

## SECTION 8: SUMMARY OF MITIGATION MEASURES

### 8.1.1 - Air Resources

**MM AIR-1a** Prior to construction of the proposed improvements, the project proponent will provide a Fugitive Dust Control Plan (FDCP) that will describe the application of standard best management practices to control dust during construction. Best management practices will include:

- Application of water on disturbed soils a minimum of two times per day;
- Using track-out prevention devices at construction site access points;
- Stabilizing construction area exit points;
- Limiting onsite construction traffic to 15 miles per hour on unpaved roads;
- Limiting onsite construction traffic to 25 miles per hour on paved roads;
- Paving or providing a hard surface for onsite roads to reduce fugitive dust;
- Covering dirt haul vehicles; and
- Replanting disturbed areas as soon as practical and other measures, as deemed appropriate to the site, to control fugitive dust.

The Fugitive Dust Control Plan shall be submitted to the City for review and approval prior to grading.

**MM AIR-1b** Prior to construction of the proposed improvements, a Construction Traffic Control Plan (CTCP) will be reviewed and approved by the City. The CTCP will describe in detail safe detours around the project construction site and provide temporary traffic control (i.e., flag person) during construction related truck hauling activities.

**MM AIR-1c** During construction of the proposed improvements, construction equipment shall be properly maintained at an offsite location, including proper tuning and timing of engines. Equipment maintenance records and equipment design specification data sheets shall be kept on-site during construction.

**MM AIR-1d** During construction of the proposed improvements, all contractors will be advised not to idle construction equipment on the site for more than five minutes.

**MM AIR-1e** During construction of the proposed improvements, onsite electrical hook ups shall be provided for electric construction tools including saws, drills and compressors, to eliminate the need for diesel powered electric generators.

**MM AIR-1f** Onsite grading equipment will comply with one or more of the following:

- Use of onsite grading and construction equipment equipped with oxidized diesel catalyst and fueled with aqueous diesel fuel during grading and construction

operations with a reduced equipment fleet or hours of operation totaling a maximum of 17,000 horsepower hours per day;

- Use of onsite grading and construction equipment equipped with oxidized diesel catalyst with a reduced equipment fleet or hours of operation totaling a maximum of 14,000 horsepower hours per day;
- Use of onsite grading and construction equipment fueled with aqueous diesel fuel during grading and construction operations with a reduced equipment fleet or hours of operation totaling a maximum of 13,000 horsepower hours per day; and
- Reduce the grading and construction equipment fleet or hours of operation to a maximum total of 10,000 horsepower hours per day.

- MM AIR-1g** Implementation of the Short-Term Air Quality Mitigation Measures shall be documented in an Air Quality Mitigation Implementation Plan. This plan will detail each mitigation measure and include daily logs documenting implementation of each mitigation measure. Daily logs for each piece of construction equipment will include the hours per day the equipment ran. A master daily log will document the hours of operation all equipment ran each day. The master daily log will also document timing and tuning of equipment, the type of fuel used on construction equipment, and any add-on emissions reduction equipment used such as oxidized diesel catalysts.
- MM AIR-3a** The project proponent shall install bicycle racks at the clubhouse, MDA and A (attached) housing areas (Planning Areas 6, 8-11, 13, 14, 16, 18, and 20), and all park sites to encourage non-vehicular trips within the project.
- MM AIR-3b** The project design shall include signs posted in visible places in any truck parking areas that state, “No Idling.”
- MM AIR-3c** The project proponent will coordinate with CSUSB to install improvements that will support future shuttle transit service for project residents, including bus turnouts, bus shelters/benches, street lighting, and safe ingress/egress between the designated bus stop and adjacent uses. The developer will install identified improvements when the applicable road is constructed. .
- MM AIR-3d** Provide onsite information for clubhouse employees regarding local car pools, bus schedules and shuttle services in the area that service the project site, including maps showing the routes of transit services and employee carpool destinations.
- MM AIR-9a** Areas and/or facilities to encourage recycling shall be provided and installed in all MDA and A (attached) residential areas (Planning Areas 5, 6, 8-11, 13, 14, 16, `8, and 20) and in the clubhouse (Planning Area 7) consistent with City requirements.

**MM AIR-9b** To increase energy efficiency, the following measures shall be implemented to the satisfaction of the City of San Bernardino: a) there shall be a minimum 10 percent reduction in all buildings, combined space heating, cooling, and water heating energy compared to the current Title 24 Standards; b) the project shall incorporate light roof colors and cool pavements in the residential driveway areas; c) each appliance (i.e., washer/dryers, refrigerators, stoves, etc.) provided by the builder must be Energy Star qualified if an Energy Star designation is applicable for that appliance; d) low-flow appliances (i.e., toilets, dishwashers, shower heads, washing machines) shall be installed and; e) solar powered water heaters and photovoltaic cells (solar panels) shall be offered to homebuyers as an option.

### 8.1.2 - Biological Resources

**MM BIO-1a** **Plummer's Marisposa Lily.** During the spring prior to grading, the developer shall retain a qualified biologist to conduct a focused survey of the proposed development areas to determine if this species is present onsite. The survey shall be conducted according to the standard protocol established by CDFG. If the species is present, the developer shall fund relocation of the plants to a suitable location within the permanent open space area.

**MM BIO-1b** **Burrowing Owl.** Within 30 days of grading or any ground disturbance activities on the project site, a qualified biologist shall conduct a focused survey to determine if burrowing owls are present onsite. The survey shall be conducted according to the standard protocol established by CDFG. If burrowing owls are determined to be present on the site, mitigation shall follow the CDFG guidelines including passive relocation. If vegetation removal or ground disturbance begins within 30 days of the focused survey, no pre-construction survey would be required. If vegetation removal or ground disturbance activities begin after 30 days of the focused survey, a subsequent pre-construction survey would be required.

**MM BIO-1c** **Nesting Birds.** If trees or large shrubs (over 4 feet in height) will be removed during the nesting season (February 1 through August 31), a qualified biologist shall conduct a nesting bird survey no more than 30 days prior to any disturbance to identify any potential nesting activity. If passerine birds are found to be nesting, or there is evidence of nesting behavior within 250 feet of the impact area, the biologist shall determine an appropriate buffer that shall be required around the nests. No vegetation removal or ground disturbance would occur within this buffer. For raptor species—birds of prey (e.g., hawks and owls)—this buffer would generally be 500 feet. A qualified biologist shall monitor the nests closely until it is determined that the nests are no longer active, at which time construction activities may commence

within the buffer area. Construction activity may encroach into the buffer area at the discretion of the biological monitor.

- MM-BIO-3a**     **Jurisdictional Land.** Prior to grading, the developer shall obtain a Clean Water Act Section 404 Permit from USACE, a Clean Water Act Section 401 Certification from the RWQCB (Santa Ana Region), and a Streambed Alteration Agreement from CDFG if jurisdictional land will be impacted. Offsite mitigation, if necessary, shall be provided at a minimum 1:1 ratio depending on location and importance of the jurisdictional land removed. If the project provides onsite mitigation equal or in excess of its identified impact (i.e., removal of jurisdictional land), no permits may be necessary. This determination shall be made by qualified biologists in consultation with City Planning, USACE, and CDFG staff based on the final land plan and value assigned to the proposed bio-swales and other drainage improvements onsite.

### 8.1.3 - Cultural Resources

- MM CUL-1**     The developer shall retain a qualified historian to survey the building remnants between Planning Areas 18 and 20 to determine if they have any historical significance prior to excavation of the site. Due to their condition, they could not be preserved or protected in place even if it is determined they had historical significance. If they are determined to be significant, the developer shall retain a qualified historian to document the resource characteristics for archival purposes prior to demolition. The historian will prepare a report and submit it to the appropriate information center for their records.
- MM CUL-2**     The developer shall retain a qualified archaeologist to monitor grading to the satisfaction of the staffs of the County Museum and City Development Services Department. If potentially significant archaeological or historic resources are encountered during subsurface activities, all construction within a 100-foot radius of the find shall cease until the monitor determines whether the resource requires further study. The developer shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. Any previously undiscovered resources found during construction shall be recorded on appropriate DPR forms and evaluated for significance in terms of CEQA criteria by a qualified archaeologist. Potentially significant cultural resources consist of, but are not limited to, glass, ceramics, stone, bone, wood, rock and shell artifacts or features, including hearths, structural remains, or pre-historic dumpsites. If the resource is determined to be significant under CEQA, a qualified archaeologist shall prepare and implement a research design and archaeological data recovery plan, if necessary. The archaeologist shall also perform appropriate technical analyses, prepare a full written

report and file it with the appropriate information center, and provide for permanent curation of the recovered resources.

**MM CUL-3** Prior to the start of excavation, a qualified paleontological monitor will be retained to conduct an onsite monitoring program to ensure protection of previously unknown paleontological specimens. In the event a fossil is discovered during construction of the Proposed Project when the paleontological monitor is not present, excavation within 100 feet of the find shall be temporarily halted until the discovery is examined by a qualified paleontologist, in accordance with Society of Vertebrate Paleontology standards. The developer shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. The paleontologist shall notify the City of the procedures that must be followed before construction is allowed to resume at the location of the find. If the find is determined to be significant and the Paleontologist determines that avoidance is not feasible, the paleontologist shall design and carry out a data recovery plan consistent with the Society of Vertebrate Paleontology standards. The plan shall be submitted to the City for review and approval. Upon approval, the plan shall be incorporated into the project. The Paleontologist shall also perform appropriate technical analyses, prepare a full written report and file it with the appropriate information center, and provide for permanent curation of any recovered resources.

**MM CUL-4** If human remains are encountered during earth-disturbing activities for the Proposed Project, all work within 100 feet of the find shall stop immediately and the San Bernardino County Coroner's office shall be notified. If the Coroner determines the remains are Native American in origin, the NAHC will be notified and, in turn, will notify the person determined to be the Most Likely Descendent (MLD). The MLD will provide recommendations for treatment of the remains (CEQA Guidelines § 15064.5; Health and Safety Code § 7050.5; Public Resources Code §§ 5097.94 and 5097.98).

#### **8.1.4 - Geology, Soils, and Seismicity**

**MM GEO-1a** Prior to the recordation of any map in the area north of the South Branch of the San Andreas Fault (Planning Area 15), detailed geologic investigations shall be prepared to determine slope stability, landslide limits, and specific structural and grading requirements to identify the most appropriate design and construction requirements for specific building foundations. This study must demonstrate that any residences to be built in this area will not be subject to landslides, or that risks associated with any landslide features or conditions can be alleviated or reduced to a level equivalent to that of other residential planning areas in the project. This measure shall be

implemented to the satisfaction of the City Planner in consultation with the City Geologist or qualified geotechnical personnel retained by the City.

**MM GEO-1b** Prior to the recordation of any tract map in the area north of the South Branch of the San Andreas Fault (Planning Area 15), the developer must demonstrate that the reservoir in Planning Area 22 will have no impact on any homes in Planning Area 15 from a seiche event that could occur from strong seismic ground shaking. The reservoir must be designed to withstand anticipated seismic shaking, and must be dyked or otherwise protected so as to protect downstream homes from seiche flow damage.

**MM GEO-3a** Prior to the commencement of grading activities, the applicant shall retain a qualified geotechnical consultant to test any areas planned for development that are underlain by existing imported fill soils to determine their *in situ* compaction and suitability for excavation and reuse as engineered fill. Soil testing can be avoided if the applicant elects to remove the fill and place it either in areas where it will not support buildings, be located in paved or landscaped areas, or be disposed of offsite. This measure shall be implemented to the satisfaction of the City Geologist.

**MM GEO-3b** The developer shall implement the grading recommendations identified in the GeoMat 2007 and the CHJ 2006 reports. Prior to the commencement of building construction, the applicant shall retain a qualified engineer to design foundations adequate to support the Proposed Project's structures where necessary, based on the recommendations of the GeoMat 2007 study. Settlement analysis shall be performed once the structural design loads and foundation system geometry have been defined for each building.

### 8.1.5 - Hydrology and Water Quality

**MM HYD-1a** Prior to the issuance of grading permits for any portion or phase of the project, the project applicant shall receive City approval SWPPP and Grading Plan to the City of San Bernardino that identify specific actions and BMPs to prevent stormwater pollution from construction sources. These BMPs shall be consistent with the Conceptual Water Quality Management Plan prepared for the project by PBS&J Engineers (see DEIR Appendix G). The plans shall identify a practical sequence for site restoration, BMP implementation, contingency measures, responsible parties, and agency contacts. The applicant shall include conditions in construction contracts requiring the plans to be implemented and shall have the ability to enforce the requirement through fines and other penalties. The plans shall incorporate control measures in the following categories:

- Soil stabilization practices;
- Dewatering practices (if necessary);
- Sediment and runoff control practices;
- Monitoring protocols; and
- Waste management and disposal control practices.

Once approved by the City, the applicant's contractor shall be responsible throughout the duration of the project for installing, constructing, inspecting, and maintaining the control measures included in the SWPPP and Grading Plan.

**MM HYD-1b** Each SWPPP shall identify pollutant sources that could affect the quality of stormwater discharges from the construction site. Control practices shall include those that effectively treat target pollutants in stormwater discharges anticipated from project construction sites. To protect receiving water quality, the SWPPP shall include, but is not limited to, the following elements:

- Temporary erosion control measures (such as fiber rolls, staked straw bales, detention basins, temporary inlet protection, check dams, geofabric, sandbag dikes, and temporary revegetation or other ground cover) shall be employed for disturbed areas.
- No disturbed surfaces will be left without erosion control measures in place during the winter and spring months (September 30 – March 30).
- Sediment shall be retained onsite by a system of sediment basins, traps, or other appropriate measures. Of critical importance is the protection of existing catch basins that eventually drain to Cajon Creek.
- The construction contractor shall prepare Standard Operating Procedures for the handling of hazardous materials on the construction site to eliminate or reduce discharge of materials to storm drains.
- BMPs performance and effectiveness shall be determined either by visual means where applicable (i.e., observation of above-normal sediment release), or by actual water sampling in cases where verification of contaminant reduction or elimination, (inadvertent petroleum release) is required to determine adequacy of the measure.
- Native grasses or other appropriate vegetative cover shall be established on the construction site as soon as possible after disturbance.

**MM HYD-2a** **Landscaping Management Plan.** The developer shall develop and implement a Landscaping Management Plan (LMP) for landscaped areas with the goal of reducing potential discharge of herbicides, pesticides, fertilizers, and other contaminants to local waterways. All contractors involved in project-related landscaping conducted

during the individual phases of development, as well as maintenance of landscaping following project completion, shall complete their work in strict compliance with the LMP. The applicant shall be responsible for ensuring that requirements of the LMP are provided to and instituted by future project land owners and managers following project completion. The LMP shall be prepared by a licensed landscape architecture firm with experience in methods to reduce or eliminate the use of landscape chemicals that could cause adverse effects to the environment. At a minimum, this LMP shall:

1. Require that pesticides and fertilizers not be applied in excessive quantities, and only applied at times when rain is not expected for at least 2 weeks, in an effort to minimize leaching and runoff into the storm drainage system.
2. Encourage the use of organic fertilizers and mulching of landscaped areas to inhibit weed growth and reduce water demands.
3. Utilize native, perennial, drought-tolerant vegetation to minimize irrigation needs.
4. Specify the maintenance measures to be used (e.g., mowing) and will specify an application schedule for all fertilizer amendments and pesticide applications.
5. Identify a list of preferred herbicides and pesticides and instances in which their use would be appropriate and the associated application rate.

**MM HYD-2b** **Water Quality Maintenance Reports.** The UHSP project shall form a Landscaping and Lighting Maintenance District (LLMD) to monitor water quality and provide regular reports to the City regarding water quality on the project site. A qualified professional shall be retained through the LLMD to prepare and provide annual documentation to the City Engineer that the onsite BMPs (i.e., water quality devices, improvements, and procedures) are functioning as planned to effectively protect water quality both onsite and on downstream uses/drainages. This includes the function and condition of bioswales, street sweeping, etc. These reports shall be made to the satisfaction of the City Engineer in consultation with the RWQCB if necessary. If a report indicates water quality objectives are not being met and/or the RWQCB has expressed concerns in this regard, the LLMD will take appropriate steps and/or make appropriate improvements to achieve these objectives, to the satisfaction of the City Engineer.

**MM HYD-5** Prior to approval of any final maps, the developer shall submit drainage plans to the City Public Works Department for review and approval. The City shall review and

approve all storm drain improvement plans prior to issuance of any encroachment or building permits that involve flood control facilities.

### 8.1.6 - Noise

- MM NOI-1a** At the time the grading permit application is submitted, the project applicant shall submit a Construction Noise Mitigation Plan to the City for review and approval. The plan shall depict the location of staging areas for construction equipment and describe how noise would be mitigated for any nearby sensitive receptors..
- MM NOI-1b** Stationary noise-generating equipment (such as pumps and generators) will be located as far as possible from nearby noise-sensitive receptors (i.e., homes south of PA 16-20) and no closer than 200 feet from any existing home within the Proposed Project site once occupancy has begun.
- MM NOI-1c** Noise-generating equipment will be shielded from nearby noise-sensitive receptors by noise-attenuating buffers such as structures or haul truck trailers.
- MM NOI-1d** Onsite noise sources located less than 600 feet from noise-sensitive receptors will be equipped with noise-reducing engine housings.
- MM NOI-1e** Portable acoustic barriers able to attenuate at least 6 dB will be placed around noise-generating equipment in the “East Village” portion of the project site.
- MM NOI-1f** Water tanks and equipment storage, staging, and warm-up areas will be located as far from noise-sensitive receptors as possible, and at least 200 feet from any existing home within the Proposed Project site once occupancy has begun.
- MM NOI-1g** All construction equipment shall utilize noise reduction features (e.g., mufflers and engine shrouds) that are no less effective than those originally installed by the manufacturer.
- MM NOI-1h** No construction equipment shall be allowed to idle for more than 5 minutes if it is within 100 feet of an existing house.
- MM NOI-1i** Prior to approval of any subsequent tentative tract maps, the developer shall submit noise studies as appropriate for any residences within the project to assure that exterior and interior noise levels meet City noise standards based on actual final floor elevations, actual roadway cross sections and elevations, onsite topography after grading, etc. Walls or other attenuating improvements shall be installed as needed based on the results of these studies to assure onsite residences meet the City’s noise regulations.

### 8.1.7 - Public Services and Recreation

**MM PSR-4a** Prior to issuance of the first building permit for the project, the developer shall contact the City Library Director in writing and offer to provide up 2,000 square feet of building space in the clubhouse (plus parking), for a future satellite library facility. The developer shall provide the City Planning Department with written confirmation whether or not the Library Director chooses to locate a library facility on the Specific Plan property, based on the needs of the Department at that time relative to staffing and facilities.

**MM PSR-4b** Prior to issuance of the first building permit for the project, the developer shall demonstrate that the project can be connected via the internet to City library and other information technology systems. This may involve wireless or hard-wired connections, depending on the City's requirements at the time of hookup.

### 8.1.8 - Transportation and Circulation

**MM TRANS-1** Prior to the issuance of the first building permit, the developer shall install or provide fair share payments to the City to install improvements referred to in Table 5 in the TIA (KA 2008). ). If fair share payments are not paid prior to issuance of the first building permits, the UHSP will be required to install improvements, and be reimbursed by the City upon completion. . Improvements include:

- Traffic signal at Northpark Boulevard and Campus Parkway;
- Cross Street Stop at Little Mountain Drive and Project Access;
- Add two (2) left- turn lanes on northbound leg of University Parkway at Northpark Boulevard;
- Add two (2) left- turn lane on northbound I-215 Freeway ramp;
- Add a left-turn lane on the northbound leg of Little Mountain Drive at Project Access;
- Add a right-turn lane on the northbound leg of Little Mountain Drive at Project Access;
- Add a left-turn lane on the southbound leg of Northpark Boulevard at Campus Parkway;
- Add a through lane to the eastbound leg of Little Mountain Drive at Project Access;
- Add a right-turn-overlap to the eastbound leg of University Parkway at Northpark Boulevard;
- Add a right-turn lane to the eastbound leg of Little Mountain Drive at Project Access;
- Add a left-turn lane to the westbound leg of Northpark boulevard at Campuss Parkway;

- Add three (3) left-turn lanes to the westbound leg of University Parkway at Northpark Boulevard;
- Add a left turn lane to the westbound leg of Little Mountain Drive at Project Access;
- Add a through lane to the westbound leg of Northpark Boulevard and Campus Parkway; and
- Add a through lane to the westbound leg of Little Mountain Drive at Project Access;
- Add a right-turn lane to the westbound leg of University Parkway at Northpark Boulevard.

To implement this measure, a right- turn lane can be striped or unstriped, but to function as a right- turn lane, there must be sufficient width for right- turn vehicles to travel outside the through lanes.

**MM TRANS-2** Prior to the issuance of the 600<sup>th</sup> building permit, the developer shall install or provide fair share payments to the City to install improvements referred to in Table 8 in the TIA (KA 2008). ). If fair share payments are not paid prior to the issuance of the 600<sup>th</sup> building permit, the UHSP will be required to install improvements, and be reimbursed by the City upon completion. Improvements include:

- Cross street stop at Campus Parkway at I-215 Freeway northbound ramp;
- Cross street stop at Campus Parkway at I-215 Freeway southbound ramp;
- Add a thorough lane on northbound leg of campus Parkway and Kendall Drive;
- Add a thorough lane on the northbound leg of campus Parkway and at I-215 Freeway northbound ramp;
- Add a thorough lane on northbound leg of campus Parkway and at I-215 Freeway southbound ramp;
- Add a right-turn lane on northbound leg of University Parkway at Kendall Drive;
- Add a right-turn lane on the northbound leg of University Parkway at I-215 Freeway southbound ramp;
- Add a left-turn lane on the southbound leg of Campus Parkway at I-215 Freeway southbound ramp;
- Add a thorough lane on the southbound leg of Campus Parkway at Kendall Drive;
- Add a thorough lane on the southbound leg of Campus Parkway at I-215 Freeway northbound ramp;
- Add a thorough lane on the southbound leg of Campus Parkway at I-215 Freeway southbound ramp;

- Add a right-turn lane on the southbound leg of University Parkway at I-215 Freeway northbound ramp;
- Add a right-turn lane on the eastbound leg of University Parkway at I-215 Freeway northbound ramp;
- Add a left-turn lane on the eastbound leg of Campus Parkway at Kendall Drive;
- Add a left-turn lane on the eastbound leg of Campus Parkway at I-215 Freeway northbound ramp;
- Add a right-turn lane on the westbound leg of Campus Parkway at I-215 Freeway northbound ramp.

**MM TRANS-8** Prior to the commencement of construction, the developer shall provide a Construction Traffic, Staging, and Parking Management Plan to the City of San Bernardino for review and approval. All construction contracts shall include a clause requiring compliance with the Construction Traffic, Staging, and Parking Management Plan and the developer shall be able to enforce the provisions of the plan through penalties, up to and including, termination of the contract. The plan shall include the following provisions:

- Construction truck traffic shall be limited to the following designated routes: Campus Parkway from the site and west of Northpark Boulevard to Kendall Drive, and Kendall Drive from Campus Parkway to Palm Avenue. Construction truck traffic shall be prohibited on all other roadways, unless compelling circumstances warrant such movements (e.g., a major traffic accident).
- Signage shall be installed at construction truck ingress and egress points alerting motorists to such movements.
- Soil, debris, or other loose materials shall be covered with tarps or other restraining material during haul movements on roadways
- On-site and off-site construction staging and parking locations shall be identified, as well as any necessary shuttle service needed to transport workers from off-site locations. For safety reasons, off-site staging or parking shall not be allowed west of Northpark Boulevard or on the CSUSBCal State San Bernardino campus.
- A pre-construction conference shall be held advising all construction contractors of the requirements of the Construction Traffic, Staging, and Parking Management Plan.

### 8.1.9 - Utility Systems

**MM US-4a** Prior to the issuance of building permits, the applicant shall submit a Construction Debris Recycling Plan to the City of San Bernardino identifying the procedures by which construction and demolition would be salvaged and recycled to the maximum extent feasible. The plan shall include proof that a construction and demolition debris recycler is under contract to the applicant to perform this work. This Plan shall achieve at least a 50 percent reduction in construction waste, to the satisfaction of the City Planner.

**MM US-4b** Prior to the issuance of occupancy permits, the developer shall provide the City with written assurance that all project residents will be provided with information on City and County waste reduction and disposal activities. This information may be provided by the developer or home owners association (HOA) as appropriate. This measure shall be implemented to the satisfaction of the City Planner.

