time Period	PM
E/W Street	Baseline	Date	10/26/2015
Project			

Existing

			244.0172	269		350	311.4692					
				43%	0	57%						
					619							
606.9196				67	148	54						453.2136
865	49%		93				51		48%			828
	0	1778	790		2324		740	1722		0		
913	51%		30				37		52%			894
647.738				58	206	50						514.836
					529							
				41%	0	59%						
			186.6116	215		314	274.8676					

Future

				234.71		409.7744						
				259	93.6%	460						
				35%	0	65%						
					719							
922.11				64	113	29						835.3128
1314	28%		12				117		69%			1526
	0	2594	809		2309		606	2858		0		
1280	72%		36				65		31%			1332
907.9224	61.4%			64	338	55			58.8%			767.2868
					558							
				38%	0	62%						
				211	120.3%	347						
				182.9324		304.1556						

Future Turning Movement Calculation Sheet

N/S Street	Waterman Avenue	Time Period	AM
E/W Street	Baseline	Date	10/26/2015
Project			

Existing

			818.0298	695		523	339.3058					
				57%	0	43%						
					1218							
428.222				147	467	81						316.4374
641	53%		116				67			54%		605
	0	1201	348		2385		400	1125			0	
560	47%		96				138			46%		520
332.8534				94	340	91						292.8774
					1226							
				57%	0	43%						
			720.1266	701		525	313.2454					

Future

				960.7616		356.0562						
				816	99.0%	549						
				59%	0	41%						
					1365							
588.7378				243	532	17						420.2154
881	46%		15				140			50%		803
	0	1970	481		3271		409	1590			0	
1089	54%		171				305			50%		787
647.0222	79.5%			248	406	305				104.2%		443.1104
					1617							
				62%	0	38%						
				988	121.6%	629						
				1015.242		375.1474						

Future Turning Movement Calculation Sheet

N/S Street	Waterman Avenue	Time Period	PM
E/W Street	Baseline	Date	10/26/2015
Project			

Existing

			615.5716	695		518	883.3748					
				57%	0	43%						
					1213							
453.2136				147	467	81						325.3852
652	46%		126				52			48%		617
	0	*1412*	508		**2597**		411	*1297*		0		
760	54%		126				154			52%		680
514.836				94	340	91						409.6372
					1272							
				59%	0	41%						
			502.7876	747		525	793.2204					

Future

				696.5588		1097.838						
				786	106.9%	644						
				55%	0	45%						
					1430							
835.3128				322	549	19						560.8484
1202	51%		17				160			54%		1063
	0	*2334*	544		**3781**		542	*1978*		0		
1133	49%		177				315			46%		914
767.2868	82.7%			329	463	345				97.3%		550.8748
					1819							
				57%	0	43%						
				1048	119.7%	771						
				705.3144		1164.646						

Future Turning Movement Calculation Sheet

N/S Street	Tippecanoe	Time Period	AM
E/W Street	Baseline	Date	11/6/2015
Project			

Existing

			0	0		0	0					
				100%	0		0%					
					0							
353.5862				0	0	0						488.2088
620	56%		0				0			62%		657
	0	*1116*	288		**1434**		458	*1064*			0	
496	44%		208				199			38%		407
312.911				162	0	119						256.4354
					688							
				59%	0		41%					
			373.3956	407		281	182.2974					

Future

				0		0						
				0	100.0%	0						
				100%	0		0%					
					0							
446.139				10	10	0						581.6964
747	37%		0				0			62%		767
	0	*1494*	287		**1303**		341	*1243*			0	
747	63%		96				170			38%		476
507.1404	62.9%			207	0	182				78.8%		309.909
					848							
				33%	0		67%					
				560	78.4%	287						
				520.1782		187.3856						

Future Turning Movement Calculation Sheet

N/S Street	Tippecanoe	Time Period	PM
E/W Street	Baseline	Date	11/6/2015
Project			

Existing

			0	0		0	0					
				100%	0		0%					
					0							
379.946				0	0	0						325.7772
695	49%		0				0		45%			625
	0	*1408*	550		**1780**		480	*1402*	0			
713	51%		163				145		55%			777
461.048				215	0	227						604.296
					750							
				41%	0	59%						
			284.8132	308		442	482.2104					

Future

				0		0						
				0	100.0%	0						
				100%	0		0%					
					0							
685.6024				10	10	0						450.5508
1127	42%		0				0		49%			807
	0	*1979*	538		**1870**		505	*1718*	0			
852	58%		57				102		51%			911
570.2956	71.6%			306	0	341			86.5%			721.4676
					995							
				17%	0	83%						
				341	82.1%	654						
				316.7892		703.0128						

Future Turning Movement Calculation Sheet

N/S Street	Waterman	Time Period	AM
E/W Street	9th	Date	10/26/2015
Project			

Existing

			700.549	640			441	303.8176				
				59%	0		41%					
					1081							
193.4238				36	541	63						359.4838
403	50%		69				59			55%		482
	0	807	273		1964		302	878			0	
404	50%		62				121			45%		396
269.1388				65	313	60						317.6876
					1162							
				62%	0		38%					
			787.1776	724			438	272.9388				

Future

				1059.793			366.6202					
				968	76.1%		532					
				66%	0		34%					
					1500							
368.0946				200	411	17						555.0964
767	53%		13				128			49%		744
	0	1390	478		2831		336	1570			0	
623	47%		132				236			51%		826
414.8232	98.1%			204	372	303				95.4%		662.72
					1201							
				65%	0		35%					
				807	138.0%		394					
				877.8228			245.5484					

Future Turning Movement Calculation Sheet

N/S Street	Waterman	Time Period	PM
E/W Street	9th	Date	10/26/2015
Project			

Existing

			501.676	821		822	769.3756					
				50%	0	50%						
					1643							
326.2224				95	645	81						408.7272
467	47%		128				64		47%			493
	0	1000	340		2701		292	1058		0		
533	53%		65				137		53%			565
378.9072				80	630	144						552.0732
					1701							
				50%	0	50%						
			504.378	847		854	862.7416					

Future

				713.7312		1199.741						
				1168	81.6%	1282						
				47%	0	53%						
					2450							
549.122				217	455	17						751.3296
786	50%		34				327		52%			906
	0	1599	483		3782		365	1697		0		
813	50%		147				261		48%			790
578.144	91.7%			221	948	306			103.7%			772.3184
					1817							
				48%	0	52%						
				846	128.7%	972						
				503.566		981.596						

Future Turning Movement Calculation Sheet

N/S Street	I-215 SB	Time Period	AM
E/W Street	5th St	Date	11/2/2015
Project			

Existing

			246.2894	920		0	0					
				100%	0	0%						
					920							
338.8992				187	0	733						338.8992
596	43%		0				0			35%		660
	0	1373	468		2357		409	1861			0	
777	57%		309				251			65%		1201
742.425				0	0	0						742.425
					560							
				100%	0	0%						
			348.004	560		0	0					

Future

				298.7712		0						
				972	101.2%	0						
				100%	0	0%						
					972							
533.2616				210	0	775						533.2616
790	32%		0				0			29%		854
	0	1754	817		2749		353	2242			0	
964	68%		383				211			71%		1388
928.9708	100.5%			0	0	0				96.2%		928.9708
					711							
				84%	0	16%						
				711	83.6%	0						
				499.0426		0						

Future Turning Movement Calculation Sheet

N/S Street	I-215 SB	Time Period	PM
E/W Street	5th St	Date	11/2/2015
Project			

Existing

			5044.376	318		0	0					
				100%	0	0%						
					318							
852.5776				128	1	189						852.5776
838	50%		0				0			65%		1238
	0	1669	489		2387		710	1916			0	
831	50%		342				528			35%		678
578.6004				0	0	0						578.6004
					871							
				100%	0	0%						
			5853.882	871		0	0					

Future

				6243.992		0						
				394	99.7%	0						
				100%	0	0%						
					394							
1169.868				158	0	234						1169.868
1150	32%		0				0			71%		1699
	0	2154	499		2152		531	2518			0	
1004	68%		413				317			29%		819
699.2776	74.3%			0	0	0				62.8%		699.2776
					1032							
				71%	0	29%						
				1032	70.8%	0						
				6935.088		0						

Future Turning Movement Calculation Sheet

N/S Street	I-215 NB	Time Period	AM
E/W Street	5th St	Date	11/2/2015
Project			

Existing

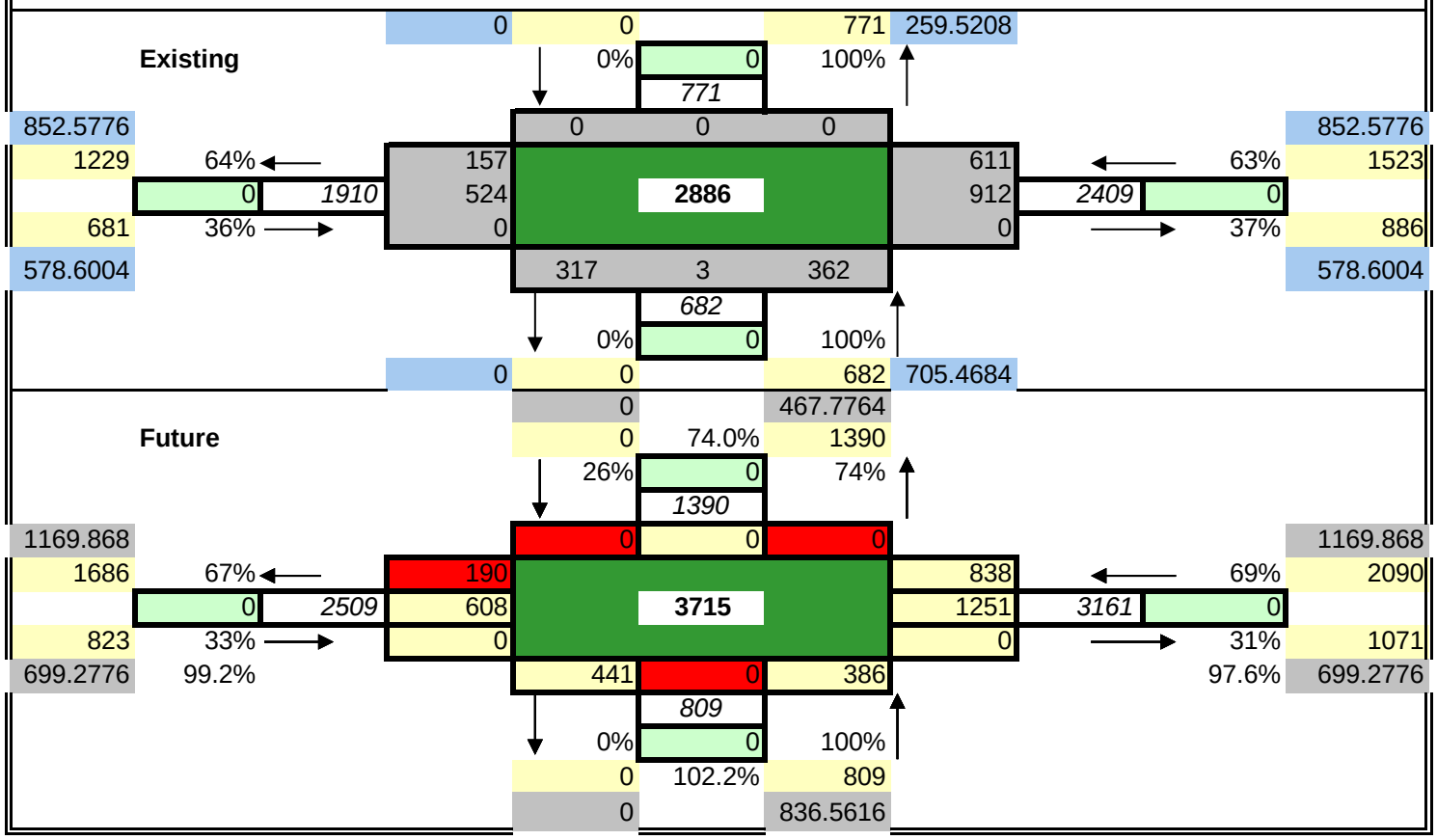
			0	0		275	448.8978					
				0%	0	100%						
					275							
338.8992				0	0	0						338.8992
640	35%		135				140			25%		555
	0	1832	1057		2564		415	2204		0		
1192	65%		0				0			75%		1649
742.425				225	0	592						742.425
					817							
				0%	0	100%						
			0	0		817	778.5326					

Future

				0		700.929						
				0	63.3%	429						
				37%	0	63%						
					429							
533.2616				0	0	0						533.2616
1007	28%		169				103			34%		873
	0	2499	1189		2922		440	2937		0		
1492	72%		0				0			66%		2063
928.9708	82.6%			267	0	754				84.6%		928.9708
					868							
				0%	0	100%						
				0	117.6%	868						
				0		826.9864						

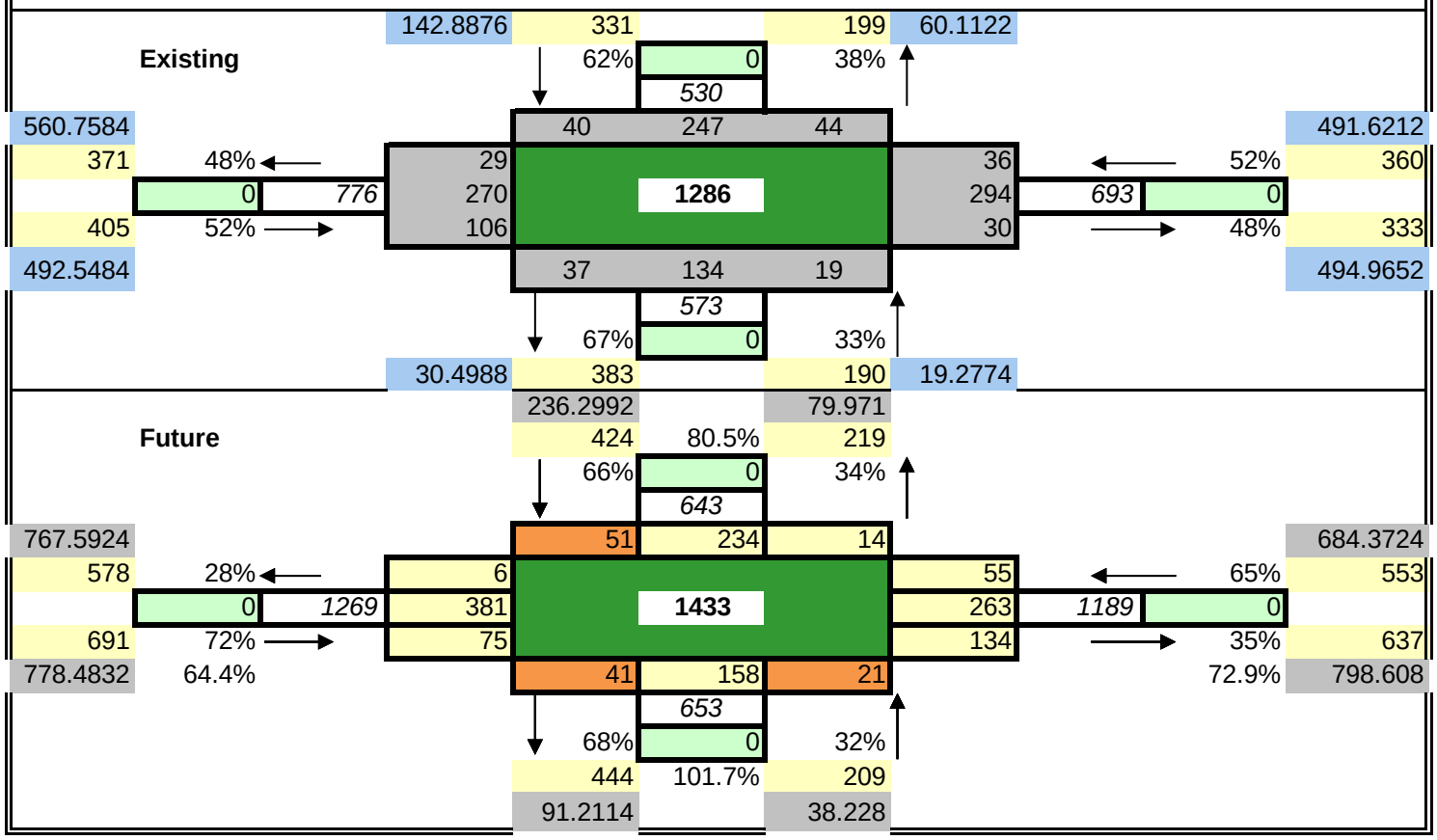
Future Turning Movement Calculation Sheet

N/S Street	I-215 NB	Time Period	PM
E/W Street	5th St	Date	11/2/2015
Project			



Future Turning Movement Calculation Sheet

N/S Street	Sierra Way	Time Period	AM
E/W Street	5th St	Date	10/26/2015
Project			



Future Turning Movement Calculation Sheet

N/S Street	Sierra Way	Time Period	PM
E/W Street	5th St	Date	10/26/2015
Project			

Existing

			100.3268	227		352	172.5108					
				39%	0	61%						
					579							
534.4556				41	140	46						521.7604
454	41%		66				34		37%			354
	0	1098	519		1616		311	956		0		
644	59%		59				9		63%			602
657.3224				102	252	37						652.4644
					599							
				35%	0	65%						
			28.7028	208		391	108.7268					

Future

				229.7204		333.3316						
				520	105.2%	680						
				49%	0	51%						
					1200							
837.2644				94	536	17						918.0892
711	35%		16				154		63%			623
	0	1612	469		2753		293	1487		0		
900	65%		173				307		37%			864
919.072	76.1%			182	446	66			87.8%			936.0288
					1821							
				56%	0	44%						
				1121	94.0%	699						
				154.7448		194.4852						

Future Turning Movement Calculation Sheet

N/S Street	Waterman	Time Period	AM
E/W Street	5th St	Date	10/26/2015
Project			

Existing

			805.3226	763			509	312.9566				
				60%	0		40%					
					1272							
528.6332				112	631		20					417.4148
390	55%		68					18		61%		296
	0	703	136		1889			221	489		0	
313	45%		109					57		39%		193
431.395				57	423		37					266.513
					1314							
				61%	0		39%					
			893.8322	797			517	347.8026				

Future

				923.5406			360.9012					
				878	92.1%		572					
				61%	0		39%					
					1450							
713.1498				149	606		10					783.5866
550	50%		119					37		57%		609
	0	1097	270		2491			251	1058		0	
547	50%		195					117		43%		450
702.354	103.5%			152	415		171			80.8%		564.1366
					1841							
				50%	0		50%					
				1146	90.0%		695					
				1262.615			491.321					

Future Turning Movement Calculation Sheet

N/S Street	Waterman	Time Period	PM
E/W Street	5th St	Date	10/26/2015
Project			

Existing

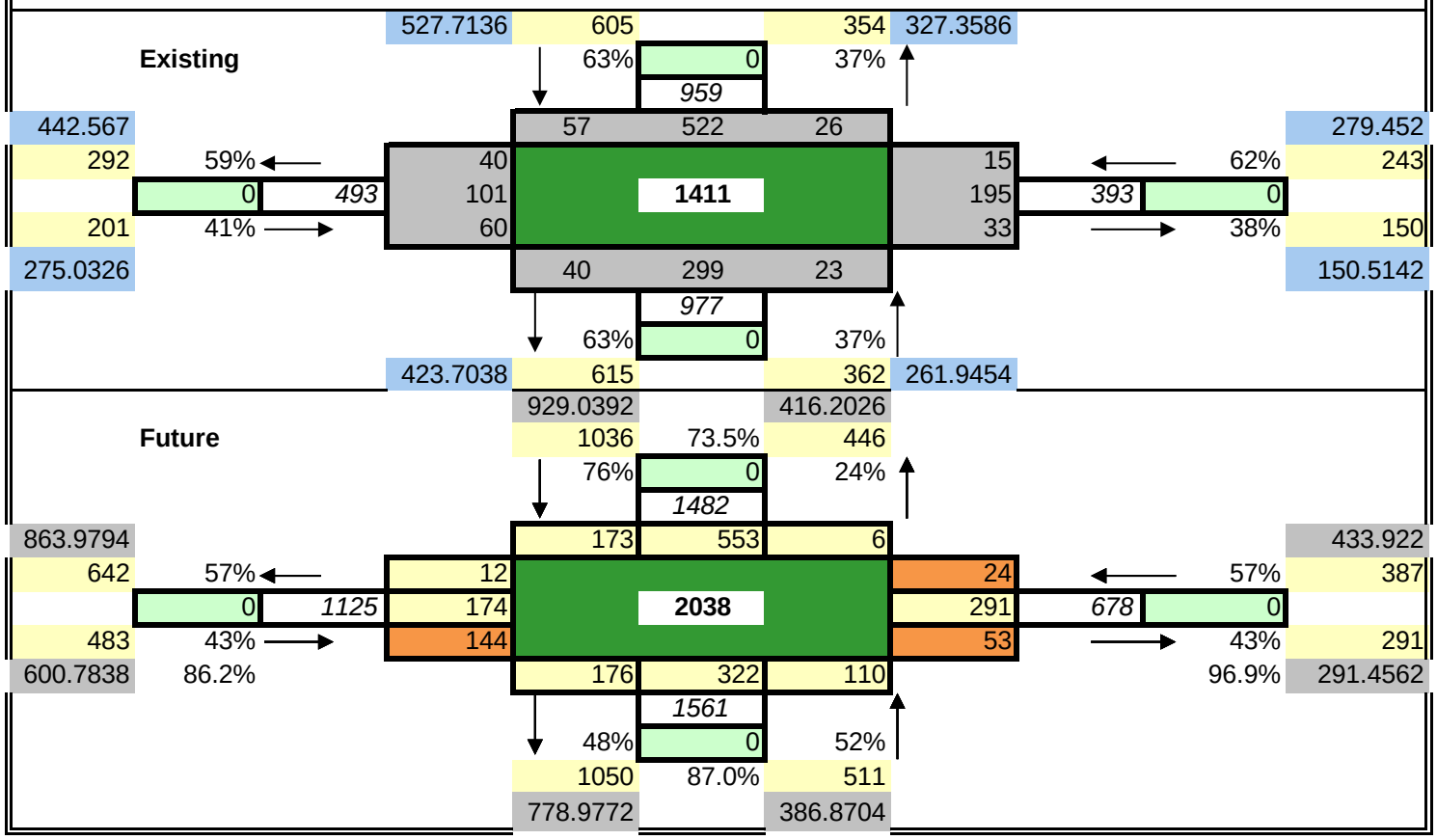
			551.2696	839		894	889.4452					
				48%	0	52%						
					1733							
431.1356				122	684	33						318.962
352	38%		132				36		33%			222
	0	921	327		2518		151	665		0		
569	62%		110				35		67%			443
659.0444				79	726	83						502.404
					1717							
				48%	0	52%						
			639.8056	829		888	933.5144					

Future

				632.9652		1056.857						
				963	89.4%	1062						
				48%	0	52%						
					2026							
794.6708				173	573	19						736.1396
649	42%		201				83		36%			512
	0	1515	549		3442		292	1440		0		
866	58%		185				81		64%			928
1003.248	104.1%			177	761	348			95.3%			1052.1392
					2411							
				35%	0	65%						
				1099	88.1%	1312						
				848.0556		1379.216						

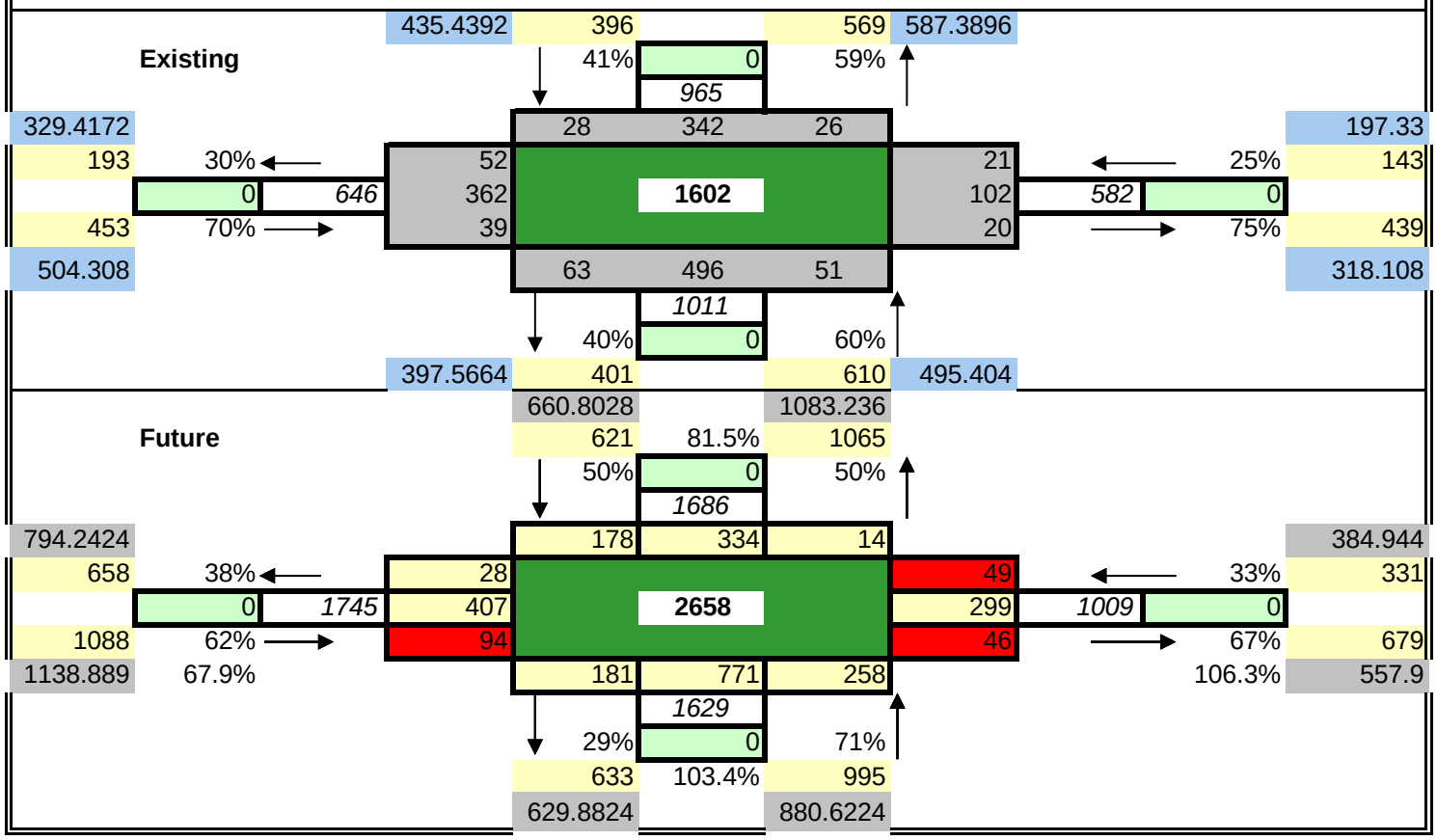
Future Turning Movement Calculation Sheet

N/S Street	Tippecanoe	Time Period	AM
E/W Street	5th St	Date	10/26/2015
Project			



Future Turning Movement Calculation Sheet

N/S Street	Tippecanoe	Time Period	PM
E/W Street	5th St	Date	10/26/2015
Project			



Future Turning Movement Calculation Sheet

N/S Street	I-210 SB	Time Period	AM
E/W Street	5th St	Date	10/26/2015
Project			

Existing

			69.4108	350		0	0					
				100%	0	0%						
					350							
435.0772				179	4	167						769.2796
1017	62%		0				0			79%		1567
	0	1638	257		2538		838	1991		0		
621	38%		364				729			21%		424
275.2872				0	0	0						77.1552
					1097							
				100%	0	0%						
			601.7414	1097		0	0					

Future

				218.8116		0						
				499	209.0%	0						
				100%	0	0%						
					499							
968.1526				418	613	12						1216.2736
1550	48%		0				0			86%		2014
	0	2336	352		2649		704	2601		0		
786	52%		197				352			14%		587
440.116	71.6%			0	0	0				54.6%		240.1904
					1162							
				100%	0	0%						
				1162	100.0%	0						
				666.862		0						

Future Turning Movement Calculation Sheet

N/S Street	I-210 SB	Time Period	PM
E/W Street	5th St	Date	10/26/2015
Project			

Existing

			32.8328	481		0	0					
				100%	0	0%						
					481							
347.2112				119	4	358						521.136
552	33%		0				0			43%		762
	0	*1668*	639		**2359**		433	*1759*			0	
1116	67%		477				329			57%		997
508.4828				0	0	0						272.7508
					810							
				100%	0	0%						
			442.4896	810		0	0					

Future

				564.9392		0						
				1013	68.4%	0						
				100%	0	0%						
					1013							
491.4672				188	462	44						684.6896
696	21%		0				0			57%		926
	0	*2377*	1227		**2650**		316	*2974*			0	
1681	79%		149				265			43%		2048
1073.582	79.1%			0	0	0				62.3%		1324.0668
					875							
				100%	0	0%						
				875	100.0%	0						
				507.6764		0						

Future Turning Movement Calculation Sheet

N/S Street	I-210 NB	Time Period	AM
E/W Street	5th St	Date	10/26/2015
Project			

Existing

			0	0		330	18.8784					
				0%	0	100%						
					330							
769.2796				0	0	0						577.638
1564	79%		72				254		70%	1462
	0	1988	352		2526		1208	2094	0	
424	21%		0				0		30%	632
77.1552				356	4	280				200.9554
					640					
				0%	0	100%						
			0	0		640	334.3202					

Future

				0		177.232						
				0	27.6%	488						
				72%	0	28%						
					488							
1216.274				0	0	0						1103.3604
2011	57%		13				122		71%	1988
	0	2598	502		2423		914	2825	0	
587	43%		0				0		29%	838
240.1904	76.3%			554	0	318			65.7%	406.6
					762					
				0%	0	100%						
				0	114.4%	762						
				0		456.7752						

Future Turning Movement Calculation Sheet

N/S Street	I-210 NB	Time Period	PM
E/W Street	5th St	Date	10/26/2015
Project			

Existing

			0	0		341	83.2188					
				0%	0	100%						
					341							
521.136				0	0	0						295.666
786	43%		125				215		33%			733
	0	1822	911		2643		518	2249	0			
1036	57%		0				0		67%			1516
272.7508				268	1	605						606.9448
					874							
				0%	0	100%						
			0	0		874	642.88					

Future

				0		379.3104						
				0	27.6%	637						
				72%	0	28%						
					637							
684.6896				0	0	0						707.8428
950	23%		17				159		33%			1145
	0	3037	1478		3284		432	3613	0			
2087	77%		0				0		67%			2468
1324.067	72.0%			262	0	937			83.2%			1558.6704
					822							
				0%	0	100%						
				0	145.9%	822						
				0		590.758						

Future Turning Movement Calculation Sheet

N/S Street	I-215 SB Off Ramp	Time Period	AM
E/W Street	3rd St	Date	11/2/2015
Project			

Existing

			348.004	1039		0	0					
				100%	0	0%						
					1039							
70.8586				121	535	383						10.2904
205	69%		0				0			20%		114
	0	295	81		1243		84	578		0		
90	31%		9				30			80%		464
16.3628				0	0	0						170.2628
					574							
				100%	0	0%						
			246.2894	574		0	0					

Future

				499.0426		0						
				1190	100.0%	0						
				100%	0	0%						
					1190							
81.5176				139	613	439						28.8496
216	73%		0				0			-17%		133
	0	330	318		1913		101	648		0		
114	27%		110				195			117%		515
40.2648	202.3%			0	0	0				162.4%		221.6768
					626							
				146%	0	-46%						
				626	146.4%	0						
				298.7712		0						

Future Turning Movement Calculation Sheet

N/S Street	I-215 SB Off Ramp	Time Period	PM
E/W Street	3rd St	Date	11/2/2015
Project			

Existing

			258.4176	338		0	0					
				100%	0	0%						
					338							
133.5572				70	193	75						32.032
169	52%		0				0		60%	298
	0	327	124		794		99	497	0	
158	48%		34				199		40%	199
11.3232				0	0	0						86.534
					426							
				100%	0	0%						
			100.0776	426		0	0					

Future

				296.114		0						
				376	106.4%	0						
				100%	0	0%						
					376							
122.1248				102	215	83						87.3348
158	51%		0				0		62%	353
	0	338	143		862		71	595	0	
181	49%		90				160		38%	241
34.244	119.6%			0	0	0			76.8%	128.8812
					534							
				87%	0	13%						
				534	86.8%	0						
				208.2388		0						

Future Turning Movement Calculation Sheet

N/S Street	I-215 NB On Ramp	Time Period	AM
E/W Street	3rd St	Date	11/2/2015
Project			

Existing

			0	0		276	109.2994					
				0%	0	100%						
					276							
10.2904				0	0	0						10.2904
111	19%		35				42		19%	127		
	0	*585*	439		**945**		85	*685*	0			
474	81%		0				0		81%	558		
170.2628				26	199	119				170.2628		
					344							
				0%	0	100%						
			0	0		344	489.8732					

Future

				0		164.5666						
				0	93.8%	416						
				6%	0	94%						
					416							
28.8496				0	0	0						28.8496
311	24%		46				102		47%	356		
	0	*928*	426		**1184**		138	*1083*	0			
617	76%		0				0		53%	726		
221.6768	74.8%			84	243	145			74.9%	221.6768		
					420							
				0%	0	100%						
				0	112.5%	420						
				0		597.5614						

Future Turning Movement Calculation Sheet

N/S Street	I-215 NB On Ramp	Time Period	PM
E/W Street	3rd St	Date	11/2/2015
Project			

Existing

			0	0		803	328.8096					
				0%	0	100%						
					803							
32.032				0	0	0						32.032
297	60%		74				240		72%			521
	0	495	124		1301		281	722		0		
198	40%		0				0		28%			201
86.534				16	489	77						86.534
					582							
				0%	0	100%						
			0	0		582	725.9056					

Future

				0		569.0412						
				0	70.3%	1390						
				30%	0	70%						
					1390							
87.3348				0	0	0						87.3348
810	34%		110				336		85%			1420
	0	1105	174		1608		357	1720		0		
295	66%		0				0		15%			299
128.8812	59.6%			17	530	83			55.3%			128.8812
					631							
				0%	0	100%						
				0	100.0%	631						
				0		786.478						

Future Turning Movement Calculation Sheet

N/S Street	I-215 SB On Ramp	Time Period	AM
E/W Street	2nd St	Date	11/2/2015
Project			

Existing

			0.38	546			0	0.38				
				100%	0		0%					
					546							
202.293				107	70	369						243.01
394	44%		0				0			40%		517
	0	887	417		1556		287		1303		0	
493	56%		76				230			60%		786
379.2666				0	0	0						173.6942
					376							
				100%	0		0%					
			246.2894	376			0	0.38				

Future

				935.6398			0.38					
				1481	42.2%		0					
				100%	0		0%					
					1481							
226.594				145	80	400						274.9338
418	40%		0				0			25%		549
	0	969	615		1735		244		1348		0	
551	60%		85				166			75%		799
437.1216	112.3%			0	0	0				105.7%		186.6902
					428							
				77%	0		23%					
				428	77.3%		0					
				298.7712			0.38					

Future Turning Movement Calculation Sheet

N/S Street	I-215 SB On Ramp	Time Period	PM
E/W Street	2nd St	Date	11/2/2015
Project			

Existing

			551.1296	427		0	0					
				100%	0	0%						
					427							
263.7488				57	231	139						592.0992
533	49%		0				0			68%		1176
	0	*1096*	423		**2166**		476	*1738*		0		
563	51%		140				700			32%		562
378.2856				0	0	0						155.5064
					1071							
				100%	0	0%						
			551.1296	1071		0	0					

Future

				689.4188		0						
				534	119.4%	0						
				100%	0	0%						
					534							
321.9412				175	289	174						774.1972
651	60%		0				0			71%		1538
	0	*1325*	507		**2850**		622	*2318*		0		
674	40%		168				915			29%		780
453.0456	111.1%			0	0	0				95.7%		215.8828
					1340							
				102%	0	-2%						
				1340	102.4%	0						
				689.4188		0						

Future Turning Movement Calculation Sheet

N/S Street	I-215 NB Off Ramp	Time Period	AM
E/W Street	2nd St	Date	11/2/2015
Project			

Existing

			0	0		334	198.9224					
				0%	0	100%						
					334							
243.01				0	0	0						105.7236
514	39%		93			102			22%			506
	0	1304	697		2670	404		2328		0		
790	61%		0			0			78%			1822
173.6942				110	139	1125						675.7692
					1374							
				0%	0	100%						
			0	0		1374	838.28					

Future

				0		286.7746						
				0	89.9%	422						
				10%	0	90%						
					422							
274.9338				0	0	0						194.8906
546	46%		95			105			45%			595
	0	1349	708		2550	475		2799		0		
803	54%		0			0			55%			2204
186.6902	105.9%			150	179	837			76.0%			1057.6502
					1773							
				0%	0	100%						
				0	65.8%	1773						
				0		1237.778						

Future Turning Movement Calculation Sheet

N/S Street	I-215 NB Off Ramp	Time Period	PM
E/W Street	2nd St	Date	11/2/2015
Project			

Existing

			0	0		573	355.754					
				0%	0	100%						
					573							
592.0992				0	0	0						579.5356
1193	67%		139				394		64%			1441
	0	1774	442		2582		1047	2257		0		
581	33%		0				0		36%			816
155.5064				146	40	374						482.2216
					560							
				0%	0	100%						
			0	0		560	695.0356					

Future

				0		600.9976						
				0	52.8%	818						
				47%	0	53%						
					818							
774.1972				0	0	0						892.15
1375	82%		153				204		68%			1754
	0	2016	488		3046		1274	2999		0		
641	18%		0				0		32%			1245
215.8828	113.8%			379	75	473			81.3%			911.1256
					1043							
				0%	0	100%						
				0	88.8%	1043						
				0		1178.29						

Future Turning Movement Calculation Sheet

N/S Street	Waterman Ave	Time Period	AM
E/W Street	2nd St	Date	11/6/2015
Project			

Existing

			685.1476	775		691	418.7182					
				53%	0	47%						
					1466							
46.968				113	662	0						0
173	39%		198				0			100%		0
	0	440	0		1595		0		0		0	
267	61%		69				0			0%		0
103.569				60	493	0						0
					1284							
				57%	0	43%						
			714.533	731		553	391.5064					

Future

				1138.347		629.4358						
				1258	74.4%	970						
				57%	0	43%						
					2228							
97.9412				79	617	0						0
292	20%		256				0			100%		0
	0	815	0		1937		0		0		0	
522	80%		199				0			0%		0
246.2856	75.5%			81	705	0				100.0%		0
					1832							
				45%	0	55%						
				1165	87.5%	667						
				1143.355		486.1036						

Future Turning Movement Calculation Sheet

N/S Street	Waterman Ave	Time Period	PM
E/W Street	2nd St	Date	11/6/2015
Project			

Existing

			618.4136	907		982	803.0876					
				48%	0	52%						
					1889							
96.6644				133	774	0						0
220	40%		233				0			100%		0
	0	*554*	0		**2077**		0		*0*	0		
334	60%		101				0			0%		0
136.9592				87	749	0						0
					1711							
				51%	0	49%						
			635.6196	875		836	779.9932					

Future

				916.3644		1426.572						
				1344	74.2%	1744						
				50%	0	50%						
					3088							
292.4376				178	576	0						0
666	27%		289				0			100%		0
	0	*1321*	0		**2657**		0		*0*	0		
655	73%		185				0			0%		0
268.7692	63.1%			181	1248	0				100.0%		0
					2536							
				30%	0	70%						
				1104	86.4%	1432						
				801.9172		1335.793						

Future Turning Movement Calculation Sheet

N/S Street	Waterman Ave	Time Period	AM
E/W Street	I-10 WB On Ramp	Date	11/6/2015
Project			

Existing

			491.1462	845		1740	1297.335			
				33%	0	67%				
					2585					
120.593				149	696	0				0
406	100%		0				0		100%	0
	0	*406*	0		**2842**		0	*0*	0	
0	0%		0				0		0%	0
0				257	1740	0				0
					2693					
				26%	0	74%				
			457.482	696		1997	1384.26			

Future

				969.8702		1729.513				
				1324	83.5%	2172				
				48%	0	52%				
					3496					
271.9926				289	818	0				0
557	110%		0				0		100%	0
	0	*557*	0		**3242**		0	*0*	0	
0	-10%		0				0		0%	0
0	110.0%			324	1811	0			100.0%	0
					3741					
				22%	0	78%				
				1168	78.9%	2573				
				929.043		1960.675				

Future Turning Movement Calculation Sheet

N/S Street	Waterman Ave	Time Period	PM
E/W Street	I-10 WB On Ramp	Date	11/6/2015
Project			

Existing

			1368.94	1976		1332	1008.328					
				60%	0	40%						
					3308							
412.1516				604	1372	0						0
974	100%		0				0		100%			0
	0	*974*	0		**3678**		0	*0*	0			
0	0%		0				0		0%			0
0				370	1332	0						0
					3074							
				45%	0	55%						
			1216.233	1372		1702	1267.77					

Future

				1752.691		1404.746						
				2530	89.7%	1856						
				65%	0	35%						
					4386							
747.2332				805	1596	0						0
1766	73%		0				0		100%			0
	0	*1766*	0		**4410**		0	*0*	0			
0	27%		0				0		0%			0
0	72.6%			478	1531	0			100.0%			0
					4622							
				35%	0	65%						
				1866	78.0%	2756						
				1653.806		2053.092						

Water Infrastructure

This summary identifies existing water infrastructure conditions within the Waterman Gardens Specific Plan and provides an analysis of potential impacts to the water infrastructure that could result from the implementation of the proposed project. This section is based on information obtained from the *General Plan Utilities Element*, the *San Bernardino Final General Plan Update and Associated Specific Plans Environmental Impact Report*, *San Bernardino Merged Area A – Program Environmental Impact Report*, the *2015 City of San Bernardino Municipal Water Department Water Facilities Master Plan Report*, the *2010 Amended Urban Water Management Plan*, and staff of the San Bernardino Municipal Water Department (SBMWD) the East Valley Water District (EVWD)

Background

Based on the data provided by the SBMWD and EVWD, the majority of the existing water pipelines located within Specific Plan boundary and the immediate vicinity are either unlined, under-sized, made with asbestos, and are typically greater than 50 years in age. Due to these factors, this infrastructure is not capable of meeting standards required for domestic needs and fire demand for modern development. The location of existing water pipelines are depicted on Exhibit XX-Existing Water Lines. As noted on the Exhibit, pipeline sizes range from 4-inches to 30-inches in size. There are approximately 92,000 linear feet of existing pipelines.

The water demand based on the existing conditions within the Specific Plan is approximately 2.2 million gallons per day (detailed in Table 1).

Proposed Water Infrastructure

The water infrastructure within the Specific Plan will require significant investment to meet current development standards. The age and condition of the water system necessitates that the entire system with the Specific Plan boundary be replaced over time as new development occurs. The proposed water system is depicted on Exhibit XX-Proposed Water Lines. Based on the system depicted on Exhibit XX, there is a need to replace over 85,000 linear feet of water pipelines. At an assumed construction cost of $280 per liner foot (2015 dollars), the cost of the water system infrastructure is in excess of $23.8 Million. It is typical of the SBMWD to place conditions of approval on each development to replace the infrastructure that is immediately adjacent to the project boundary.

The anticipated water demand for the proposed Specific Plan is approximately 3.8 million gallons per day (detailed in Table 2). Therefore the net increase in demand based on implementation of the Specific Plan, is approximately 1.6 million gallons per day.

TABLE 1 - WATER DEMAND BASED ON EXISTING CONDITIONS

Land Use	Acres	Demand Factor (gpd/acre)	Total Project Demand (gpd)
Residential[1]	240.31	5,427	1,304,162
Commercial (retail/office)[2]	121.41	3,204	388,998
industrial (auto-related)[3]	89.63	1,126	100,923
Public Facilities/Parks[4]	125.81	3,204	403,095
Vacant Land[5]	133.82	0	0
TOTAL	**710.98**		**2,197,179**

gpd = gallons per day

Source: SBMWD Water Facilities Master Plan, 2015

Notes:

1 - Used *Residential Medium* (RM) factor

2 - Used *Commercial Office* (CO) Factor

3 - Used *Industrial Heavy (IH) factor*

5 - Assumed Public Facilities would be closely related to *Commercial/Office* uses

5 - assumed no water usage

Table 2 - WATER DEMAND BASED ON THE SPECIFIC PLAN

Land Use	Acres	Demand Factor (gpd/acre)	Total Project Demand (gpd)
Corridor Mixed Use[1]	143.82	5,904	849,113
Employment[2]	103.67	3,204	332,159
Urban Mixed Use[3]	88.02	6,991	615,348
Neighborhood Residential[4]	360.29	5,427	1,955,294
Open Space/Public Facility[5]	15.18	3,204	48,637
TOTAL	**710.98**		**3,800,550**

gpd = gallons per day

Source: SBMWD Water Facilities Master Plan, 2015

Notes:

1 - Used *Residential Med High* (RMH) factor

2 - Used *Commercial Office* (CO) Factor

3 - Used *Residential High* (RH) factor

4 - Used *Residential Medium* (RM) factor

5 - Assumed Public Facilities would be closely related to *Commercial/Office* uses

Sewer Infrastructure

This summary identifies existing sewer infrastructure conditions within the Waterman Gardens Specific Plan and provides an analysis of potential impacts to the sewer infrastructure that could result from the implementation of the proposed project. This section is based on information obtained from the *General Plan Utilities Element*, the *San Bernardino Final General Plan Update and Associated Specific Plans Environmental Impact Report*, *San Bernardino Merged Area A – Program Environmental Impact Report*, the *2015 City of San Bernardino Municipal Water Department Water Facilities Master Plan Report*, the *2010 Amended Urban Water Management Plan*, and staff of the San Bernardino Municipal Water Department.

Background:

The SBMWD owns and operates the San Bernardino Water Reclamation Plant (WRP). The WRP was constructed in 1973 and treats both residential and industrial wastewater. The WRP is located at 699 Chandler Place, which is located approximately 1.8 miles southerly of the Specific Plan. The WRP includes both primary and secondary treatment processes in order to meet the discharge standards specified in the NPDES issued to the WRP by the State of California RWQCB.

The existing sewer infrastructure within the Specific Plan is depicted on Exhibit XX-Existing Sewer Pipe; existing pipelines range in size from 8-inch to 48-inch as depicted on the Exhibit. The major backbone collection system is located in Waterman Avenue, this backbone infrastructure collects sewer from the area within and surrounding the Specific Plan and tranmits flows to the WRP. The sewer lines are made of materials that have little or no propensity to degrade with age, and are therefore not vulnerable to useful life constraints, as is the water infrastructure. There are approximately 211,000 linear feet of existing sewer pipelines.

The sewer generation based on the existing conditions within the Specific Plan is just over 850,000 gallons per day (detailed in Table 3).

TABLE 3 - SEWER DEMAND BASED ON EXISTING CONDITIONS

District	Existing Conditions	Generation Factor (gpd)	Wastewater Generation (gpd)
Residential	1,946 DU's	(3/4) (210.75) gpd/du	307,590
Commercial (retail / office)	2,366,385 SF	0.23 gpd/sf	544,269
TOTAL	**0.0**	**0**	**851,858**

du = dwelling units gpd = gallons per day sf = square feet

Source: San Bernardino Merged Area A EIR, 2010

Proposed Sewer Infrastructure

The existing sewer system can typically be used for in-fill development; however, due to the increased generation of sewer for the proposed Specific Plan, there will be a need for supplemental backbone lines that can be integrated into the existing system over time. Exhibit XX-Proposed Sewer Pipe, depicts a concept for a supplemental 12-inch backbone system that can be introduced in Waterman Avenue, Baseline, and 9th Street. The supplemental system would take overflow from the existing backbone pipelines at key manholes, and then convey the flow to a point in south Waterman Avenue where the existing pipeline is adequate to accommodate the increased flow and deliver safely to the WRP.

The proposed supplemental backbone system as depicted on Exhibit-XX, is estimated to be approximately 17,500 lineal feet. A rough order of magnitude cost for this system was estimated using a installed cost of $360/LF (2015 dollars) for a total capital cost of $6.3 million. This cost should be aggregated across the entire plan so that each new development pays an apportioned portion of the cost at the time of occupancy. The City typically requires new development to pay a sewer service charge to maintain sewer systems (Municipal Code Chapter 13.08, Connection with Public Sewer).

The anticipated sewer generation for the proposed Specific Plan is approximately 1.5 million gallons per day (detailed in Table 4). Therefore the net increase in demand based on implementation of the Specific Plan, is approximately 650,000 million gallons per day.

Table 4 - SEWER DEMAND BASED ON THE SPECIFIC PLAN

District	Proposed Development	Generation Factor (gpd)	Wastewater Generation (gpd)
Residential	4,341 DU's	(3/4) (210.75) gpd/du	686,149
Commercial (retail / office)	3,570,448 SF	0.23 gpd/sf	821,203
TOTAL	**0.0**	**0**	**1,507,352**

du = dwelling units gpd = gallons per day sf = square feet

Source: San Bernardino Merged Area A EIR, 2010

Flood Protection

This summary identifies existing storm drain and flooding conditions within the Waterman Gardens Specific Plan and provides an analysis of potential impacts that could result from the implementation of the proposed project. This section is based on information obtained from the *General Plan Public Facilities and Services and Utilities Elements*, the *San Bernardino Final General Plan Update and Associated Specific Plans Environmental Impact Report*, and the *San Bernardino Merged Area A – Program Environmental Impact Report*.

Background:

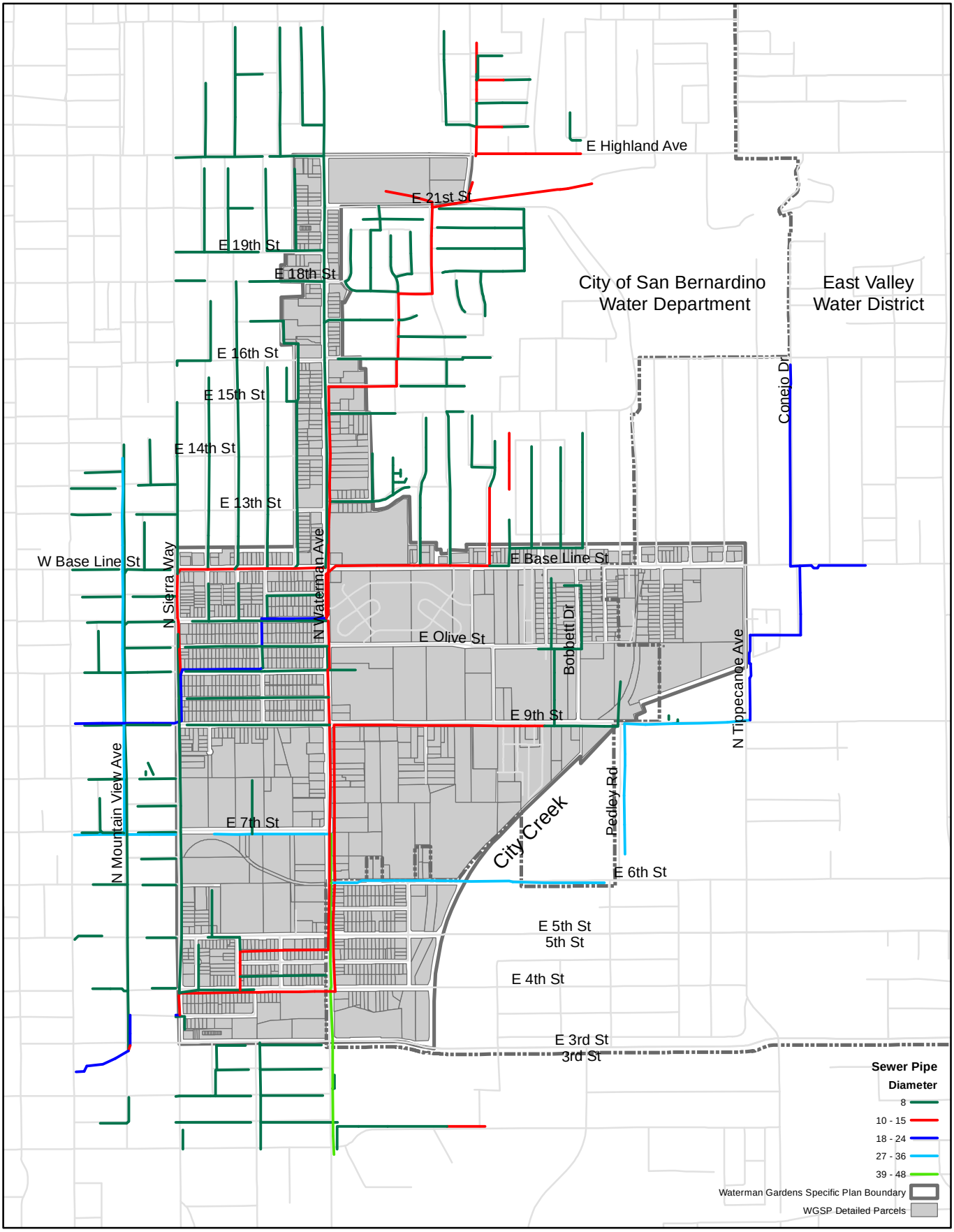
As noted in the *San Bernardino General Plan EIR*, the City of San Bernardino is located within the Santa Ana River Basin (Region 8) of the Regional Water Quality Control Board. The Santa Ana River reaches from the San Bernardino and San Gabriel Mountains to the Newport Bay. The Santa Ana River has a number of tributaries in the vicinity of San Bernardino that contribute to the flow, including the local tributary channels of Warm Creek and City Creek to which the Specific Plan area drains.

Within the project area and surrounding vicinity are natural and man-made channels, storm drains, and street waterways that control storm water. Exhibit XX-Existing Storm Drains, depicts the existing storm drain pipeline infrastructure within the Specific Plan. Currently there are over 41,000 linear feet of storm drain pipelines ranging is size from 15-inches to 84-inches. While there is some existing storm drain infrastructure, it isolated to the most northerly and southerly portions of the Specific Plan, and the majority of the project area relies on surface street drainage to control storm water flows, and as a result is often vulnerable to localized flooding. Local storm water drains to one of two regional county flood control facilities, Warm Creek and City Creek, which are concrete-lined channels of sufficient size to control regional storm flows.

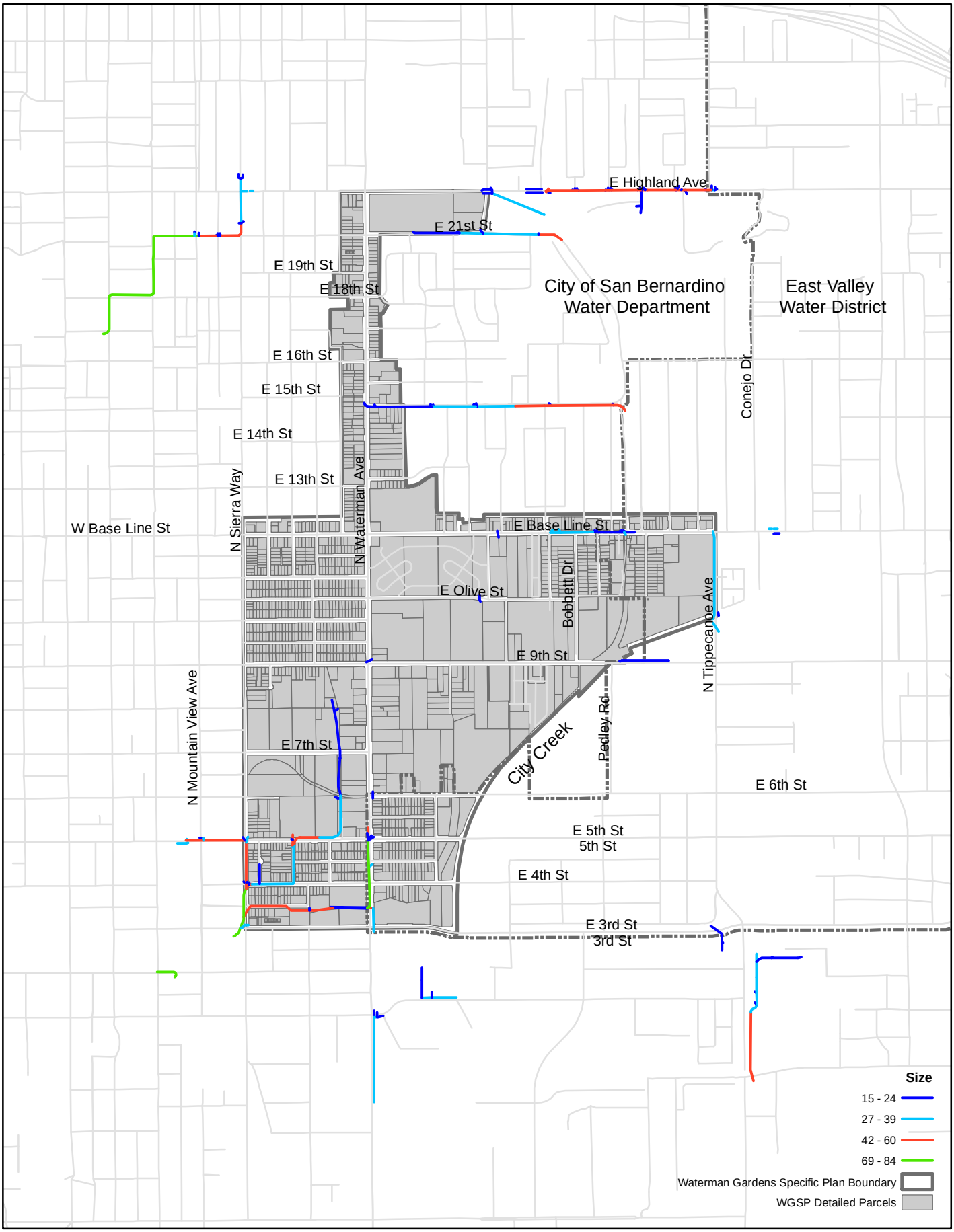
Proposed Storm Drain Infrastructure

Exhibit XX-Proposed Storm Drains, depicts a conceptual system of drainage basins and collection system, that if developed, could significantly reduce the risk of localized flooding. This conceptual system would provide the necessary infrastructure to provide adequate flood protection within the Specific Plan. The proposed storm drain infrastructure depicted on Exhibit XX, provides approximately 9,300 linear feet of 60-inch diameter Reinforced Concrete Pipe (RCP), along with one 5-acre basin associated with each backbone line. The construction cost for the proposed drainage system is approximately $450 per linear foot (2015 dollars) for a cost of approximately $4 million; adding the cost estimate for each of the three basins at approximately $350,000 each, the total estimated cost is approximately $5 Million. These costs could be aggregated across the entire Specific Plan so that each new development pays an apportioned portion of the cost at the time of occupancy.

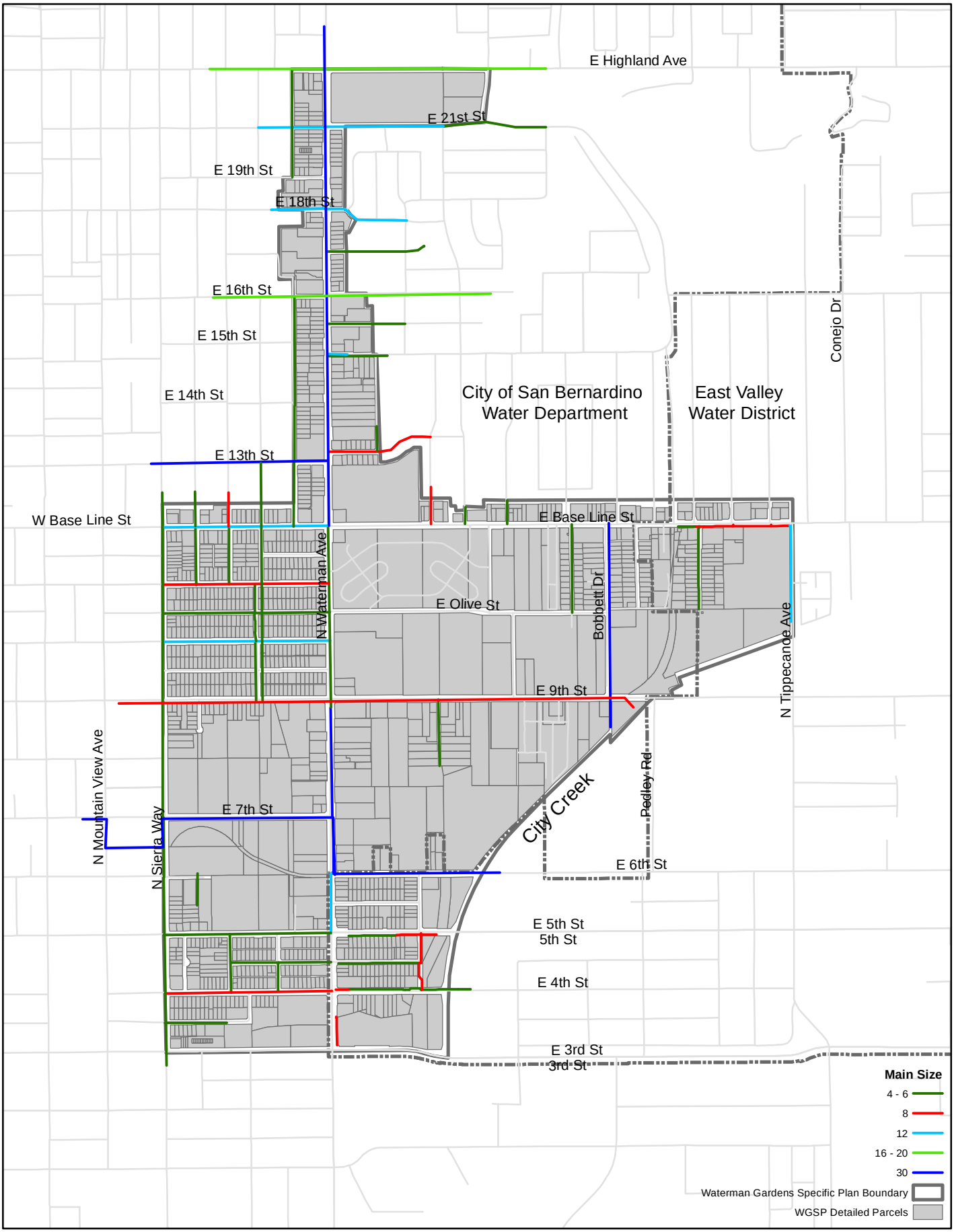
Waterman Gardens Specific Plan
Existing Sewer Pipe



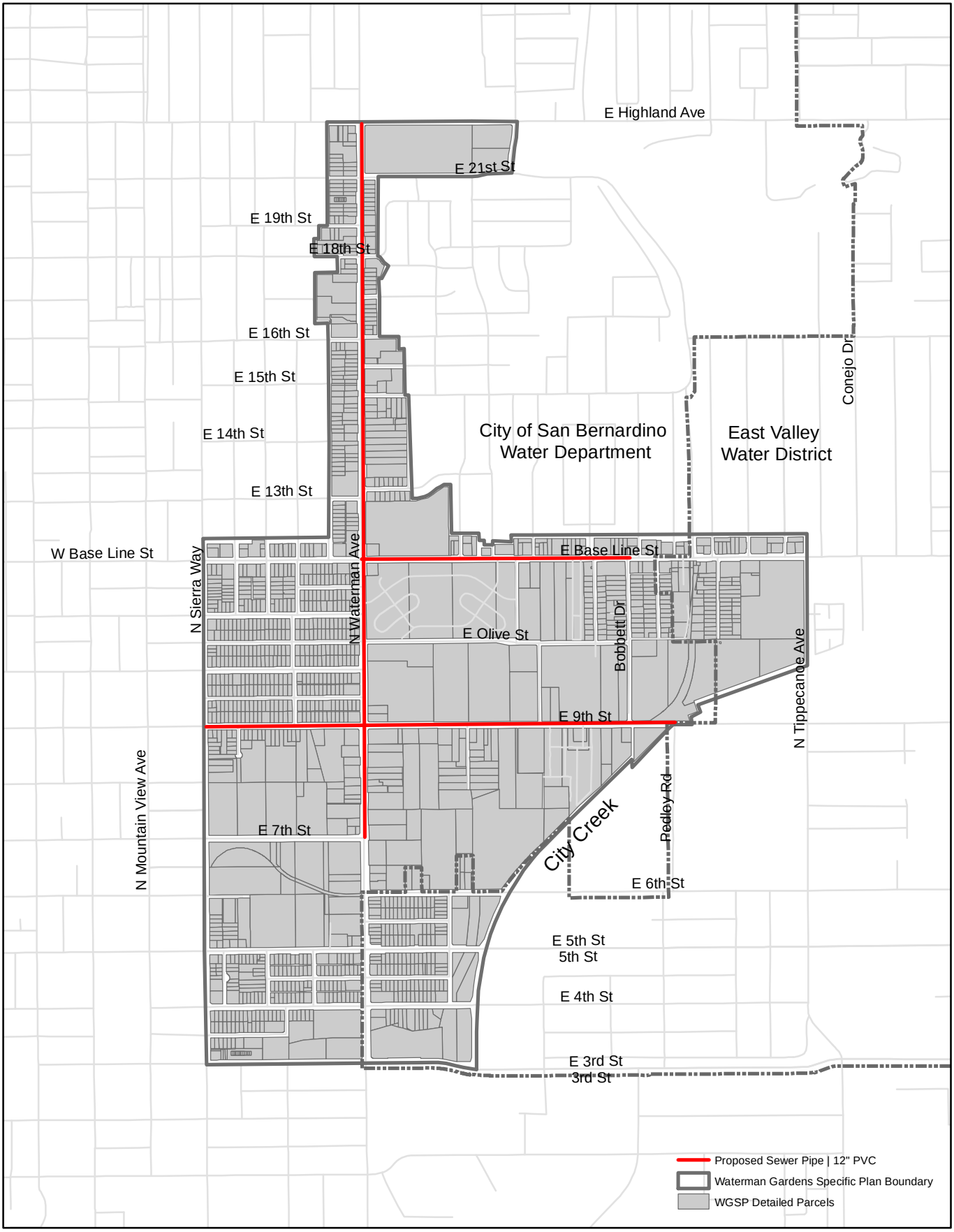
Waterman Gardens Specific Plan
Existing Storm Drains



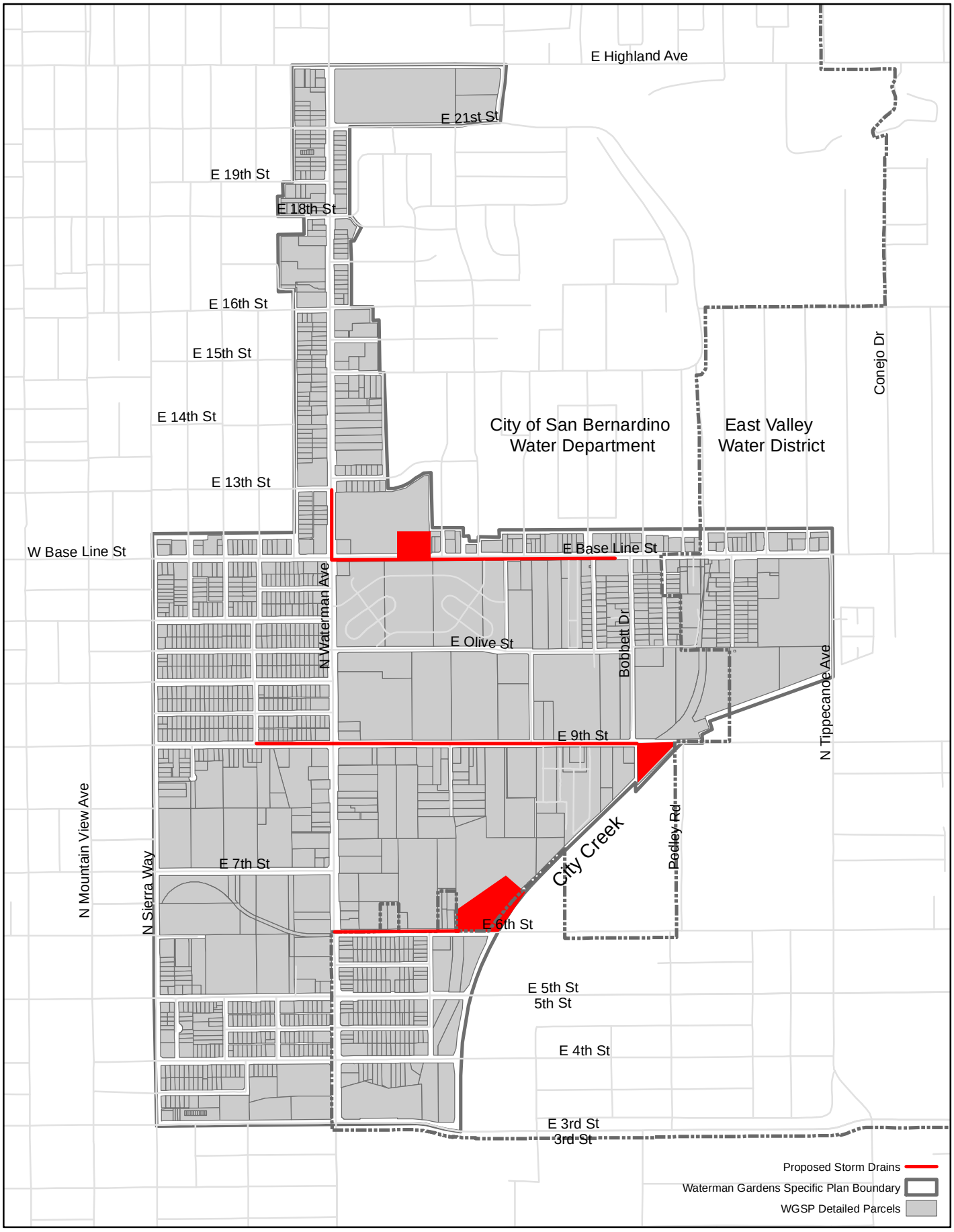
Waterman Gardens Specific Plan
Existing Water Lines



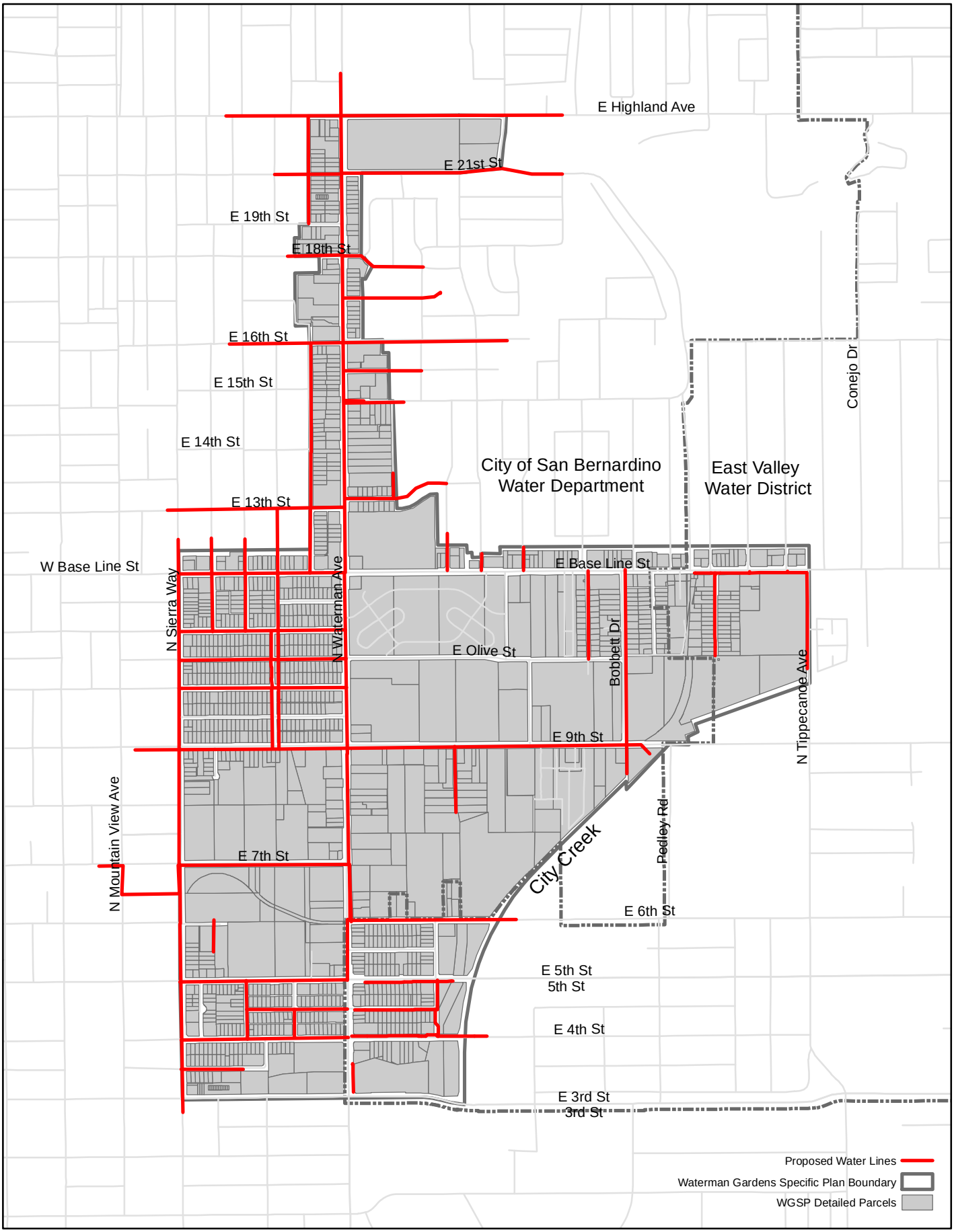
Waterman Gardens Specific Plan
Proposed Sewer Pipe



Waterman Gardens Specific Plan
Proposed Storm Drains



Waterman Gardens Specific Plan
Proposed Water Lines



San Bernardino Municipal Water Department
Water Supply Assessment
Water Code §10910 *et seq.*

To: (Lead Agency)
Mr. Oliver Mujica
City of San Bernardino
Development Services Department
300 North "D" Street, 3rd Floor
San Bernardino, CA 92418

(Applicant)
Ms. Alexa Washburn
National Community Renaissance
9421 Haven Avenue
Rancho Cucamonga, CA 91730

Project Information

Project Title: Waterman + Baseline Neighborhood Transformation Plan
Development Type: Residential, Commercial, Industrial, & Public Facilities

Water Supply Assessment

On 4/19/16, the Board of Water Commissioners of the San Bernardino Municipal Water Department approved the within assessment and made the following determination regarding the above-described Project:

- [X] The projected water demand for this Project **was** included in San Bernardino Municipal Water Department's latest adopted Urban Water Management Plan.
- [ ] The projected water demand for this Project **was not** included in San Bernardino Municipal Water Department's latest adopted Urban Water Management Plan.
- [X] A sufficient water supply **is** available for the Project's water demand, as well as existing and other projected water demands for the service area during normal, single-dry and multiple-dry years for the next 20 years.
- [ ] A sufficient water supply **is not** available for the Project's water demand. [Plan for acquiring and developing sufficient water supply attached. Water Code § 10911 (a)]

The foregoing determination is based on the following Water Supply Assessment information.

Robin Ohama
Robin L. Ohama
Deputy City Clerk & Ex-Officio Secretary

4-19-16
Date

Water Supply Assessment
Waterman + Baseline Neighborhood Transformation Plan

Background

Senate Bills 610 and 221 amended state law, effective January 1, 2002, to improve the linkage between certain land use decisions made by cities and counties and water supply availability. Both statutes require detailed information regarding supply availability and reliability with respect to certain developments to be included in the administrative record to serve as evidentiary basis for an approval action by the city or county on such projects.

Under SB 610, water supply assessments must be furnished to local governments for inclusion in any environmental documentation for certain types of projects, as defined in Water Code § 10912[a] and subject to the California Environmental Quality Act (CEQA).

A fundamental source document for compliance with SB 610 is the Urban Water Management Plan (UWMP). If the UWMP is properly prepared, it can be used by the water supplier to meet the standards set forth in SB 610.

The City of San Bernardino Municipal Water Department (SBMWD) is the water supplier that is responsible for preparing water supply assessments for the City of San Bernardino (City). The Board of Water Commissioners of SBMWD approved the 2010 UWMP in June 2011; this document is the primary source of reference for this water supply assessment.

On February 10, 2016, a letter was received by SBMWD requesting that the Department prepare a water supply assessment pursuant to the provisions of the Water Code § 10910 et seq. for the Waterman + Baseline Neighborhood Transformation Plan (see Appendix A). The project applicant, National Community Renaissance (National Core), submitted the project for proposed development to the City's Development Services Department.

Project Description

The Waterman + Baseline Neighborhood Transformation Plan (Project) proposes up to 1,375,000 square feet of industrial space, up to 2,200,000 square feet of commercial space, and up to 2,400 new housing units within approximately 710 acres of land, located near the geographic center of San Bernardino (Figure 1). The Plan area boundaries are loosely formed by Sierra Way to the west, Tippecanoe Avenue and East Twin Creek and Warm Creek to the east, 3rd Street to the south, and Highland Avenue to the north.

Water Demand Projections

According to Water Code §10910(c)(2), if the projected water demand associated with the proposed project was accounted for in the most recently adopted UWMP, the water supplier may use the demand projections from the UWMP in preparing the water supply assessment.

SBMWD used ultimate build-out conditions from the City's 2005 General Plan and 2013 Updated Housing Element as the basis for water demand projections in the 2010 UWMP and the 2015 Water Facilities Master Plan. Therefore, water demands for any proposed project that is consistent with the General Plan (and more specifically the land use districts or zoning) would be included in the total water demand projections of the 2010 UWMP and the 2015 Water Facilities Master Plan.

The project development is consistent with the City's General Plan land uses, as the total project area combines various types of residential, commercial, Public Facilities, and industrial land uses. As submitted by National Core in its request for a water supply assessment, overall water demand for the project based on ultimate build-out conditions is 3.3 million gallons per day (mgd), or 2,275 gallons per minute (gpm). Existing current demand is 2.1 mgd, or 1,428 gpm. Therefore, the project is anticipated to increase water demand by approximately 1.2 mgd over existing conditions. The net daily water demand increase represents an annual demand increase of approximately 1,367 acre-feet per year (ac-ft/yr). Demand projections for the project are summarized in Appendix B. Calculations of these demands are consistent with the 2010 UWMP and the 2015 Water Facilities Master Plan.

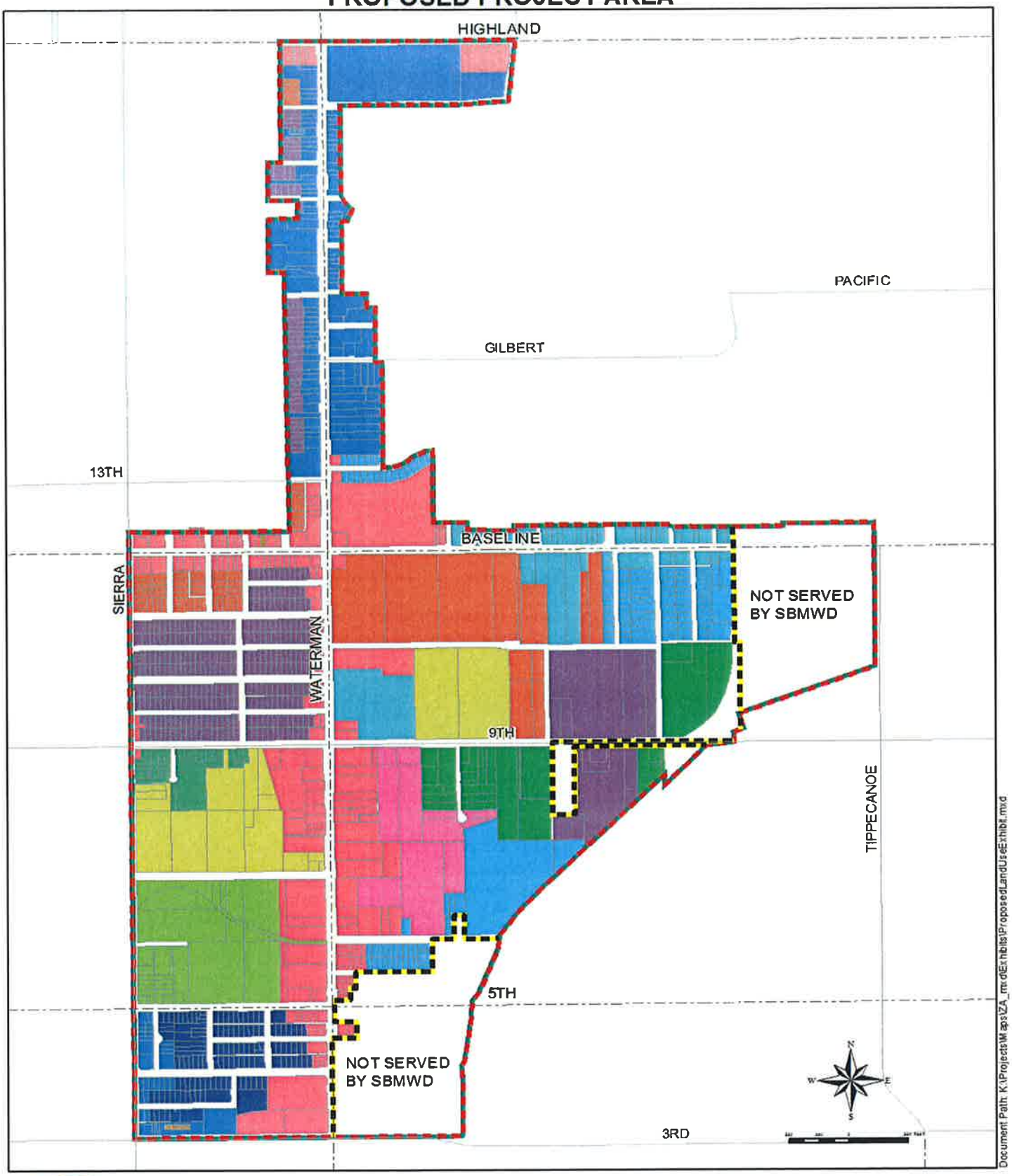
The Project area is shown in Figure 1, which also shows the land use districts for the City.

The project parcels all fall within the major land use districts in the City's 2005 General Plan referred to as:

- RS (Residential Suburban) – This land use district allows for single family residences in a high quality suburban setting at 4.5 dwelling units per acre.
- RU (Residential Urban) – This land use district allows for single and multi-family attached and detached residences including townhouses, stacked flats, courtyard homes, small lot subdivisions, and mobile home parks at 8 dwelling units per acre.
- RM (Residential Medium) – This land use district allows for multi-family dwellings including apartments and condominiums at 12 dwelling units per acre.
- RMH (Residential Medium High) – This land use district allows for multi-family dwellings including apartments and condominiums at 24 dwelling units per acre.
- RH (Residential High) – This land use district allows for multi-family dwellings including apartments and condominiums at 31 dwelling units per acre.
- CG (Commercial General) – This land use district allows for local and regional serving retail, personal service, entertainment, office, related commercial uses and limited residential uses with a conditional use permit.
- CH (Commercial Heavy) – This land use district allows for large scale, regional serving retail and service uses and limited commercial and industrial uses that are characterized by an extensive use of outdoor or indoor space for their sales, service, and/or storage.
- CO (Commercial Office) – This land use district allows for professional offices including financial, legal, insurance, medical, and other similar uses.
- PF (Public Facilities) – This land use district allows for public facilities, governmental institutions, transportation facilities, public schools (K-12), public or private colleges and universities, museums, and public libraries.

- PP (Public Parks) – This land use district allows for public parks and recreational facilities.
- IL (Industrial Light) – This land use district allows a variety of light industrial uses, including warehousing/distribution, assembly, light manufacturing, research and development, mini storage, repair facilities conducted within enclosed structures, as well as supporting retail and personal uses.
- IH (Industrial Heavy) – This land use district allows a variety intense industrial activities that could potentially generate significant impacts such as excessive noise, dust, and other nuisances such as rail yards and multi-modal transportation centers.

FIGURE 1 - WATERMAN + BASELINE NEIGHBORHOOD TRANSFORMATION PLAN
PROPOSED PROJECT AREA



Legend

- Commercial General -1
- Commercial General -2
- Commercial Heavy
- Commercial Office
- Industrial Heavy
- Industrial Light
- Public Facilities
- Public Park
- Residential High
- Residential Medium
- Residential Medium High
- Residential Suburban
- Residential Urban
- SBMWD Service Area Boundary
- Plan Boundary

Climate Conditions

The climate of the City is considered arid west. Table 1 summarizes the climate for the City.

Table 1
Average Climate Data for SBMWD Service Area

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Standard Monthly Average ETo (inches) [1]	2.09	4.28	5.85	6.28	5.37	7.46	6.75	7.65	5.81	4.21	2.77	2.35	60.87
Average Rainfall (inches) [2]	3.5	3.7	3.28	0.93	0.41	0.09	0.04	0.22	0.41	0.71	1.2	1.94	16.43
Average Temperature (F) [2]	54.4	56.2	58.0	62.7	67.5	73.8	79.6	80.1	76.3	68.4	59.4	54.5	-

1. - Obtained from CIMIS Station 44 at UCR as of March 15, 2016.
2. - Weather Station San Bernardino F S 226, Station Number 047723, NOAA 1981-2015 Climate Normals.

Population Projections within SBMWD Service Area

Table 2 presents the population projection for the SBMWD service area. A population growth rate for the area served by SBMWD was defined based on SCAG projected populations for years 2015, 2020, and 2035, as contained in the 2015 Integrated Growth Forecast. It should be noted that the service area is different than that of the City's boundary. Based on GIS data, SBMWD serves 90 percent of the City of San Bernardino and the remaining service area consists of unincorporated San Bernardino County. The population growth rate provided by SCAG was applied to existing population in the City of San Bernardino to project population through year 2040. Because SBMWD serves 90 percent of the City, it is assumed that the population served by SBMWD will be 90 percent of the City's population projection.

Table 2
Population Projections for SBMWD Service Area

	2015	2020	2025	2030	2035	2040
Population	196,453	207,715	213,366	221,400	234,937	248,474

Customer Accounts

Table 3 summarizes the projection of customer accounts for SBMWD. These accounts were projected based on land use categories from the City's General Plan and the historical correlation between land use and service accounts.

Table 3
Projection of SBMWD Customer Accounts

Customer Class	Year				
	2015	2020*	2025*	2030*	2035*
Residential	38,493	42,997	44,616	46,296	48,039
Commercial/Industrial	5,007	4,672	4,848	5,030	5,220
Institutional/Governmental	12	91	95	98	102
Other	1,130	1,225	1,271	1,319	1,368
Total	44,642	48,985	50,830	52,743	54,729

*Source: SBMWD Urban Water Management Plan, 2010.

Projected Water Use

The Water Conservation Bill of 2009 (also referred to as SBX7-7) was enacted as part of the November 2009 Comprehensive Water Package. The Water Conservation Bill of 2009 provides the regulatory framework to support a statewide reduction in urban per capita water use. Each retail water supplier must demonstrate compliance with SBX7-7 by determining its existing baseline water consumption and then establish a future water use target in gallons per capita per day and report that information in its 2010 UWMP.

Should SBMWD's recycled water program develop prior to year 2020, SBMWD would achieve its interim and compliance water use SBX7-7 targets without any additional conservation actions. However, because the recycled water program is in the planning stages, as described later, SMBWD is still planning to undertake additional conservation actions to ensure compliance with SBX7-7.

In January 2014, the Governor of California declared a State of Emergency throughout the State due to severe drought conditions and subsequently issued Executive Orders B-26-14, B-28-14, and then B-29-15. Executive Order B-29-15 mandates that the State Water Resources Control Board (Water Board) shall impose restrictions to achieve a statewide 25 percent reduction in potable urban water usage through October 2016. These restrictions will require water suppliers throughout California to reduce usage as compared to amounts used in 2013. This regulation is intended to be temporary, and was not intended to replace SBX7-7.

Since the inception of this emergency drought regulation, the Water Board has issued some allowable adjustments to the overall conservation requirements based on climate, growth, and new water supplies. Due to this adjustment, SBMWD's current conservation standard is 26 percent. The conservation standard has been met through a comprehensive drought monitoring program that includes public awareness, education, and conservation efforts.

Table 4 summarizes the total water demand projections for SBMWD, as depicted in the 2010 UWMP. As discussed previously, water demand projections in the 2010 UWMP were based on ultimate build-out conditions presented in the City's General Plan. It should be noted that the projection totals are without conservation.

Table 4
Annual SBMWD Water Demands (Acre-Feet)

Customer Class	Year				
	2015	2020*	2025*	2030*	2035*
Residential	21,177	36,644	38,023	39,455	40,940
Commercial/Industrial	6,111	9,124	9,468	9,824	10,194
Institutional/Governmental	810	2,437	2,529	2,624	2,723
Landscape	4,954	6,466	6,710	6,962	7,224
Other	629	629	629	629	629
Future Known Developments	625	2,083	2,083	2,083	2,083
Unaccounted/system loss	3,169	3,666	3,797	3,934	4,076
Total	37,475	61,049	63,239	65,511	67,869

* Source: SBMWD Urban Water Management Plan, 2010.

Existing Water Supply

SBMWD's current water supply consists solely of water extracted from the underlying underground aquifer, the Bunker Hill Groundwater Basin (BHG Basin). SBMWD produces its water supply from 54 groundwater wells located throughout its service area. The wells range from 50 to 1,300 feet in depth and have production capacities ranging from 50 to 3,500 gpm. Table 5 presents historical groundwater pumping for SBMWD.

Table 5
SBMWD Groundwater Pumped (Acre-Feet)

	2008	2009	2010	2011	2012	2013	2014	2015
Groundwater Pumped	56,310	52,357	47,654	48,767	48,758	45,835	44,131	36,036
% of Total Water Supply	100%	100%	100%	100%	100%	100%	100%	100%

Groundwater Management

Management of the BHG Basin is coordinated through the San Bernardino Valley Municipal Water District (Valley District or District), which was formed in 1954 to plan long-range water supply for the San Bernardino Valley including the BHG Basin. Valley District is a State Water Project (SWP) contractor that was incorporated under the Municipal Water District Act of 1911 (California Water Code Section 7100 et. seq., as amended). The District's responsibility for long-range water supply planning includes importing supplemental water and management of the groundwater basins within its boundaries. It has specific responsibilities for monitoring groundwater supplies in the San Bernardino and Colton-Rialto basins and maintaining flows at Riverside Narrows on the Santa Ana River.

The BHG Basin contains in excess of 5 million acre feet (ac-ft) of high-quality water of which approximately 1.5 million ac-ft of water is extractable. The BHG Basin is replenished naturally by local precipitation and by stream flow from rain and snow melt in the San Bernardino Mountains watershed. Water can also be artificially recharged by rerouting stream flows to recharge percolation basins and thorough SWP turnouts.

Prior to 1963, the lack of native surface water and imported water for many years led to groundwater overdraft within the District's boundaries. In more recent years, increased groundwater recharge has led to high groundwater levels in the lower (southern) portion of the BHG Basin, also known as the pressure zone, where the aquifer is confined and artesian. While groundwater levels in the pressure zone are being managed through increased pumping, they may cause artesian flow in local wells, infrastructure infiltration, and the potential for liquefaction during seismic events. Within the past 70 years, a high groundwater condition has occurred at least three (3) times in the area south and east of the intersection of Mill Street and "D" Street in the City. A high groundwater condition occurs when the groundwater elevation exceeds the ground surface elevation. SBMWD participates with other local water agencies in a dewatering program to lower the water levels in the confined pressure zone. Valley District has sold extracted high groundwater water to downstream water agencies and will likely do so again if high groundwater conditions reoccur.

Since 1970, Valley District has been calculating the change in groundwater storage within the San Bernardino Basin Area (SBBA), which includes the BGH Basin and the Lytle Creek Sub-Basin, using a specific yield model. This model calculates both the cumulative change in groundwater storage and the annual change in storage. The cumulative change in groundwater storage is a measurement of groundwater lost or gained in the SBBA compared to the base year of 1934. The year 1934 was selected by the District as the base year to correspond with the California Department of Water Resources (DWR) base period of 1934-35 through 1959-60. The cumulative change in storage since 1934 for the SBBA is approximately negative 650,000 acre-feet (ac-ft) as illustrated in Figure 2. This figure indicates a new historic low for the basin, as of the year 2014. However, conditions have been similar in the past, nearing negative 600,000 ac-ft in the mid-1960s. The decrease in cumulative change in storage since 1998 has resulted from an increased reliance on groundwater production combined with below average precipitation. Drier winter months have led to a heavier reliance on pumping during the winter than in the past. Values for the cumulative change in storage through 2015 were not available at the time of this report.

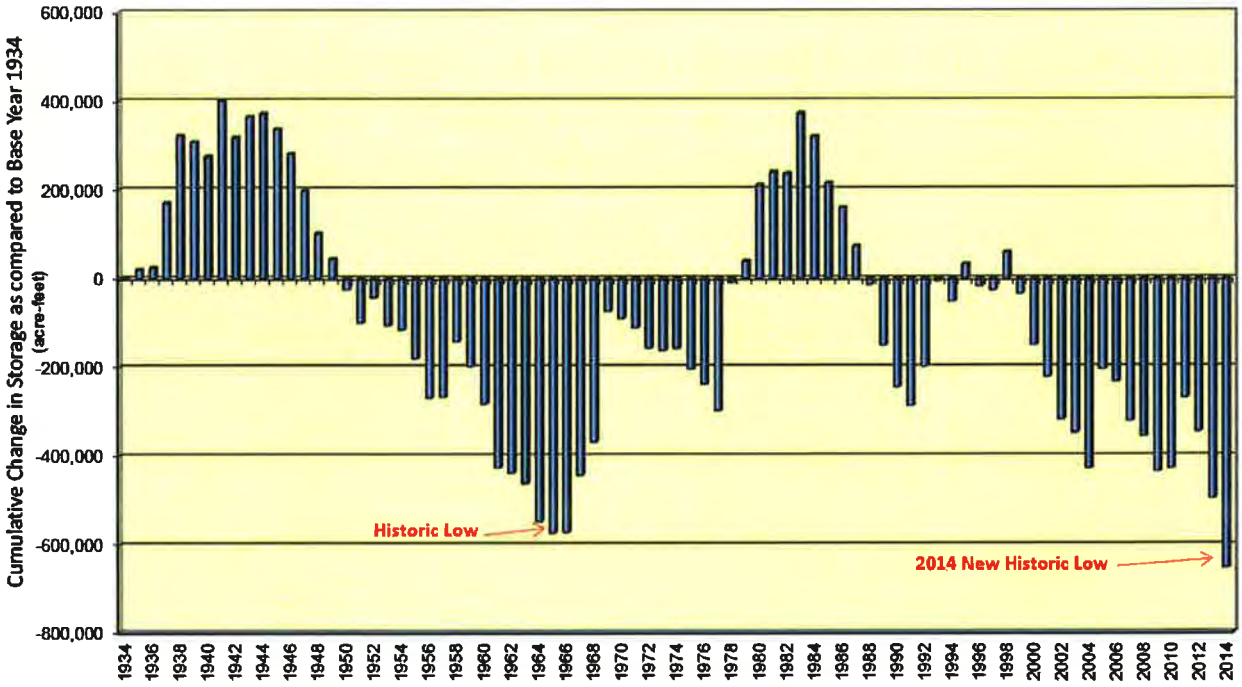


Figure 2
Cumulative Change in Storage for the San Bernardino Basin Area

The annual change in storage is the change in storage from the prior year. In 2014, despite conservation efforts across the SBBA, the amount of storage in the basin declined by approximately 10,000 ac-ft as illustrated in Figure 3. The decrease in annual storage can be mainly attributed to the ongoing severe drought condition and the resulting reduction in precipitation and natural recharge.

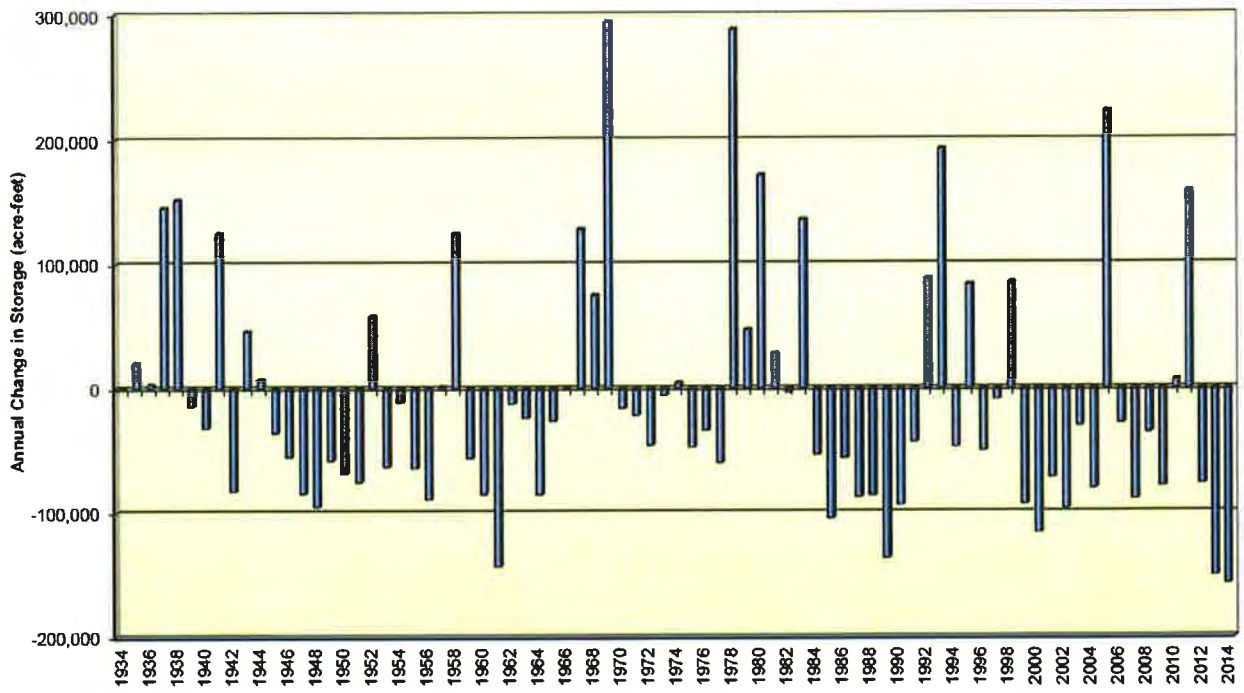


Figure 3
Annual Change in Storage for the San Bernardino Basin Area

In 2014, the verified extractions for the SBBA by other than plaintiff's agencies within the District's jurisdiction were 152,260 ac-ft. This is less than the adjusted annual right of 167,238 ac-ft by 14,978 ac-ft, and will be added to Valley District's accumulated credits. The accumulated credits result from extractions that are less than Valley District's adjusted right, during previous years. The accumulated credits can then be applied during years when the verified extractions exceed the adjusted annual right of 167,238 ac-ft.

Water quality extracted from the BHG Basin by SBMWD is of excellent mineral quality with total dissolved solids (TDS) averaging less than 350 milligrams per liter (mg/L).

Groundwater Judgments

Groundwater management issues (mainly export) in the BHG Basin are primarily governed by the judgment in Western Municipal Water District et al. v. East San Bernardino County Water District et al., entered on April 17, 1969 (Western Judgment). Other adjudications affecting the management of this basin include City of San Bernardino v. City of Riverside, County of San Bernardino Case No. 13754; Orange County Water District v. City of Chino, County of Orange Case No. 117628 (the Orange County Judgment); and a Consent Decree (Decree) entered in City of San Bernardino v. United States of America, United States District Court Central District, CV 96-8867 and CV 96-5205 (consolidated) among the US Environmental Protection Agency, the US Department of the Army, the City of San Bernardino, and the California Department of Toxic Substances Control. An Integrated Regional Water Management Plan of the Upper Santa Ana River Watershed was first adopted in 2008. In January 2015, an updated and more comprehensive IRWMP was approved. An Integrated Regional Water Management Plan of the entire Santa Ana River Watershed, the "One Water One

Watershed" (OWOW) Plan, was originally adopted in December 2010. The updated plan, OWOW 2.0 Plan, was adopted in February 2014.

Under the Western Judgment, the District has the responsibility to ensure that adequate quantities of water are available for extractions in the SBBA above the basin safe yield of 232,100 ac-ft/yr. As defined, this includes both the BHG Basin and the Lytle Creek Sub-Basin. Within Valley District's boundaries, the adjusted right is 167,238 ac-ft/yr, with the remainder of the water rights assigned to plaintiff agencies outside of its service area. If water agencies within Valley District's service area exceed the allotted groundwater production, the District is required to augment the supply sources by spreading imported water from the SWP and/or obtaining water from other sources. Under the Western Judgment, the production rights of individual agencies within the District's service area are not allocated. The Western Judgment also sets the maximum amount of water that can be exported from the Basin. A copy of the Western Judgment can be found in the 2010 RUWMP.

The City of San Bernardino v. the City of Riverside Judgment (1922) and subsequent amendments set the maximum amount of water that can be pumped by both cities from the Antil region and, to some extent, limits the geographic areas in which both parties may pump.

The 1969 Orange County Judgment was a physical solution adopted by the court to resolve claims of inter-basin allocation of obligations and rights in the Santa Ana Watershed. Essentially, the Lower Area (below Prado Dam) is ensured annual delivery of a base flow at Prado Dam of 42,000 ac-ft plus all storm flow reaching Prado Dam. Valley District, Chino Basin Municipal Water District (now Inland Empire Utilities Agency), and Western Municipal Water District guarantee that those flows are met, with Valley District being responsible for delivery of approximately 16,000 ac-ft/yr to the Riverside Narrows. SBMWD, through an agreement with Valley District, is obligated to discharge the 16,000 ac-ft/yr from its wastewater tertiary treatment facility (RIX facility).

The Consent Decree (Decree) among the US Environmental Protection Agency, the US Department of the Army, the City of San Bernardino, and the California Department of Toxic Substances Control settled a lawsuit filed by the City of San Bernardino against Federal defendants. The Decree requires the City of San Bernardino to develop a groundwater management plan for a management zone that is a subset of City limits to ensure the integrity and effectiveness of the interim remedial action implemented in the Newmark Groundwater Contamination Superfund Site. The groundwater management plan must regulate the amount of new pumping in the management zone, as well as spreading activities. As a result, the City of San Bernardino has developed a groundwater management program that regulates new wells within the management area and spreading, such that these activities would not adversely affect the Newmark remedy. In 2008, the Upper Santa Ana Water Resources Association adopted an Integrated Regional Water Management Plan to address major water management issues for the communities of the Upper Santa Ana River Watershed. Valley District, as the regional wholesale water agency, led the planning effort and received a grant from DWR to prepare the plan. The main benefit of the plan was the development of a process for managing the local and imported water sources in the SBBA. A secondary benefit is to identify regional projects and to receive grant funding for these projects. The plan was carefully developed through the participation of water managers and

stakeholders and has two main management objectives: the first is to improve water reliability during drought periods and reduce liquefaction, and the second is to protect water quality and maximize conjunctive use opportunities. The IRWMP serves as the guide for long-term water resources planning in the Upper Santa Ana River Watershed.

The IRWMP for the entire Santa Ana Watershed is known as the OWOW Plan. The plan attempts to encompass all sub-regions, political jurisdictions, water agencies, and non-governmental stakeholders (including private sector, environmental groups, and the public at large) in the watershed. The OWOW Plan also views all types of water (imported, local surface and groundwater, stormwater, and wastewater effluent) as components of a single water resource which is linked to the land use and habitat, and tries to limit impacts to natural hydrology while striving towards sustainability.

The OWOW 1.0 Plan, adopted in December 2010, was developed by a diverse group of stakeholders led by a Steering Committee composed of public officials from counties and cities in the watershed, representatives from the environmental, regulatory and business communities, and representatives from the Santa Ana Watershed Authority (SAWPA). The Steering Committee was supported by technical experts grouped into ten disciplines (known as Pillars), ranging from water supply and quality, to climate change, and environmental justice.

The OWOW 2.0 Plan, adopted in February 2014, reflects a collaborative planning process that addresses all aspects of water resources within the watershed. The plan represents collaboration across jurisdictions, political boundaries involving multiple agencies, stakeholders, individuals, and groups working in unison to address the issues and differing perspectives of all the entities involved through mutually-beneficial solutions. The plan includes planning of future water demands and supplies over a 20-year time horizon within the watershed as a hydrologic and interconnected system. The plan reflects new and innovative approaches to meet growing demands in the region by leading with a water demand reduction strategy, rather than relying solely on imported water deliveries.

Recycled Water

Wastewater in the region is coordinated with several neighboring communities, with SBMWD treating wastewater from the City of San Bernardino, City of Loma Linda, East Valley Water District, and portions of unincorporated San Bernardino County. Wastewater is collected and treated at the San Bernardino Water Reclamation Plant using secondary treatment. After secondary treatment, non-disinfected effluent from the plant is sent to the Rapid Infiltration Extraction Tertiary Treatment Facility (RIX) for tertiary treatment. RIX is jointly owned by SBMWD and the City of Colton. Currently, all RIX effluent, which meets California Title 22 standards, is discharged into the Santa Ana River. SBMWD is not using any of the RIX effluent for landscape irrigation in its service area because of the location of the RIX facility and cost of distribution. However, it should be noted that the use of recycled water is an integral component in the overall management of the BHG Basin through the implementation of the IRWMP.

Although a recycled water program has not yet been implemented, SBMWD is actively undertaking design and environmental studies for the Clean Water Factory, a project that will treat effluent from the San Bernardino Water Reclamation Plant to a quality

approved for recharge by the California State Water Resources Control Board (Water Board) and the Santa Ana Regional Water Quality Control Board (RWQCB).

The Clean Water Factory will convey recycled water to the northern portion of the SBMWD service area for recharge at the Waterman Basins and the East Twin Creek Spreading Grounds. Recycled water spread at these locations will artificially recharge the BHG Basin, increasing sustainability within the Upper Santa Ana River Watershed.

Planned Water Supply

Both the SBMWD and Valley District are planning to develop a number of water supply projects in order to meet the region's growing water demands. These include new wells, recycled water, and groundwater recharge.

SBMWD's Planned Supplies

The 2015 Water Master Plan documents projected water demands within the existing service area and identifies supply sources to meet them. The Water Master Plan develops a long-range water supply plan and capital improvement plan to reliably meet the needs of SBMWD's service area to build out conditions.

Table 6 summarizes the planned water supplies for SBMWD through 2030. SBMWD will continue to rely on the BHG Basin to fulfill the majority of its future supply needs. SBMWD will continue to evaluate recycled water opportunities, based on potential demands and cost.

Table 6
Planned Water Supply (Acre-Feet)

Water Supply Sources	2015	2020	2025	2030	2035
Groundwater	50,233	52,671*	54,730*	56,866*	59,082*
Recycled Water	0	5,600	5,600	5,600	5,600
Total	50,233	58,271	60,330	62,466	64,682

*Source: IRWMP, 2015

SBVMWD Water Supplies

In the Mid 1990s, Valley District completed a Regional Water Facilities Master Plan (Master Plan) for the BHG Basin that identified a number of transmission facilities to move groundwater from the pressure zone to various locations in the valley. The recently completed IRWMP builds on the previous study and includes an analysis of local water retailers' current and projected build-out water demands. The study identified over 100 local and regional capital projects to conjunctively manage water resources in the San Bernardino Basin. Projects identified include new surface water treatment facilities, groundwater storage and extraction facilities, water conservation, flood control utilization, and water conveyance facilities, including regional and local transmission facilities, pump station, and reservoir facilities. Some of the main projects that will increase the long-term reliability of water resources in the area include:

- Enhanced Groundwater Recharge Project. The objective of this project is to construct more basins along the Santa Ana River to maximize capture of this water before it is naturally conveyed downstream. The City Creek Turnout is the

first phase of this project that has been planned, designed, and currently waiting for approval before construction can begin. Once constructed it is estimated that this project will spread approximately 8,688 ac-ft/yr of State Water Project (SWP) water.

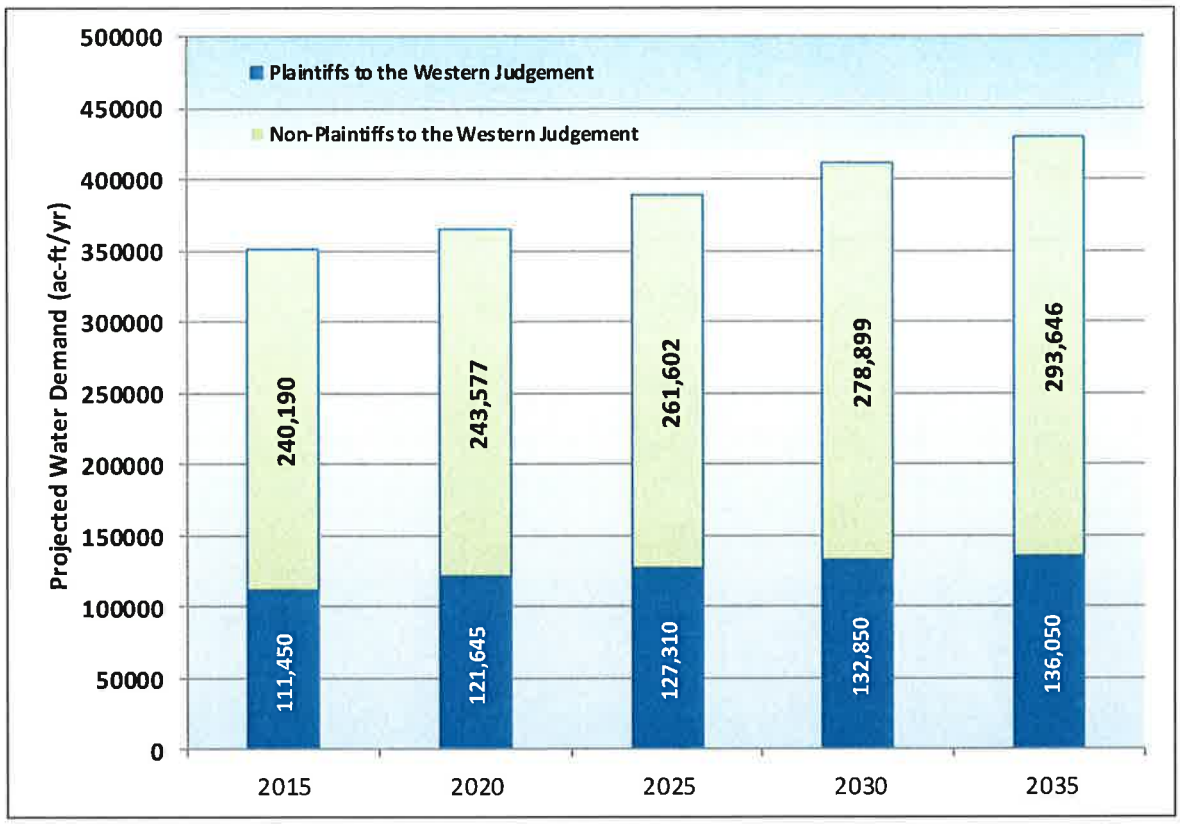
- Central Feeder Pipeline. This project consists of the construction of approximately 56,000 ft. of pipeline ranging in size from 54 to 78 inches. The project will tie the existing Baseline Feeder south extension to the proposed Citrus reservoir in the Mentone area. This pipeline will be used to convey water from the pressure zone to the east end of the valley. Phase 1 is complete and Phase II has not yet begun.
- Recycled Water Use. The construction of a number of wastewater treatment plants are being considered to have the recycled water source closer to its end use.

Reliability of Water Supply

The reliability of the SBMWD water supply is dependent on two factors: the adequacy of system capacity (wells, pipelines, pump stations, etc.) and the availability of water supply from the BHG Basin, where groundwater is produced. Water supply assessments must demonstrate supply reliability under normal, single-dry year, and multiple-dry year weather scenarios. The availability of water supply from the BHG Basin is highly dependent of the regional management of water sources in the area by Valley District.

Under the Western Judgment, the SBMWD can extract as much water as needed from the BHG Basin to meet its current and projected demands, as Valley District has the responsibility to ensure that adequate quantities of water are available for extractions above the SBBA basin safe yield of 232,100 ac-ft/yr. Therefore, the reliability of supply sources to the SBMWD is highly dependent on the reliability of imported water sources and Valley District's ability to meet its obligation under the Western Judgment.

The Western Judgment fixes the maximum amount of groundwater that can be exported from the SBBA by the plaintiffs at 64,862 ac-ft/yr. Within Valley District's boundaries, the adjusted right is 167,238 ac-ft/yr; the amount that the non-plaintiff agencies can extract from the SBBA (BHG Basin and the Lytle Creek Sub-Basin) before Valley District has to obtain additional water sources to maintain the long-term safe yield of the basin. Figure 5 illustrates projected water demands from the San Bernardino Valley area by both plaintiffs and non-plaintiffs. This figure illustrates water demands by non-plaintiffs increasing from 240,200 ac-ft/yr in 2015 to an estimated 293,700 ac-ft/yr by the year 2035.



(Source: IRWMP, 2015 Table 3-2)

Figure 5
Projected Water Demand in the San Bernardino Valley Area

Valley District's Local Water Supply Sources

The IRWMP identifies three (3) main sources of local water available to Valley District: groundwater, surface supply, and new/reclaimed supply. Below is a list, brief summary of local water supply sources available to meet projected water demands through 2035.

- SBBA Surface Water refers to surface water from local mountain streams available for potable use. Surface water is currently used by the East Valley Water District, West Valley Water District, and the City of Redlands.
- Seven Oaks Supply refers to additional surface water that could be available from the Seven Oaks Dam to spread in the basin for groundwater recharge. Supplies from this project depend on conditions placed on the applications by the State Water Resources Control Board.
- SBBA Groundwater refers to groundwater pumped from the BHG Basin and Lytle Creek Sub-Basin.
- SBBA Return Flows refers to return flows from extractions above the safe yield of the SBBA and from direct deliveries of imported water. The Annual Report of the Western San Bernardino Watermaster for calendar year 2015 estimates a 36 percent return flow from these sources to recharge the groundwater basin.
- Rialto-Colton, Riverside North, and Yucaipa basins include extractions from these basins to be used within Valley District's service area.

- Other Groundwater refers to groundwater extractions from an area between the Chino Basin and Lytle Creek Sub-Basin commonly referred to as "No Man's Land".
- Recycled Water includes direct delivery of recycled water for irrigation and/or industrial use and for groundwater recharge.

The reliability of local supply sources on a long-term basis is considered very high in the SBBA because of the relatively large amount of storage in this basin that allows local water purveyors to meet their demand obligations during extended droughts. Therefore, it is assumed that the total local supplies will be available during average, single dry-year, and multiple dry-year scenarios.

Valley District's Imported Water Supply

The amount of SWP water delivered to State Water Contractors in a given year depends on a number of factors, including the demand for the supply, amount of rainfall, snowpack, runoff, water in storage, pumping capacity from the Delta, and legal/regulatory constraints on SWP operation. Water delivery reliability depends on three general factors: the availability of water, the ability to convey water to the desired point of delivery, and the magnitude of demand for the water. Urban SWP contractors' requests for SWP water, which were low in the early years of the SWP, have been steadily increasing over time.

Since the 2010 RUWMP was prepared in 2011, the DWR has updated its State Water Project Final Delivery Capability Report. The biennial Report assists SWP contractors in assessing the reliability of the SWP component of their overall supplies. The 2015 SWP Capability Report updates DWR's estimate of the current (2015) water delivery capability of the SWP. The updated analysis shows that the primary component of the annual SWP deliveries (referred to as Table A deliveries) will be essentially the same under current and future conditions, when compared to the preceding report (State Water Project Delivery Reliability Report 2013). The report discusses factors having the potential to affect SWP delivery reliability:

- Water availability at the source.
- Regulatory restrictions on SWP and Central Valley Project (CVP) operations due to State regulation and federal biological opinions to protect endangered fish such as Delta smelt and spring-run salmon;
- Water rights with priority over the SWP.
- Climate change and sea level rise, which is altering the hydrologic conditions in the State;
- The vulnerability of Delta levees to failure due to floods and earthquakes.

"Water delivery reliability" is defined as the annual amount of water that can be expected to be delivered with a certain frequency. SWP delivery reliability is calculated using computer simulations based on 82 years of historical data.

The 2015 SWP Capability Report recognizes continuing challenges to the ability of the SWP to deliver full contractual allotments of SWP water. For current conditions, the

noted factors that have the most significant impact on these reductions are both the inherently variable availability of water at the source, and the restrictive operational requirements contained in the federal biological opinions. Deliveries estimated for the 2015 Report expressly account for the operational restrictions of the biological opinions issued by the U.S. Fish and Wildlife Service in December 2008 and the National Marine Fisheries Service in June 2009 governing the SWP and Central Valley Project operations.

For future conditions, the 2015 SWP Capability Report conservatively assumes that the restrictions imposed by the biological opinions will still be in place, and includes the potential effects of climate change to estimate future deliveries. The changes in run-off patterns and amounts are included along with the noted rise in sea level. Sea level rise has the potential to require more water to be released to repel salinity from entering the Delta in order to meet the water quality objectives established for the Delta.

These updated analyses in the 2015 SWP Capability Report indicate that the SWP, using existing facilities operated under current regulatory and operational constraints and future anticipated conditions, and with all contractors requesting delivery of their full Table A amounts in most years, could deliver 45 percent of Table A amounts on a long-term average basis.

An ongoing planning effort to increase long-term supply reliability for both the SWP and CVP is taking place through the Bay Delta Conservation Plan (BDCP) and the Delta Plan. The co-equal goals of the BDCP are to improve water supply and restore habitat in the Delta. The BDCP is being prepared through a collaboration of state, federal, and local water agencies, state and federal fish agencies, environmental organizations, and other interested parties. Several "isolated conveyance system" alternatives are being considered in the BDCP which would divert water from North of the Delta and convey it "around" the Delta to a point where water is pumped for the SWP and CVP. The new conveyance facilities would allow for greater flexibility in balancing the needs of the estuary with reliable water supplies. In December 2010, DWR released a "Highlights of the BDCP" document which summarizes the activities and expected outcomes of the BDCP. The results of preliminary analysis included in the document indicate the proposed conveyance facilities may increase the combined average long-term water supply to the SWP and CVP from 3.5 million ac-ft/yr to 5.9 million ac-ft/yr. This would represent an increase in reliability for State Water Project contractors from 45 percent (Table A current amount) to 75 percent. The draft BDCP and its associated EIR/S were released for public review in late 2013, and public comments were received in mid-2014. The reports are targeted to be final in 2016. Then, a decision to proceed with the program will be made.

The final Delta Plan was adopted by the Delta Stewardship Council on May 16, 2013. The Delta Plan contains a set of 14 regulatory policies that will be enforced by the Delta Stewardship Council's appellate authority and oversight. These 14 regulations to be implemented into the Delta Plan were approved by the State Office of Administrative Law (OAL) on September 1, 2013, and became legally enforceable regulations. 73 non-regulatory recommendations are also included in the Delta Plan which were deemed essential to achieving the coequal goals.

The Delta Stewardship Council also initiated the Delta Levees Investment Strategy (DLIS) in 2014 with a goal to combine economics, engineering, and decision-making techniques in order to identify funding priorities, and assemble a comprehensive investment strategy for the Delta Levees.

In addition to the overall long-term average presented in the 2015 SWP Capability Report, it also includes Delivery Reliability Reports (DRRs) for each of the individual SWP contractors based upon the unique conditions that impact each contractor. The DRR for Valley District indicated average reliability would be 45 percent in 2015 and will continue through 2035. Table 8 provides the projected SWP water available to Valley District over the next 25 years, based on the Valley District's maximum Table A amounts from 2010 to 2035 and the supply reliability analyses provided in the 2015 SWP Report and associated DRR.

Table 8 summarizes estimated SWP supply availability to Valley District in a single-dry year (based on a repeat of the worst-case historic hydrologic conditions of 1977) and over a multiple-dry year period (based on a repeat of the worst-case historic four-year drought of 1931 to 1934). During a dry or critical year as defined by the Sacramento River Index, the SWP will be able to supply an average of 11,286 ac-ft (year 2015) to Valley District. During a multiple dry year period (1931 to 1934), Valley District's SWP supply is estimated to be about 33,858 ac-ft/yr (year 2015).

The values shown in Tables 8 address the DWR estimates at the 2015 level for the current conditions. It is the best information and best estimates available to use in developing water management plans and this assessment.

Table 8
Wholesale Supply Reliability:
Single-Dry Year and Multiple-Dry Year Conditions[a]

Wholesaler	Single-Dry Year[b]	Multiple-Dry Year[c]
California State Water Project (SWP)		
2015		
% of Table A Amount Available	11%	33%
Anticipated Deliveries (Acre-Feet)	11,286	33,858

Notes:
(a) The percentages of Table A amount projected to be available are taken from Delivery Reliability Reports prepared for Valley District by DWR as part of the "The State Water Project Delivery Capability Report 2015" (July 2015). Supplies are calculated by multiplying Valley District's Table A amount (102,600 ac-ft/yr) by these percentages.
(b) Based on the worst case historic single dry year of 1977.
(c) Supplies shown are annual averages over four consecutive dry years, based on the worst case historic four-year dry period of 1931-1924.

While the primary supply of water available from the SWP is allocated Table A supply, SWP supplies in addition to Table A water are periodically available, including "Article 56C" carryover water, "Article 21" water, "Turnback Pool" water, and DWR "Dry Year Purchase Programs". Pursuant to the long-term water supply contracts, SWP

contractors have the opportunity to carry over a portion of their allocated water approved for delivery in the current year for delivery during the next year. Valley District has exercised this option in the past. Contractors can also "carryover" water under Article 56C of the SWP long-term water supply contract with advance notice when they submit their initial request for Table A water, or within the last three (3) months of the delivery year. The carryover program was designed to encourage the most efficient and beneficial use of water and to avoid obligating the contractors to "use or lose" the water by December 31 of each year. The water supply contracts state the criteria of carrying over Table A water from one year to the next. Normally carryover water, which is water that has been exported during the year, has not been delivered to the contractor during that year, and has remained stored in the SWP share of San Luis Reservoir to be delivered during the following year. Storage for carryover water no longer becomes available to the contractors if it interferes with storage of SWP water for project needs (DWR 2010).

Article 21 water (which refers to the SWP contract provision defining this supply) is water that may be made available by DWR when excess flows are available in the Delta (i.e. when Delta outflow requirements have been met, SWP storage south of the Delta is full, and conveyance capacity is available beyond that being used for SWP operations and delivery of allocated and scheduled Table A supplies). Article 21 water is made available on an unscheduled and interruptible basis and is typically available only in average to wet years, generally only for a limited time in the late winter. Since 1999, Valley District has taken 256 ac-ft of Article 21 water.

The Turnback Pool is a program available to State Water Contractors who signed the "Monterey Amendment". The program helps facilitate the sale of excess Table A supplies and establishes a sale price for the water. Valley District did not sign the Monterey Amendment; however, Valley District is able to sell any excess water to other SWP contractors. Currently, Valley District has an agreement with the Metropolitan Water District of Southern California (MWDSC) which gives MWDSC "first right of refusal" to purchase Table A supplies deemed "excess" to Valley District's needs.

As urban contractor demands increase in the future, the amount of water turned back and available for purchase will likely diminish. In critical dry years, DWR has formed Dry Year Water Purchase Programs for contractors needing additional supplies. Through these programs, water is purchased by DWR from willing sellers in areas that have available supplies and is then sold by DWR to contractors willing to purchase those supplies.

Because the availability of these supplies is somewhat uncertain, they are not included as supplies to Valley District in this Plan. However, Valley District's access to these supplies when they are available may enable it to improve the reliability of its SWP supplies beyond the values used throughout this report.

Impacts of Waterman + Baseline Neighborhood Transformation Plan Demands

As discussed, incremental water demands from the Project are estimated at 1,367 ac-ft/yr.; this amount represents an estimated 0.5 percent increase in the total water demand in Valley District's service area. The additional demand would result in an average deficit that can be easily addressed through water conservation, groundwater recharge, and/or future recycled water direct use.

Conclusion

Based on the supply reliability of Valley District and SBMWD supply sources, as presented in this water supply assessment, it is concluded that SBMWD has sufficient water supplies to meet the water demands of the Project, along with the other projected municipal water demands.

However, it should be noted the SBMWD reserves the right to revisit and review the Water Supply Assessment if any changes occur to the project. The purpose of the review would be to determine if SBMWD has a sufficient water supply to accommodate the project changes and revise the Water Supply Assessment accordingly in accordance with the provisions of the Water Code §10910 et seq.

This review is only an assessment of the water supply availability and does not address the water infrastructure needs.

Primary Source Documents

SBMWD Urban Water Management Plan, 2010

SBMWD Water Master Plan, 2015 Final Report

California Department of Water Resources, Guidebook for Implementation of Senate Bill 610 and Senate Bill 221 of 2001, 2003

City of San Bernardino General Plan (November 2005)

2013-2021 Housing Element, City of San Bernardino (February 2014)

Upper Santa Ana River Watershed Integrated Regional Water Management Plan, January 2015, San Bernardino Valley Municipal Water District

The State Water Project Delivery Capability Report – 2015, July 2015

Santa Ana Watershed Integrated Regional Water Management Plan (IRWMP), also known as "One Water One Watershed" (OWOW) Plan, November 2010 & OWOW 2.0 Plan February, 2014

Appendix A

Letter Requesting Water Supply Assessment

CITY OF SAN BERNARDINO
Community Development Department – Planning Division
Interoffice Memorandum

TO: Stacey Aldstadt, General Manager, Water Department

FROM: Oliver Mujica, Planning Division Manager

SUBJECT: Water Supply Assessment for Waterman + Baseline Project

DATE: February 10, 2016

National Core has proposed the Waterman + Baseline Neighborhood Transformation Specific Plan that proposes a maximum build out of up to 4,341 residential units, 3,570,448 square feet of non-residential uses, and associated transportation/mobility and infrastructure improvements. The proposed project area includes approximately 710 acres located near the center of San Bernardino around the intersection on Waterman Avenue and Baseline Avenue. Specifically, the proposed project boundaries are formed by Sierra Way to the west, Tippecanoe Avenue and the flood control channel on the east, 3rd Street to the south, and Highland Avenue to the north. The western boundary is approximately 1.1 miles away from the Interstate 215 freeway and the northern boundary is approximately 0.6 miles from Foothill and Martin Avenue. The project will require a General Plan Amendment to change the land use designation of the properties within the project area to Specific Plan. An Environmental Impact Report is being prepared.

This project exceeds the threshold of 650,000 sq. ft. to be defined as a "project" pursuant to section 10912(5) of the Water Code. Therefore, a Water Supply Assessment (WSA) is required pursuant to Public Resources Code section 21151.9 and Water Code section 10910, et seq. National Core would appreciate the expedited preparation of the WSA, and has submitted project information and water demand estimates transmitted via a previous e-mail.

National Core will be responsible for the costs associated with the WSA. Please contact me with cost information and I will process a transfer of funds on deposit for this project, or will arrange for direct payment by National Core.

Appendix B

Water Demands for Waterman Gardens

memorandum

date March 30, 2016

to Ted Brunson, SBMWD

from Sarah Walker, Planning Project Manager, National CORE
Jamey Dye, PE, WSP | Parsons Brinckerhoff

subject Revised Water Supply Assessment for the Waterman + Baseline Neighborhood Transformation Plan

In accordance with Senate Bill 610, and based upon City Staff recommendations, National Community Renaissance has prepared a partial draft Water Supply Assessment (WSA) for the Waterman + Baseline Neighborhood Transformation Plan. We have provided information about the Plan area location, existing land uses and water demand as well as proposed land use changes and projected water demand assuming maximum build-out under the Specific Plan.

This information is being provided to the San Bernardino Municipal Water Department (SBMWD) to complete the WSA, primarily in assessing whether there is sufficient water capacity to meet the demand for water generated by the proposed Plan. This analysis is typically based on information provided in the City's Urban Water Management Plan.

Please do not hesitate to contact Sarah at (626) 318-8413, or Jamey at (909) 888-1106 with any questions or concerns.

REGISTERED PROFESSIONAL ENGINEER
JAMES GORDON DYE
No. 49004
EXP. Sept. '16
STATE OF CALIFORNIA

9421 Haven Avenue, Rancho Cucamonga, CA 91730
909.483.2444 Fax: 909.483.2448 nationalcore.org

Senate Bill 610
WATER SUPPLY ASSESSMENT

WATERMAN + BASELINE NEIGHBORHOOD TRANSFORMATION PLAN
City of San Bernardino

1. INTRODUCTION

The City of San Bernardino is proposing to establish a Specific Plan to encourage the revitalization of a 700-acre area around the intersection of Waterman Ave and Baseline Street. The Waterman + Baseline Neighborhood Transformation Plan (the Plan) is intended to provide comprehensive, consistent and multi-faceted redevelopment strategies for the neighborhoods surrounding the intersection of Waterman Avenue and Baseline Street. Toward that end, the Plan establishes a land use and development framework, identifies needed transportation and infrastructure improvements, and recommends strategies needed to develop the Plan area. Section 65451 of the Government Code requires that specific plans include text and diagrams that specify all of the following:

- The distribution, location, and extent of the uses of land, including open space, within the area covered by the plan
- The proposed distribution, location, and extent and intensity of major components of public and private transportation, sewage, water, drainage, solid waste disposal, energy, and other essential facilities proposed to be located within the area covered by the plan and needed to support the land uses described in the plan
- Standards and criteria by which development will proceed, and standards for the conservation, development, and utilization of natural resources, where applicable
- A program of implementation measures including regulations, programs, public works projects, and financing measures necessary to carry out the specific plan
- A statement of the relationship of the specific plan to the general plan.

- This Plan is designed to meet the requirements of the State of California Government Code. The Specific Plan is adopted by City Council ordinance and thereby establishes the zoning regulations for the development of the Plan area.

Waterman + Baseline Neighborhood Transformation Plan establishes a long term vision for the neighborhood, allowing for a maximum build-out of up to 1,375,000 square feet of employment and industrial space, and up to 2,200,000 square feet of commercial space. The Plan also envisions as many as 2,400 new housing units at select new residential locations. This Plan also includes provisions to ensure that existing, longstanding residents' are able to remain in the area and participate in the expected economic growth.

According to California Water Code Section 10910 (Water Code) a Water Supply Assessment (WSA) must be prepared for all proposed developments above a defined size. A WSA is required for any project with 500 or more dwelling units, 500 or more hotel rooms, 500,000 square feet of commercial shopping center space, or a mixed use project with a combination of these uses (with equivalent water demands). The Plan is a qualifying project and therefore a WSA is required. Cities and counties are mandated to identify the public water system that might provide a project's water supply and request preparation of a WSA.

The City of San Bernardino Municipal Water Department (SBMWD) is the primary water purveyor for the City of San Bernardino and it has been identified as a potential water supplier for much of the Plan area. Therefore, the City, as the California Environmental Quality Act (CEQA) lead agency, is required to consider the adequacy of the water supply for the Plan through a WSA, and to consider adopting the resulting WSA if it shows that there is adequate water supply. The Water Code also requires that a WSA consider project and non-project demands on proposed water supply sources over a period of 20 years in 5 year increments. SBMWD estimates that the Project will require approximately 30 years to achieve full buildout, and as a result, this WSA considers all existing and planned future uses of the projected water supplies through 2045.

This WSA quantifies reasonably foreseeable Project and non-project water demands in the City of San Bernardino, documents water supply sources, assesses sufficiency of supply to meet demand, evaluates drought impacts, and provides a comparison of water supply and demand in normal, dry, and multiple dry years through the 30 year period ending in 2045.

2. THE PLANNING AREA

The Plan area is located in the center of the City of San Bernardino and within the Riverside-San Bernardino metropolitan area, also referred to as the "Inland Empire". San Bernardino is a large city with a population of just under 210,000 residents occupying approximately 81 square miles on the floor of the San Bernardino Valley. Serving as the County seat, San Bernardino is the 17th largest city in California, and the 99th largest city in the United States. Jurisdictions neighboring San Bernardino include the cities of Rialto, Colton, Loma Linda, Redlands, Highland, and Muscoy.

The Plan Area is strategically located within the Inland Empire providing excellent access to downtown San Bernardino, the San Bernardino and Ontario airports, Los Angeles and Orange Counties by major freeways. It contains historic residential neighborhoods and structures; existing building stock with potential for creative and economically viable reuse; convenient connections to local and regional transportation networks; adjacencies to major economic development centers; and a diverse demographic of residents. **Figure 1,** *Regional Location Map,* illustrates the regional location of the Plan area.

The Plan area boundaries are loosely formed by Sierra Way to the west, Tippecanoe Avenue and the flood control channel on the east, 3rd Street to the south and Highland Avenue to the north. The Plan area is comprised of approximately 710 acres situated near the geographic center of the City of San Bernardino. **Figure 2**, *Community Context Map,* illustrates the boundaries and landmarks within the Plan area.

FIGURE 1 - REGIONAL LOCATION MAP

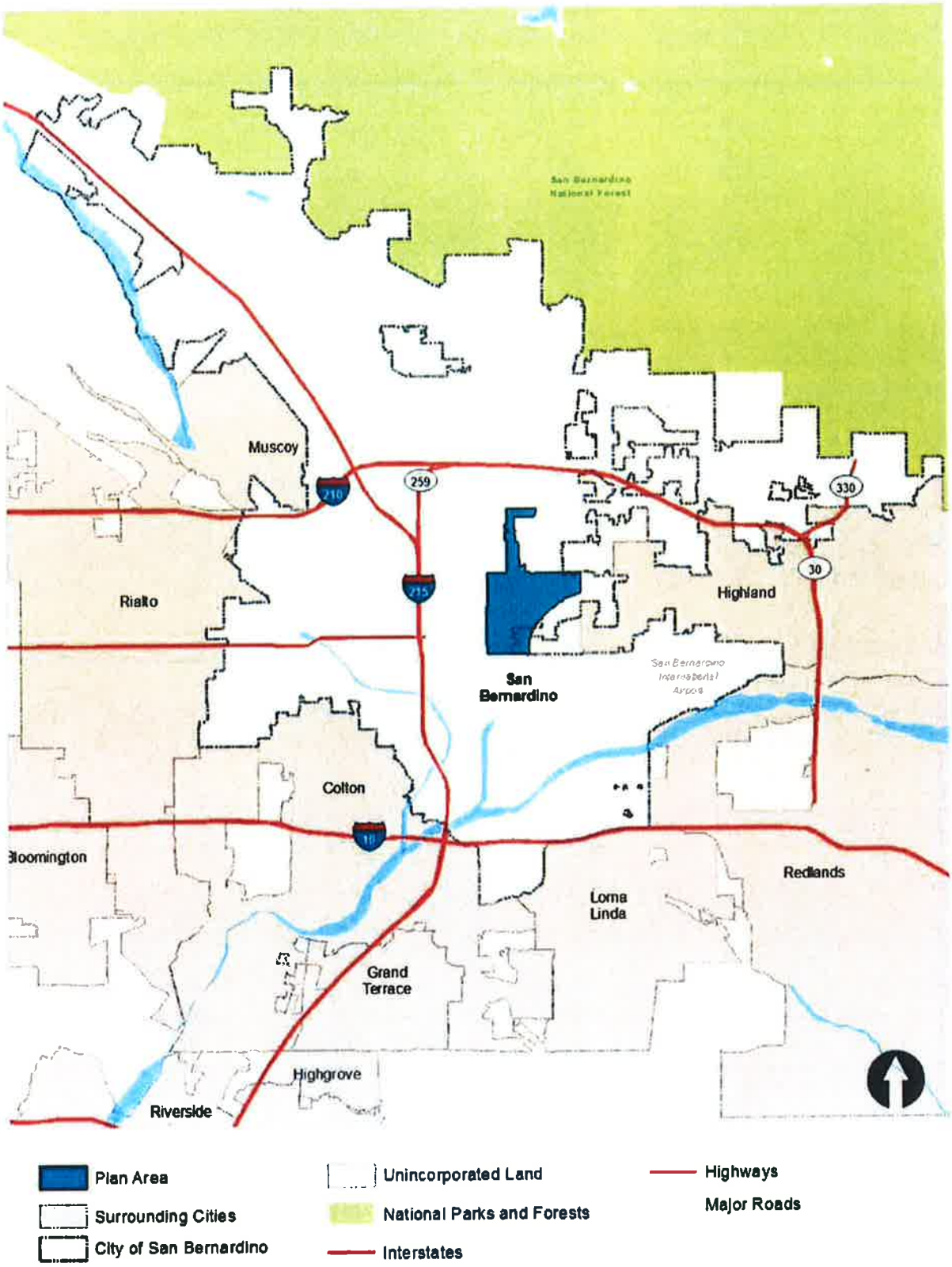
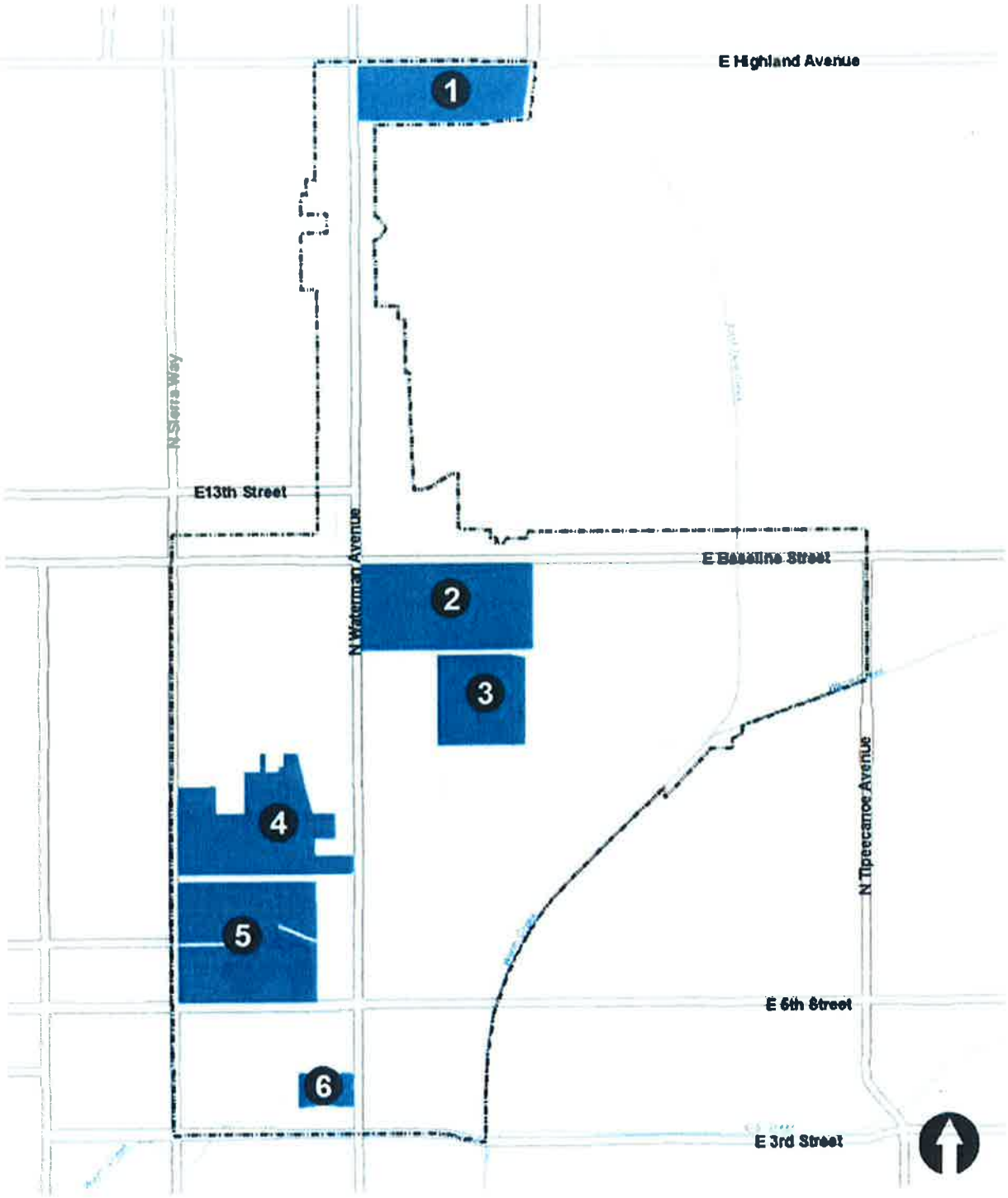


FIGURE 2 – COMMUNITY CONTEXT MAP



Plan Area

1. St. Bernardine's Medical Center
2. Waterman Gardens Public Housing
3. E. Neal Roberts Elementary School
4. Pioneer Memorial Cemetery
5. Seccombe Lake Park
6. San Bernardino County Offices

3. Existing Water Demand

Potable water is provided by SBMWD to 605-acres of the total 710-acre Plan area (the remainder of the Plan area is served by East Valley Water District). Based on the existing development and conditions occurring in the SBMWD portion of the Plan area, the water demand is approximately 2.0 million gallons per day. Existing water demand, by land use type is shown in **Table 1**, *Existing Water Demand.* **Figure 3**, *Existing Land Uses,*

Table 1 – SBMWD Water Demand Based on Existing Conditions

Land Use	Acres	Demand Factor (gpd/acre)	Total Project Demand (gpd)
Residential[1]	218.74	5,427	1,187,102
Commercial/Retail/Office[2]	119.10	3,204	381,596
Industrial /Auto-related uses[3]	74.11	1,126	83,448
Public Facilities/Parks[4]	125.81	3,204	403,095
Vacant Land[5]	67.93	0	0
TOTAL	**605.69**		**2,055,241**

gpd = gallons per day
Source: SBMWD Water Facilities Master Plan, 2015
Notes:
1 - Used *Residential Medium* (RM) factor
2 - Used *Commercial Office* (CO) Factor
3 - Used *Industrial Heavy (IH) factor*
4 - Assumed Public Facilities would be closely related to *Commercial/Office* uses
5 - assumed no water usage

Within the Plan area, there are approximately 110,000 linear feet of existing pipelines ranging from 4 inches to over 30 inches in size. The location of existing water pipelines are depicted in **Figure 4,** *Existing Water Facilities* Based on the data provided by the SBMWD, the majority of the existing water pipelines located within Plan area and the immediate vicinity are either unlined, under-sized, made with asbestos, and/or are typically greater than 50 years in age. The condition of these facilities suggests that the existing infrastructure system is not capable of providing the level of service required to meet the domestic needs and fire demand required by modern development.

FIGURE 3- EXISTING LAND USES

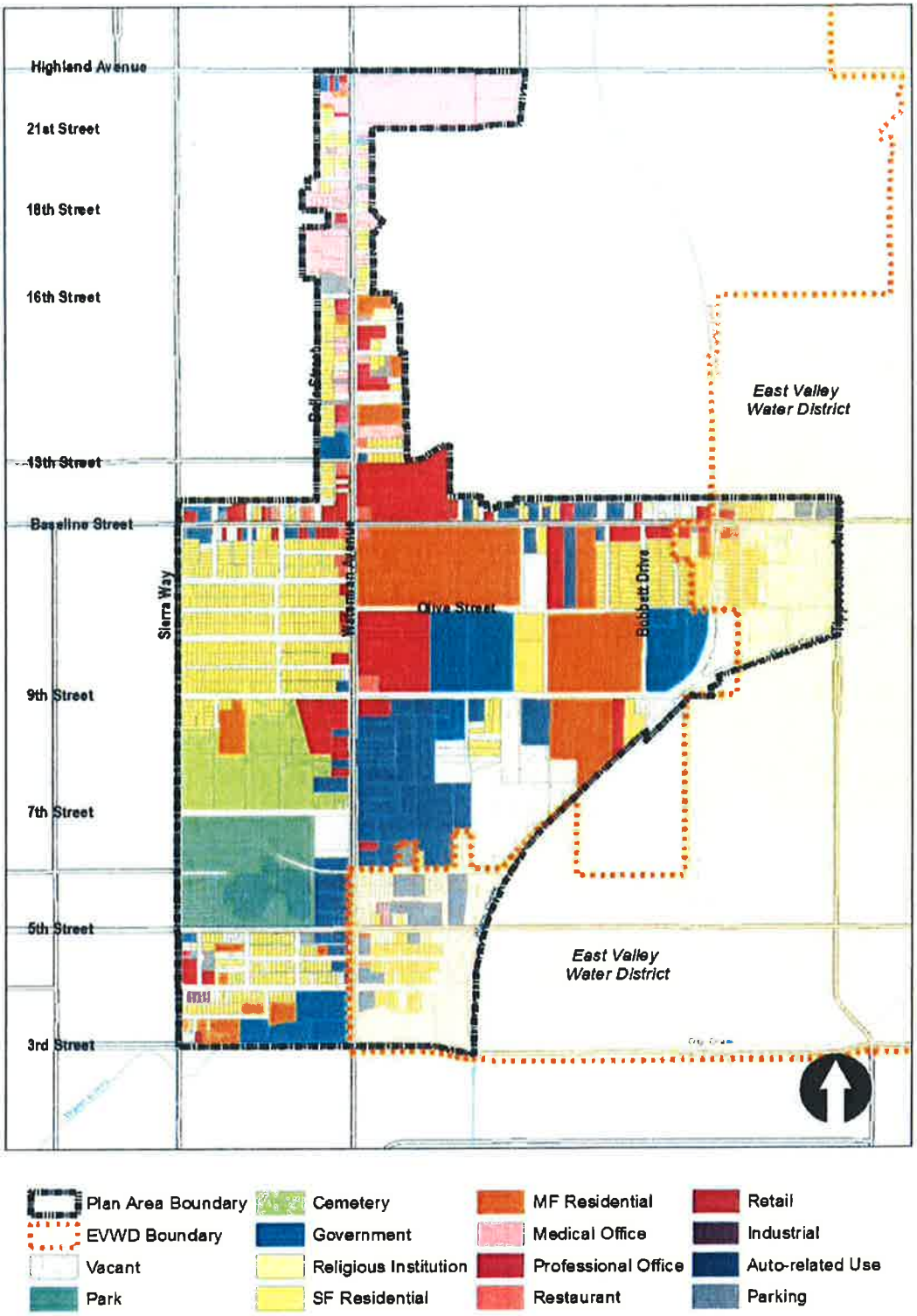
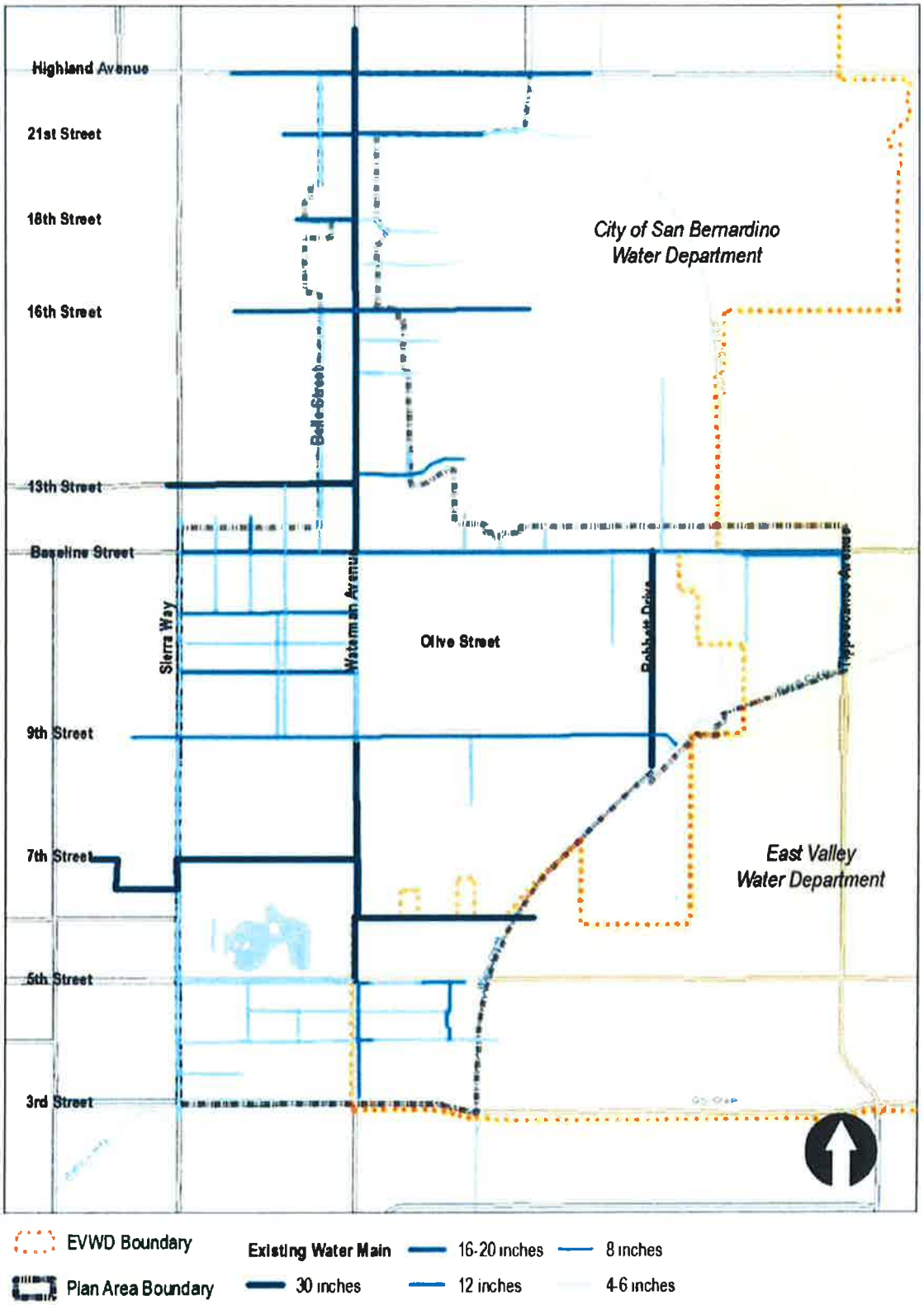


FIGURE 4 - EXISTING WATER FACILITIES



4. Proposed Water Demand

The Plan represents the implementation of the General Plan's goals and policies for the 710-acre Plan area, of which 605-acres are within the SBMWD service area. The Plan establishes the area's land use and development regulations. It replaces regulations contained in the San Bernardino Development Code (Title 19, Land Use/Subdivision). The Plan shall guide all land use and development decision-making processes for the area. The Specific Plan does not replace or augment building safety codes or other non-planning related codes. All applications for new construction, substantial modifications to existing buildings, and changes in land use shall be reviewed for conformance with this Specific Plan. The Plan will be adopted under the authority of the City's Zoning Ordinance (Specific Plans 19.64), which establishes Specific Plans as a tool to regulate land use and development.

To facilitate the redevelopment of the Plan area, five new zones will be established. The mix of uses developed specifically for the Plan area is intended to create a balanced environment for residents to live, work and play in a walkable environment that is safe and enjoyable. **Figure 5,** *Proposed Land Use Plan*, shows the zoning proposed for the Plan Area.

- **Neighborhood Residential** – This zone is intended to promote the preservation and enhancement of existing single family neighborhoods while allowing for the development of new residential units up to 14 dwelling units per acre. This zone can also be implemented as a buffer between existing neighborhoods and higher intensity surrounding uses and provides a transition between residential and non-residential uses. This zone does not allow for the development of new non-residential uses.
- **Corridor Mixed Use** - The Corridor Mixed Use zone is intended to encourage the development of a mix of neighborhood serving commercial and residential uses along Baseline Street and Waterman Avenue. This zone accommodates both vertical and horizontal mixed use development up to 20 dwelling units per acre and a floor area ratio (FAR) of 0.5. Existing businesses and new construction would incorporate streetscape improvements to encourage walkability along these two major corridors.
- **Urban Mixed Use** - The urban mixed use zone is intended to develop a pedestrian-oriented environment with a variety of housing options, commercial shops and eating establishments. Mixed use development will be encouraged including residential uses up to 30 dwelling units an acre and non-residential uses up to an FAR of 0.75. These zones are intended to create a sense of place and identify the Specific Plan Area as a distinct location within the City.

- **EMPLOYMENT** - The employment zone is intended to promote the development of employment generating uses including office, commercial, and business park uses (mix of business and support services) to establish new job opportunities in close proximately to new and existing residential development. This zone allows for non-residential uses up to an FAR of 0.75.
- **OPEN SPACE** - The open space zone is intended to preserve and create recreational and open space opportunities throughout the Specific Plan Area. New development is not permitted, unless it is tied to a recreational uses and/or enhancement of existing facilities, such as a linear trail, ball parks, pocket parks, tot lots, and other similar uses.

Water infrastructure within the Plan area will require significant investment to meet the demand based on the proposed Land Use Plan. As shown in **Table 2**, Water *Demand Based on Plan Build-out,* assuming maximum build-out of the Land Use Plan, the Plan area is anticipated to increase water demand by approximately 1.2 million gallons per day over existing conditions. The resulting water demand for the Plan is approximately 3.2 million gallons per day.

TABLE 2 – SBMWD WATER DEMAND BASED ON PLAN BUILD-OUT

LAND USE	ACRES	DEMAND FACTOR (GPD/ACRE)	TOTAL PROJECT DEMAND (GPD)
Corridor Mixed Use[1]	162.44	5,904	959,046
Employment[2]	70.38	3,204	225,498
Urban Mixed Use[3]	149.33	6,991	1,043,966
Neighborhood Residential[4]	148.83	5,427	807,700
Open Space/Public Facility[5]	74.71	3,204	239,371
TOTAL	**605.69**		**3,275,581**

gpd = gallons per day

Source: SBMWD Water Facilities Master Plan, 2015.

Notes:

1 - Used Residential Med High (RMH) factor

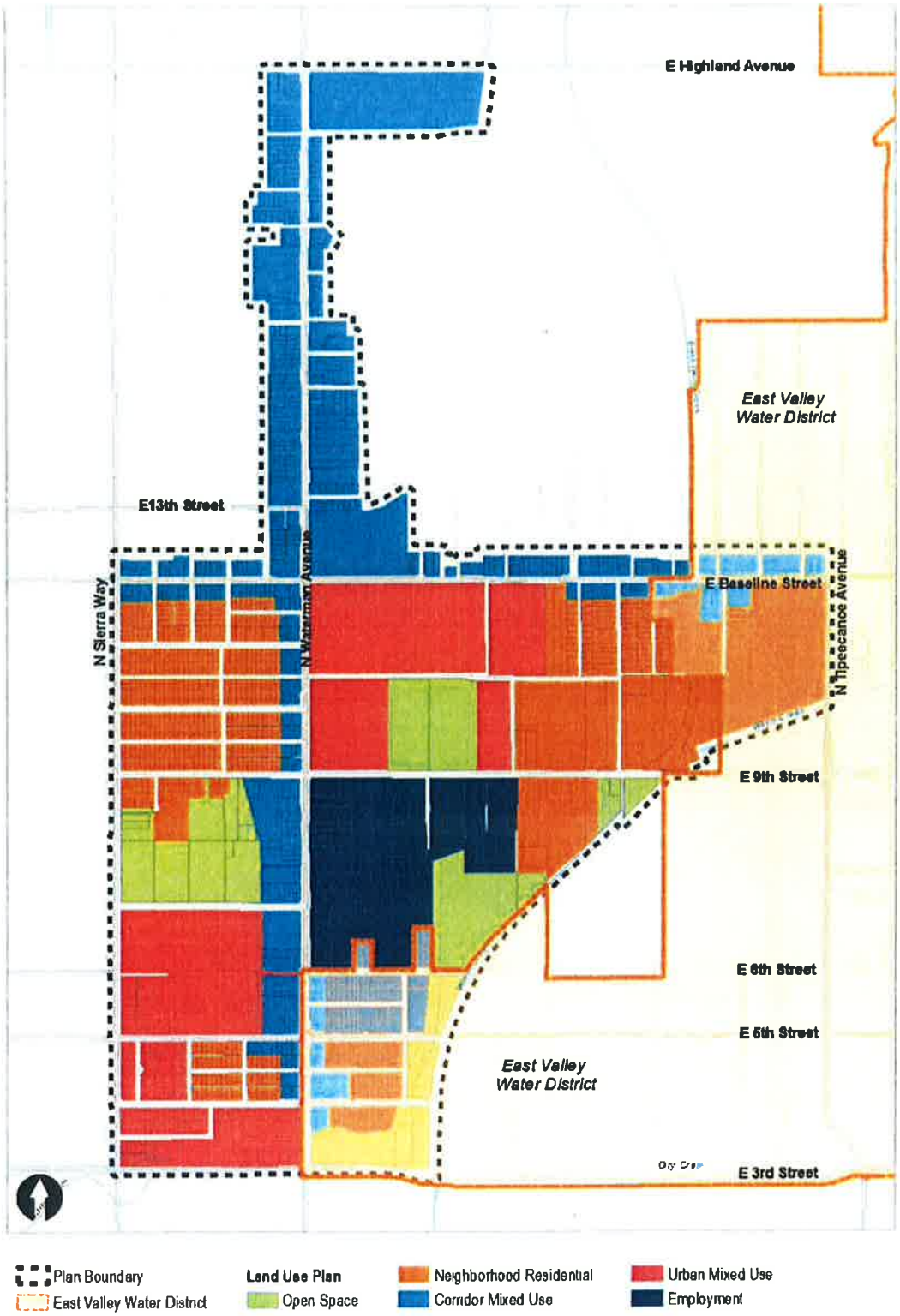
2 - Used Commercial Office (CO) Factor

3 - Used Residential High (RH) factor

4 - Used Residential Medium (RM) factor

5 - Assumed Public Facilities would be closely related to Commercial/Office uses

FIGURE 5- PROPOSED LAND USE PLAN



Based on the water demand of the proposed land uses shown in Table 2, and taking into account the water demand of existing land uses shown in Table 1, Table 3, shows the net water demand required for the Plan area, based on maximum build-out assumptions.

CONDITION	AVERAGE FLOW (GPD)	YEARLY FLOW (AFY)
Proposed	3,275,581	3,669
Existing	2,055,241	2,302
(Net) Total	**1,220,340**	**1,367**

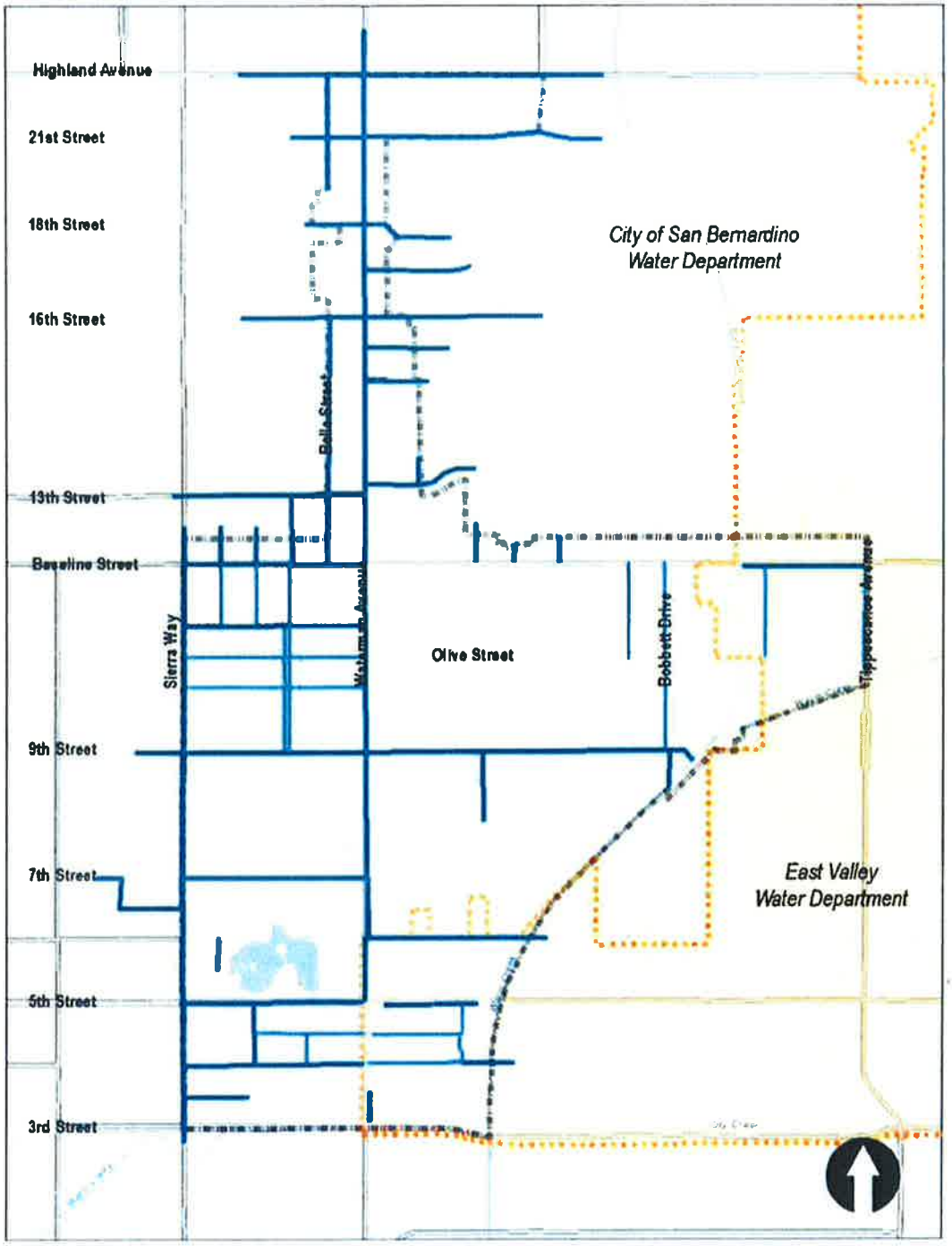
gpd = gallons per day; and AFY = acre-feet per year.

The age and condition of the existing water pipelines necessitates that a large extent of the system within the Plan area may need to be replaced over time as new development, or redevelopment, occurs. The proposed water system is depicted on **Figure 6,** *Proposed Water Lines*. Based on the system depicted on Figure 4, there is a need to replace approximately 78,300 linear feet of water pipelines. At an assumed construction cost of $280 per liner foot (2015 dollars), the cost of the water system infrastructure is approximately $22 million. It is common for SBMWD to place conditions of approval on each development to replace the infrastructure that is immediately adjacent to the project boundary.

Regional transmission lines over 12 inches in size are typically replaced via impact fees collected by SBMWD; whereas the local service lines, that provide service to individual homes and businesses, are typically provided by the developer at the time of project construction. And in the case of this Specific Plan, where a high degree of "redevelopment" is anticipated, any replacement of the local service line would be assumed to be needed at the time of such "redevelopment".

The greatest level of "redevelopment" and/or new construction is anticipated in the Corridor Mixed Use, Urban Mixed Use, and Employment Land Uses; while the Neighborhood Residential areas are slated primarily for preservation of existing single family neighborhoods. It is anticipated that the local service lines will only be replaced on a project-by-project basis as determined necessary. Replacement of the local service lines are assumed to be 12 inch pipe lines within any of the Mixed Use / Employment land use areas, and 8 inch pipe lines with the Neighborhood Residential areas.

FIGURE 6 - PROPOSED WATER FACILITIES



Plan Area Boundary

EVWD Boundary

Proposed Water Main

8 inches

12 inches

5. Urban Water Management Plan Review

Potable water is provided to 605-acres within the Plan area by the City of San Bernardino Municipal Water Department (SBMWD). SBMWD is a municipal utility established in 1905 and have a service area of approximately 45 square miles. SBMWD provides water to the majority of Plan area; however, East Valley Water District (EVWD) provides service to 105-acres located in the southerly and easterly portion of the Plan area as depicted in Figures 5 and 6.

According to their 2015 Water Facilities Master Plan, SBMWD relies solely on water extracted from the underlying aquifer, the Bunker Hill Groundwater Basin, to meet its water demands. Currently it receives 100 percent of its water from the Basin. This water is distributed via SBMWD's water distribution system consisting of pipelines, storage reservoirs, pumping stations, hydroelectric generating stations, manual and automatic control valves, fire hydrants, and water meters located throughout 19 individual pressure zones. In addition to providing water to its customers, SBMWD also delivers water to other agencies, including EVWD blending purposes due to water quality issues. In return, EVWD has delivered groundwater to SBMWD at a 2.5:1 ratio to compensate the Department for energy costs and production costs associated with the difference in elevation at the point of delivery.

(Analysis to be added regarding the supply of water and SBMWD's ability to provide water to the Plan area)

RESOLUTION NO. 882

A RESOLUTION OF THE BOARD OF WATER COMMISSIONERS, CITY OF SAN BERNARDINO ADOPTING THE WATER SUPPLY ASSESSMENT FOR THE WATERMAN AND BASELINE NEIGHBORHOOD TRANSFORMATION PLAN, DATED APRIL 5, 2016 FOR THE CITY OF SAN BERNARDINO MUNICIPAL WATER DEPARTMENT

WHEREAS, the City of San Bernardino Municipal Water Department (SBMWD) is the water supplier that is responsible for preparing Water Supply Assessments (WSA) for the City of San Bernardino (City). The SBMWD Board of Water Commissioners of the approved the 2010 Urban Water Management Plan (UWMP) in June 2011, and an amended version in November 2012 which is the primary source document for this WSA; and

WHEREAS, the Waterman and Baseline Neighborhood Transformation Plan (Project) is consistent with the City's 2005 General Plan and the 2013 Housing Element land uses. The projected total water demands for the entire project were determined based on anticipated water use fixtures and landscape demands for the entire development, which was estimated to be 2,275 gallons per minute or 3,670 acre-feet per year; and

WHEREAS, the SBMWD reserves the right to revisit the WSA if any changes occur to the Project. The Department reserves the right to review any changes. The purpose of the review is to determine if the Department has a sufficient water supply to accommodate the project changes and revise the WSA accordingly in accordance with the provisions of the Water Code §10910 et seq.

WHEREAS, it is concluded that the projected water demands of the Project are included in the total water demand projections of the 2010 UWMP; and

/ / /

/ / /

WHEREAS, Staff has reviewed the Project WSA prepared in-house by the SBMWD Water Utility Engineering Section and concludes that the projected water demand for the Project was included in SBMWD's 2010 UWMP and that sufficient water supply is available for the Project's water demand, in addition to other projected municipal water demands for the service area during the normal, single-dry and multiple-dry years for the next 20 years.

NOW, THEREFORE, BE IT RESOLVED that the Board of Water Commissioners of the City of San Bernardino hereby adopts the Water Supply Assessment for the Waterman and Baseline Neighborhood Transformation Plan dated April 5, 2016, a copy of which is attached hereto, marked Exhibit "A", and incorporated herein as though fully set forth at length.

I HEREBY CERTIFY that the foregoing resolution was duly adopted by the City of San Bernardino Municipal Water Department Board of Water Commissioners at a regular meeting thereof held on the 19th of April 2016 by the following vote, to-wit:

AYES: COMMISSIONERS CALLICOTT, FERNANDEZ, HENDRIX, VALLES, MLYNARSKI

NAYS: NONE

ABSENT: NONE

Robin L. Ohama
Clerk & Ex-Officio Secretary

(SEAL)

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