

## **MITIGATION MONITORING AND REPORTING PROGRAM FOR PERRIS AT PENTECOSTAL APARTMENTS**

### **PEN20-0211 (IS/MND), plot plan (PEN21-0215), and Tentative Tract Map (TTR3864)**

**Purpose of Mitigation Monitoring and Reporting Program:** This Mitigation Monitoring and Reporting Program (MMRP) is required for the Perris at Pentecostal Project (Project), to comply with the California Environmental Quality Act (CEQA) , Public Resources Code Section 21081.6. Since the environmental analysis in the Initial Study/Mitigated Negative Declaration (IS/MND) for the Project indicates less than significant impacts on the environment with the incorporation of mitigation measures, CEQA requires preparation of an MMRP, to establish a plan and reporting framework for implementation of each mitigation measure in the IS/MND. CEQA stipulates that “the public agency shall adopt a reporting or monitoring program for the changes to the project which it has adopted or made a condition of project approval with the intent to mitigate or avoid significant effects on the environment. The reporting or monitoring program shall be designed to ensure compliance during project implementation.”

This MMRP has been prepared for compliance with Section 21081.6 of CEQA so that all required mitigation measures are implemented and completed according to schedule and maintained as required by CEQA. Table 1 below lists mitigation measures for the Project from the IS/MND. Implementation timing and responsible party for each mitigation measure are identified to assist the responsible parties in properly implementing mitigation for the Perris at Pentecostal Project. The table identifies individual mitigation measures, monitoring/mitigation timing, the responsible agency for implementing the measure, and provides a log for comments related to mitigation measure implementation. The numbering of mitigation measures follows the numbering sequence found in the IS/MND for the Project.

The City of Moreno Valley (City) is the lead agency for the project under CEQA and shall administer and implement the MMRP. The City is responsible for reviewing of all monitoring reports, enforcement actions, and document disposition. The City shall rely on information provided by the project site observers/ monitors (e.g., construction manager, project manager, archaeologist, etc.) as accurate and up-to-date and shall provide inspection personnel to field check mitigation measure status, as required.

**Project Description:** The Project is a gated 426-unit apartment complex on 18.05 net acres of land located at the northeast corner of Iris Avenue and Emma Lane in the City of Moreno Valley, County of Riverside, California. A residential density of 23.61 dwelling units per acre (DU/AC) is proposed in compliance with the Moreno Valley Zoning Code and General Plan. A total of 21 different floorplans are proposed. The Project requires discretionary approvals from the City for PEN20-0211 (IS/MND), a plot plan (PEN21-0215), and Tentative Tract Map (TTR3864) and a demolition permit. The Project includes construction and dedication of 1.845 acres on site for public open space, extension of utilities to the Project, and development of two and three-story apartments. Proposed development is summarized as follows:

#### **Dwelling Unit Summary**

A total of 21 different floorplans are proposed. Units and square footages for each E-Urban Apartment Building are summarized in Table 2. Big House apartment buildings are summarized in Table 3.

- Plans show total of 21 individual apartment buildings with private patio/balconies:
  - Three 3-story E-Urban Apartment Buildings adjacent to Santiago Drive will be built around a central courtyard measuring approximately 56 feet by 61 feet.
    - Approximate building heights - 32 feet above ground surface.
    - Overall building dimensions are 200 feet by 186 feet each.
    - 34 Units are one-bedroom, one-bathroom units

- 33 Units are two-bedroom, two-bathroom units
- 9 Units are three-bedroom, two-bathroom units
- Eighteen 2-story Big House Apartment Buildings
  - Approximate building heights - 40-feet above ground surface
  - Overall dimensions approximately 74-feet by 141 feet each.
  - 138 Units are one-bedroom, one-bathroom units
  - 198 Units are two-bedroom, two-bathroom units
  - 90 Units are three-bedroom, two ½ bathroom units

#### **Open Space and Common Area Summary**

- Private Open Space – 100 square feet per unit (sf/unit) upper balconies and 150 sf/unit ground level patios
- Community Open Space - 80,380 square feet (1.85 acres) (includes landscaped building setbacks and courtyards, pool, shade structure, restrooms, splash pad)
- Water Quality Basin - 38,500 square-feet (0.88 acre),
- Clubhouse and Leasing Office - 8,000 square-foot building (2-story),
- Common Area Open Space Surrounding Clubhouse 53,500 square feet of common area open space,
- Ancillary Improvements - trash enclosures, driveways, landscaping including approximately 275 trees.

#### **Parking**

- Vehicular Parking – 828 Total spaces
  - (107 guest, 84 Electronic Vehicle (EV), 4 Handicap EV)
    - 275 surface parking spaces
    - 319 carport parking spaces
    - 198 Big House garage spaces
    - 36 tandem spaces (in front of garages)
- Bike Storage – 301 Total Spaces
  - 252 bicycle long-term storage/parking spaces
  - 57 bicycle short-term parking spaces

Project Plans show right-of-way dedication along adjacent streets and construction of ultimate street improvements for Emma Lane, Santiago Drive, and Iris Avenue are proposed as follows:

#### **Dedications and Street Improvements**

Improvements to Public Right-of-Way along adjacent streets consist of two-way: travel lanes, curb, gutter, and sidewalks:

- Santiago Drive (Approximately 964 linear feet of street frontage. East-West Collector with a total improved width of 66 feet),
- Emma Lane (Approximately 1,098 linear feet of street frontage. North-South Collector with a total improved width of 66 feet),
- Iris Avenue (Approximately 588 linear feet of street frontage. East-West Arterial with a total improved width of 100 feet),

A 9-month construction period is anticipated beginning of the last quarter of 2022, with demolition of the existing structures at the northwest property corner and grading (approximately 10,500 cubic yards of cut and 22,280 cubic yards of fill). Installation of infrastructure including extension of utilities and a water quality basin and access to serve the Project, public street improvements, backbone driveway circulation, then building foundations will be installed. Plans indicate that buildings will be constructed starting from southerly end of the Project Site near Iris Avenue with development progressing toward the north.

**Table 1  
MITIGATION MONITORING AND REPORTING PROGRAM CHECKLIST FOR THE  
TENTATIVE TRACT MAP 38123 RESIDENTIAL PROJECT**

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			Initials	Date
<b>AESTHETICS</b>				
<b>MM AES-01 Perimeter Walls:</b> Prior to issuance of building permits for the Project, the City's Building Official shall verify that plans show proposed perimeter walls and the restroom structure near the northeast property corner with surface treatments in character with the architectural style of the Project and incorporate appropriate graffiti prevention features.	-Verified during Plan Check and Prior to issuance of Building Permits	City / Building Official		
<b>AIR QUALITY</b>				
<b>MM AQ-01 VOC Emissions:</b> During construction, mitigation for architectural coating emissions will be needed to limit architectural coatings to 30 g/L VOC for buildings and 100 g/L for traffic markings. This requirement shall be noted on the construction plans for the Project and verified by the City's Building Official. Implementation of this BMP will be carried out by the contractor and verified by the City's Building Inspector.	-Note on plans verified during plan check, prior to issuance of building permits  -Implementation verified during construction inspections	City / Building Official  City Building Inspector		
<b>BIOLOGICAL RESOURCES</b>				
<b>MM BIO-01: Pre-Construction Nesting Bird Survey:</b> If construction occurs between February 1st and August 31st, the City Planner and City Building and/or Grading Inspector shall verify that a pre-construction clearance survey for nesting birds is conducted within three (3) days of the start of any vegetation removal or ground disturbing activities to ensure that no nesting birds will be disturbed during construction. The survey shall be documented with a report prepared by a qualified biologist and provided to the City for the administrative record on the Project and passive or active relocation methodology. Relocation shall only occur outside of the nesting season (September 1 through January 31). The RCA may require translocation sites to be created within the MSHCP Conservation Area for the establishment of new colonies. If required, the translocation sites must take into consideration unoccupied habitat areas, presence of burrowing mammals, existing colonies, and effects to other MSHCP Covered Species in order to successfully create suitable habitat for BUOW. The translocation sites must be	Prior to construction mobilization occurring during February 1st through August 31st	City / Planning and Building Officials  Grading Inspector and Construction contractor		

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developed in consultation with RCA. If required, translocation sites would also be described in the agency-approved plan.				
<b>MM BIO-02: Burrowing Owl:</b> The City Planner and City Building and/or Grading Inspector shall verify that a pre-construction burrowing owl clearance survey shall be conducted prior to issuance of grading permits and ground disturbing activities.	Prior to issuance of grading permits and ground disturbing activities	City / Planning and Building Officials  Grading Inspector and Contractor		
<b>CULTURAL RESOURCES</b>				
<b>MM CUL-01: Archaeological Training and Monitoring.</b> Prior to the start of work for construction, the City will separately retain a qualified archaeologist (City's archaeologist) to provide tailgate training to Contractor staff regarding the protocol and handling of cultural resources in the unlikely event that previously unknown cultural resources are discovered during construction. There are no known cultural resources in the project site. This measure is a precaution and will establish standard next steps in the unlikely event that resources are encountered during construction, the Contractor shall participate in a construction tailgate training session with the City's archaeologist and the Native American Monitor prior to commencement of site preparation, demolition, and construction.	-Prior to issuance of Grading and Building Permits, this mitigation measure shall be included in construction documents for implementation during construction  - Tailgate training to occur prior to mobilization for implementation during construction	City Building Official, City Engineer  Contractor, City Inspector / Archaeology and Native American Monitor(s)		
<b>MM CUL-02: Cultural and Tribal Resource Monitoring.</b> If potential cultural (archaeological and/or tribal) materials, deposits, or features are discovered at any time during site preparation, demolition, construction, or other project-related activity, Contractor shall cease work in the immediate area of the find and shall notify the City immediately. The City's archaeologist and the Native American monitor will	-Prior to issuance of Grading and Building Permits, this mitigation measure shall be included in construction documents	City Building Official, City Engineer		

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inspect the discovery and prepare recommendations for a further course of action. Contractor staff shall be responsible for adhering to direction from the City’s archaeologist and Native American monitor regarding avoidance and protection of find(s).	for implementation during construction  -Implemented throughout grading and construction	Contractor, City Inspector / Archaeology and Native American Monitor(s)		
<b>MM CUL-03: Cultural Resources Disposition.</b> If an archaeological resource is determined significant and avoidance through project redesign is not feasible, a data recovery and construction monitoring program must be approved by the archaeologist, Native American monitor, and City, then implemented by the Contractor to reduce the impacts to cultural resources. The data recovery program shall include a final data recovery and/monitoring report completed in accordance with the California Office of Historic Preservation’s Archaeological Resource Management Reports Recommended Content and Format. Confidential attachments must be submitted under separate covers. Artifacts collected during the evaluation and data recovery phases must be curated at an appropriate facility consistent with state(California State Historic Resources Commission’s Guidelines for Curation of Archaeological Collection 1993) and federal curation standards (36 CFR 79 of the Federal Register) and that allows access to artifact collections.	-Prior to issuance of Grading and Building Permits, this mitigation measure shall be included in construction documents for implementation during construction  -Implemented throughout grading activities	City Building Official, City Engineer  Contractor, City Inspector / Archaeology and Native American Monitor(s)		
<b>MM CUL-04: Human Remains.</b> If human remains are encountered during any phase of construction, implementation of the procedures in Public Resources Code Section 5097.98 and the California State Health and Safety Code 7050.5 shall be implemented in consultation with the Most Likely Descendant (MLD) as identified by the State Native American Heritage Commission (NAHC). California State Health and Safety Code Section 7050.5 dictates that no further disturbance shall occur until the Riverside County Coroner makes a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. The Riverside County Coroner must be notified within 24 hours. If the Coroner determines that	Throughout grading and construction activities	Contractor, City Building and Grading Inspectors, Native American Monitor(s)		

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the burial is not historic, but prehistoric, the NAHC must be contacted to determine the most likely descendant for this area. The MLD may become involved with the disposition of the burial following scientific analysis. The NAHC shall identify the MLD with whom consultation shall occur to determine in the treatment and disposition of the remains.				
<b>GEOLOGY AND SOILS</b>				
<b>MM GEO-01 Hydrocollapse:</b> Prior to issuance of the grading permit for the project, the engineering department shall verify that the grading plan includes notes to the contractor which require removal and re compaction of the upper zones of native soils within footprints of the building pads as recommended by the geotechnical engineer for the Project. Implementation of this mitigation measure shall be monitored during grading by the project geotechnical engineer and the City’s grading inspector to reduce risk of hydrocollapse.	-Prior to issuance of Grading and Building Permits, this mitigation measure shall be included in construction documents for implementation during construction  -Monitoring to be implemented during construction	City Engineer  Construction contractor and geotechnical engineer		
<b>MM GEO-02 Earthwork:</b> During construction the contractor and City Grading Inspector shall ensure that all activities involving soil disturbance “earthwork” are evaluated by the Project Geologist. This evaluation shall include observation and testing of engineered fill, subgrade preparation, foundation bearing soils, and other geotechnical conditions exposed during construction.	-Prior to issuance of Grading and Building Permits, this mitigation measure shall be included in construction documents for implementation during construction  -During earthwork	City Engineer  Contractor and City Grading Inspector		

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<p><b>MM GEO-03 Fill:</b> Ongoing during construction, the City Grading Inspector shall verify that site preparation during grading shall include the following measures for fill:</p> <p>a) Complete removal of existing vegetation, debris, pavements and other materials from proposed buildings and pavement areas.</p> <p>b) Initial grading shall create a level uniform surface free of mounds to receive fill and provide for a relatively uniform thickness of fill beneath proposed building structures.</p> <p>c) Demolition of the existing buildings should include complete removal of all foundation systems and remaining underground utilities within the proposed construction area, including removal of any loose backfill found adjacent to existing foundations.</p> <p>d) All materials derived from the demolition of existing structures and pavements should be removed from the site and not be allowed for use as on-site fill, unless processed in accordance with the fill requirements included in this report.</p> <p>e) All previously placed fill associated with any previous development should be removed within the proposed development area.</p> <p>f) If unexpected fills, utilities, or underground facilities are encountered, such features should be thoroughly removed and cleaned from the Project Site and excavation materials shall be disposed of at a facility licensed to handle the types and quantities of export materials generated.</p> <p>g) The City Grading and/or Building Inspector shall verify that proposed buildings are supported on engineered fill extending to a minimum depth of 3 feet below the bottom of foundations, or 5 feet below existing grades, whichever is greater. Engineered fill placed beneath the entire footprint of the building should extend horizontally a minimum distance of 3 feet beyond the outside edge of perimeter footings.</p>	<p>-Prior to issuance of Grading and Building Permits, this mitigation measure shall be included in construction documents for implementation during construction</p> <p>-During earthwork</p>	<p>City Engineer</p> <p>Contractor and City Grading Inspector</p>		

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<p>h) Subgrade soils beneath exterior slabs and pavements should be removed to a depth of 2 feet below existing grade or bottom of proposed pavement section, whichever is greater, and replaced as engineered fill to the proposed grades.</p> <p>i) The bottom of excavations should then be scarified, moisture conditioned, and compacted to a minimum depth of 10 inches. The moisture content and compaction of subgrade soils should be maintained until slab or pavement construction.</p> <p>j) Exposed areas which will receive fill, once properly cleared and benched where necessary, should be scarified to a minimum depth of 10 inches, moisture conditioned as necessary, and compacted per the compaction requirements in this report. Compacted fill soils should then be placed to the design grades, and the moisture content and compaction of soils should be maintained until slab, pavement, or proposed improvements are constructed.</p> <p>k) Fill soils provided should be free from any organics and debris.</p> <p>l) The bottom of excavations should be thoroughly cleaned of loose soils and disturbed materials prior to backfill placement and/or construction.</p> <p>m) Individual contractors shall design and construct stable, temporary excavations which are sloped or shored in the interest of safety following local, and federal regulations, including current OSHA excavation and trench safety standards.</p> <p>n) All fill materials shall consist of low volume change, inorganic soils which are free of vegetation, debris, and fragments larger than three inches in size pursuant to the geotechnical engineer's recommendations. Pea gravel or other similar non-cementitious, poorly-graded materials should not be used as fill or backfill without the prior approval of the geotechnical engineer. Clean on-site soils or approved imported materials may be used as fill material for the following:</p> <ol style="list-style-type: none"> <li>1. General site grading</li> <li>2. Foundation backfill</li> </ol>				





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<p>b) On-site materials are considered suitable for backfill of utility and pipe trenches from one foot above the top of the pipe to the final ground surface, provided the material is free of organic matter and deleterious substances.</p> <p>c) Trench back-fill should be mechanically placed and compacted as directed by the geotechnical engineer during earthwork monitoring.</p> <ol style="list-style-type: none"> <li>1. Compaction of initial lifts should be accomplished with hand-operated tampers or other lightweight compactors.</li> <li>2. Where trenches are placed beneath slabs or footings, the backfill should satisfy the gradation and expansion index requirements of engineered fill as directed by the geotechnical engineer during monitoring.</li> <li>3. Flooding or jetting for placement and compaction of backfill is not recommended.</li> </ol>	-Implement during all phases of construction			
<p><b>MM GEO-05 Drainage:</b> Ongoing during construction, the City Grading Inspector shall verify that site preparation during grading shall include the following measures for grading and drainage</p> <ol style="list-style-type: none"> <li>a) Drainage of surface water away from structures should be implemented during construction and maintained throughout the life of the project.</li> <li>b) Infiltration of water into utility trenches or foundation excavations should be prevented during construction.</li> <li>c) Planters and other surface features which could retain water in areas adjacent to the building or pavements should be sealed or eliminated.</li> <li>d) In areas where sidewalks or paving do not immediately adjoin the structure, protective slopes shall be provided with a minimum grade of approximately 5 percent for at least 10 feet from perimeter walls.</li> </ol>	<p>-Prior to issuance of Grading and Building Permits, this mitigation measure shall be included in construction documents for implementation during construction</p> <p>-Implement during all phases of construction</p>	<p>City Engineer and Building Official</p> <p>City Grading Inspector</p>		

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e) Backfill against footings, exterior walls, and in utility and sprinkler line trenches should be well compacted and free of all construction debris to reduce the possibility of moisture infiltration.  f) A minimum horizontal setback distance of 10 feet from the perimeter of any building and the high-water elevation of the nearest storm-water retention basin shall be maintained.  g) Roof drainage should discharge into splash blocks or extensions when the ground surface beneath such features is not protected by exterior slabs or paving.  h) Sprinkler systems and landscaped irrigation should not be installed within 5 feet of foundation walls.				
<b>MM GEO-06: Slabs-on-grade:</b> Ongoing during construction, the City Grading Inspector shall verify that site preparation during grading shall include the following measures for exterior slab design and construction to reduce the potential for damage caused by movement to exterior slabs-on-grade, exterior architectural features, and utilities on or in backfill  a) Minimize moisture increases in the backfill. b) control moisture-density during placement of backfill. c) Use designs which allow vertical movement between the exterior features and adjoining structural elements. d) Place effective control joints on relatively close centers.	-Prior to issuance of Grading and Building Permits, this mitigation measure shall be included in construction documents for implementation during construction  -Implement during all phases of construction	City Engineer and Building Official  City Grading Inspector		
<b>MM GEO-07: Subgrade:</b> Ongoing during construction, the City Grading and Building Inspectors shall verify that site preparation during grading shall include the following measures for Construction:  a) Upon completion of filling and grading, maintain the subgrade moisture content prior to construction of floor slabs and pavements. b) Construction traffic over the completed subgrade should be avoided.	-Prior to issuance of Grading and Building Permits, this mitigation measure shall be included in construction documents for implementation during construction	City Engineer and Building Official		

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<p>c) Site grading shall prevent ponding of surface water on the prepared subgrades or in excavations.</p> <p>d) If the subgrade should become desiccated, saturated, or disturbed, the affected material should be removed or these materials should be scarified, moisture conditioned, and recompactd prior to floor slab and pavement construction.</p> <p>e) Formwork should be implemented pursuant to the geotechnical engineer’s recommendations to stabilize foundation excavations.</p> <p>f) Earthwork to be completed during extended periods of dry weather if possible. If earthwork is completed during the wet season (typically November through April) it may be necessary to take extra precautionary measures to protect subgrade soils.</p> <p>g) Wet season earthwork operations shall implement the geotechnical engineer’s recommendations for wet weather work and shall be carried out under the supervision of the licensed geotechnical engineer.</p> <p>h) Wet season earthwork shall include diversion of surface runoff around exposed soils and draining of ponded water on the site. Once subgrades are established, it may be necessary to protect the exposed subgrade soils from construction traffic.</p>	-Implement during all phases of construction	City Grading and Building Inspectors		
<p><b>MM GEO-08 Subgrade Observation and Testing:</b> Ongoing during construction, the City Grading and Building Inspectors shall verify that site preparation during grading shall include the following measures for construction observation and testing:</p> <p>a) The geotechnical engineer shall be retained during the construction phase of the project to observe earthwork and to perform necessary tests and observations during subgrade preparation, proof-rolling, placement and compaction of controlled compacted fills, backfilling of excavation to the completed subgrade.</p>	<p>-Prior to issuance of Grading and Building Permits, this mitigation measure shall be included in construction documents for implementation during construction</p> <p>-Implement during all phases of construction</p>	<p>City Engineer and Building Official</p> <p>City Grading and Building Inspectors,</p>		

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<p>b) The exposed subgrade and each lift of compacted fill should be tested, evaluated, and reworked as necessary until approved by the geotechnical engineer prior to placement of additional lifts.</p> <p>c) Each lift of fill should be tested for density and water content at a frequency of at least one test for every 2,500 square feet of compacted fill in the building areas and 5,000 square feet in pavement areas. One density and water content test for every 50 linear feet of compacted utility trench backfill.</p> <p>d) In areas of foundation excavations, the bearing subgrade should be evaluated under the direction of the geotechnical engineer. In the event that unanticipated conditions are encountered, the geotechnical engineer should prescribe mitigation options.</p> <p>e) In addition to the documentation of the essential parameters necessary for construction, the continuation of the geotechnical engineer into the construction phase of the project provides the continuity to maintain the Geotechnical Engineer’s evaluation of subsurface conditions, including assessing variations and associated design changes.</p>		Geotechnical Engineer		
<p><b>MM GEO-09: Shallow Foundations:</b> Ongoing during construction, the City Grading and Building Inspectors shall verify that site preparation during grading shall include the following measures for shallow foundations:</p> <p>a) Site preparation must be done in accordance with the requirements noted in mitigation measures GEO-1 through GEO-7.</p> <p>b) Engineered fill shall extend 3 feet below the bottom of shallow foundations, or 5 feet below existing grades, whichever is greater.</p> <p>c) Shallow Foundations Designed for Uplift Conditions.</p> <p>d) Reinforced concrete footing foundations for canopy structures, cast against undisturbed native soils, are recommended for resistance to uplift.</p> <p>e) Footings may be designed using the cone method.</p>	<p>-Prior to issuance of Grading and Building Permits, this mitigation measure shall be included in construction documents for implementation during construction</p> <p>-Implement during all phases of construction</p>	<p>City Engineer and Building Official</p> <p>City Grading and Building Inspectors</p>		

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<p><b>MM GEO-10 Foundation Construction:</b> Ongoing during construction, the City Grading and Building Inspectors shall verify that site preparation during grading shall include the following measures for foundation construction:</p> <ul style="list-style-type: none"> <li>a) Footing excavations should be evaluated under the direction of the geotechnical engineer.</li> <li>b) The base of all foundation excavations should be free of water and loose soil, prior to placing concrete. Concrete should be placed soon after excavating to reduce bearing soil disturbance.</li> <li>c) Care should be taken to prevent wetting or drying of the bearing materials during construction.</li> <li>d) Excessively wet or dry material or any loose/disturbed material in the bottom of the footing excavations should be removed/reconditioned before foundation concrete is placed.</li> <li>e) To ensure foundations have adequate support, special care should be taken when footings are located adjacent to trenches. The bottom of such footings should be at least 1 foot below an imaginary plane with an inclination of 1.5 horizontal to 1.0 vertical extending upward from the nearest edge of adjacent trenches.</li> <li>f) The use of a vapor retarder should be considered beneath concrete slabs on grade covered with wood, tile, carpet, or other moisture sensitive or impervious coverings, or when the slab will support equipment sensitive to moisture. When conditions warrant the use of a vapor retarder, the slab designer should refer to ACI 302 and/or ACI 360 for procedures and cautions regarding the use and placement of a vapor retarder.</li> <li>g) Saw-cut control joints should be placed in the slab to help control the location and extent of cracking. For additional recommendations refer to the ACI Design Manual.</li> </ul>	<p>-Prior to issuance of Grading and Building Permits, this mitigation measure shall be included in construction documents for implementation during construction</p> <p>-Implement during all phases of construction</p>	<p>City Engineer and Building Official</p> <p>City Grading and Building Inspectors</p>		

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<p>h) Joints or cracks should be sealed with a waterproof, non-extruding compressible compound specifically recommended for heavy duty concrete pavement and wet environments.</p> <p>i) Where floor slabs are tied to perimeter walls or turn-down slabs to meet structural or other construction objectives, the structural engineer should account for potential differential settlement in adjacent slab expansion joints or floor slab cracks beyond the length of the structural dowels through use of sufficient control joints, appropriate reinforcing or other means to avoid differential movement between the walls and slabs</p>				
<p><b>MM GEO-11 Pavement:</b> Ongoing during construction, the City Grading and Building Inspectors shall verify that site preparation during grading shall include the following measures for pavement:</p> <p>a) Implement earthwork pursuant to all geotechnical mitigation measures.</p> <p>b) Design of asphalt concrete (AC) pavements based on the procedures outlined in the Caltrans "Highway Design Manual for Safety Roadside Rest Areas" (Caltrans, 2016). Design of Portland cement concrete (PCC) pavements are based upon American Concrete Institute (ACI) 330R-08; "Guide for Design and Construction of Concrete Parking Lots."</p> <p>c) Implement proper compaction of the utility trench backfills and the subgrade soils as prescribed by the geotechnical engineer, with the upper 12 inches of subgrade soils and all aggregate base material brought to a minimum relative compaction of 95 percent in accordance with ASTM D 1557 prior to paving. The aggregate base should meet Caltrans requirements for Class 2 base.</p> <p>d) Sampling and testing for pavement design should be verified by additional sampling and testing (specifically R-value testing) during construction when the actual subgrade soils are exposed.</p> <p>e) The project civil engineer should confirm minimum Traffic Indices and Sections required by local agencies or jurisdictions.</p>	<p>-Prior to issuance of Grading and Building Permits, this mitigation measure shall be included in construction documents for implementation during construction</p> <p>-Implement during all phases of construction</p>	<p>City Engineer and Building Official</p> <p>City Grading and Building Inspectors</p>		

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<p><b>MM GEO-12 Pavement Drainage:</b> Ongoing during construction, the City Grading and Building Inspectors shall verify that site preparation during grading shall include the following measures for pavement drainage:</p> <ul style="list-style-type: none"> <li>a) Pavements should be sloped to provide rapid drainage of surface water. Water allowed to pond on or adjacent to the pavements could saturate the subgrade and contribute to premature pavement deterioration.</li> <li>b) Pavement subgrade should be graded to provide positive drainage within the granular base section. Appropriate sub-drainage or connection to a suitable daylight outlet should be provided to remove water from the granular subbase.</li> </ul>	<p>-Prior to issuance of Grading and Building Permits, this mitigation measure shall be included in construction documents for implementation during construction</p> <p>-Implement during all phases of construction</p>	<p>City Engineer and Building Official</p> <p>City Grading and Building Inspectors</p>		
<p><b>MM GEO-13 Design and Layout of Pavement:</b> Prior to final Tract Map Approval the City Engineer shall verify the following recommendations have been incorporated in the design and layout of pavements on final project plans and the City's Grading and Building Inspectors shall verify implementation of the following:</p> <ul style="list-style-type: none"> <li>a) Final grade adjacent to paved areas should slope down from the edges at a minimum 2 percent.</li> <li>b) Subgrade and pavement surfaces should have a minimum 2 percent slope to promote proper surface drainage.</li> <li>c) Install below pavement drainage systems surrounding areas anticipated for frequent</li> <li>d) Wetting.</li> <li>e) Install joint sealant and seal cracks immediately.</li> <li>f) Seal all landscaped areas in or adjacent to pavements to reduce moisture migration to subgrade soils.</li> </ul>	<p>-Prior to Final Tract Map Approval, this mitigation measure shall be included in construction documents for implementation during construction</p> <p>-Implement during all phases of construction</p>	<p>City Engineer and Planning Official</p> <p>City Grading and Building Inspectors</p>		



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MITIGATION MONITORING AND REPORTING PROGRAM CHECKLIST FOR THE  
TENTATIVE TRACT MAP 38123 RESIDENTIAL PROJECT**

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g) Place compacted, low permeability backfill against the exterior side of curb and gutter. h) Place curb, gutter and/or sidewalk directly on clay subgrade soils rather than on unbound granular base course materials. i) A note should be placed on the plans requiring ongoing implementation of a planned preventative maintenance program for pavement management including both localized maintenance (e.g., crack and joint sealing and patching) and global maintenance (e.g., surface sealing).				
<b>MM GEO-14 Corrosivity:</b> Ongoing during construction, the City Grading and Building Inspectors shall verify that site preparation during grading shall include the following measures for corrosivity of the on-site soils with respect to contact with the various underground materials which will be used for project construction: a) Concrete should be designed in accordance with the provisions of the ACI Design Manual, Section 318, Chapter 4. b) For protection against corrosion to buried metals, an experienced corrosion engineer shall be retained to design a suitable corrosion protection system for underground metal structures or components. c) If corrosion of buried metal is critical, it should be protected using a non-corrosive backfill, wrapping, coating, sacrificial anodes, or a combination of these methods, as designed by a qualified corrosion engineer.	-Prior to issuance of Grading and Building Permits, this mitigation measure shall be included in construction documents for implementation during construction  -Implement during all phases of construction	City Engineer and Building Official  City Grading and Building Inspectors		
<b>MM GEO (PALEO)-15 Fossils:</b> Ongoing during construction, the construction manager shall be advised immediately upon discovery of an unearthed fossil and earthwork in the vicinity of the discovery shall immediately halt. A Qualified Paleontologist shall be retained by the developer to evaluate the discovery. Earthwork shall be diverted to other areas of the Project until the significance of the fossil discovery can be assessed by the Qualified Paleontologist. If the fossil discovery is deemed significant, the fossil shall be recovered at the expense of the developer using appropriate recovery techniques based on the type, size, and mode of preservation of the unearthed fossil. Relevant geologic, stratigraphic, and	-Implement during all phases of construction	City Grading and Building Inspectors, City Paleontologist		

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taphonomic data should be gathered during the recovery phase to provide critical provenance context. Earthwork may resume in the area of the fossil discovery once the fossil has been recovered, and the Qualified Paleontologist deems the site has been mitigated to the extent necessary. Additional earthwork following the fossil discovery may be monitored for paleontological resources on an as-needed basis, at the discretion of the Qualified Paleontologist. A Qualified Paleontologist is defined as an individual with an M.S. or Ph.D. in paleontology or geology that is experienced with paleontological procedures and techniques, who is knowledgeable in the geology and paleontology of Riverside County, and who has worked as a paleontological mitigation project supervisor for at least one year.				
<b>MM GEO (PALEO)-16 Fossil Disposition:</b> The Paleontologist for the Project shall verify that recovered fossils are prepared, identified, catalogued, and stored in a recognized professional repository (e.g., Western Science Center) along with associated field notes, photographs, and compiled fossil locality data. Donation of the fossils should be accompanied by financial support provided by the developer for initial specimen storage. A final summary report should be completed by the Paleontologist for the Project that outlines the results of this mitigation requirement. This report should include discussions of the methods used, stratigraphic section(s) exposed, fossils collected, and significance of recovered fossils. This report shall be submitted to appropriate agencies, as well as to the designated repository.	-Implement during all phases of construction	City Grading and Building Inspectors, City Paleontologist		
<b>HAZARDOUS MATERIALS</b>				
<b>MM HAZ-01 Coordination with Val Verde School District:</b> Prior to issuance of permits and construction mobilization for the Project the Contractor shall provide the construction schedule to the Val Verde School District as verified by the grading and/or building inspector prior to grading and demolition at the Project Site. The contractor shall coordinate with the school district on an ongoing basis during construction and shall keep records of this coordination at the Project Site for review by the grading and building inspectors.	Prior to issuance of building permits and start of construction	City Grading and Building Inspectors, Contractor		

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<b>MM HAZ-02 Potentially Hazardous Construction Materials:</b> Prior to issuance of permits, the contractor shall provide a manifest of construction materials and a plan for proper handling, disposal and emergency response to the building official and fire department for verification of adequate contingency measures in regard to potentially hazardous materials used, stored and handled onsite during construction.	Prior to issuance of building permits	City Building Official and Fire Department		
<b>Transportation</b>				
<b>MM TRAF-01 Sidewalk Improvements:</b> Prior to issuance of final tract map approval, building and grading permits, Project plans shall show construction of sidewalk improvements on Emma Lane between Santiago Drive and Iris Avenue and on Santiago Drive between Emma Lane and Perris Boulevard with construction of adjacent street improvements to ultimate right-of-way width. The Project shall provide high-visibility, continental crosswalks markings on the north leg of Emma Lane and Iris Avenue	-Prior to issuance of Final Tract Map approval and issuance of Grading and Building Permits, this mitigation measure shall be included in construction documents for implementation during construction  -Implementation to occur concurrently with construction of street improvements	City Engineer and Building Official  City Inspectors, Contractor		
<b>MM TRAF-02 Traffic Calming Structures: The proposed project shall construct the following traffic calming measures</b>  a) Install corner extensions/bulb-outs at the project driveways on Emma Lane. b) Install corner extensions/bulb-outs at the project driveway on Santiago Drive. c) Install speed cushions on Emma Lane between Santiago Drive and Iris Avenue. d) Install high-visibility, continental crosswalk markings on the north leg of Emma Lane and Iris Avenue.	-Prior to approval of the Final Tract Map and issuance of Building and Grading Permits, this mitigation measure shall be included in building plans/ specifications  -Implementation to occur concurrently with	City Engineer and Building Official  City Inspectors, Contractor		

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<p><b>MM TRAF-03: Install access improvements at Emma Lane (NS) at Project Driveway (EW):</b></p> <ul style="list-style-type: none"> <li>a) Install westbound stop control</li> <li>b) Construct the northbound approach to consist of one shared through/right turn lane</li> <li>c) Construct the southbound approach to consist of one shared left turn/through lane</li> <li>d) Construct the westbound approach to consist of one shared left/right turn lane</li> </ul> <p><b>MM TRAF-04: Install access improvements at Project Driveway (NS) at Santiago Drive (EW):</b></p> <ul style="list-style-type: none"> <li>a) Install northbound stop control</li> <li>b) Construct the northbound approach to consist of one shared left/right turn lane</li> <li>c) Construct the eastbound approach to consist of one shared through/right turn lane</li> <li>d) Construct the westbound approach to consist of one shared left turn/through lane</li> </ul>	<p>construction of street improvements</p>			
<b>TRIBAL CULTURAL RESOURCES</b>				
<p><b>MM TRI-01 Archaeological Monitoring:</b> Prior to the issuance of a grading permit, the Developer shall retain a professional archaeologist to conduct monitoring of all ground disturbing activities. The Project Archaeologist shall have the authority to temporarily redirect earthmoving activities in the event that suspected archaeological resources are unearthed during Project construction. The Project Archaeologist, in consultation with the Consulting Tribe(s) including the Pechanga Tribe, Temecula Band of Luiseño Mission Indians, the contractor, and the City, shall develop a CRMP as defined in TRI-03. The Project archeologist shall attend the pre-grading meeting with the City, the construction manager and any contractors and will conduct a mandatory Cultural Resources Worker Sensitivity Training to those in attendance. The archaeological monitor shall have the</p>				

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authority to temporarily halt and redirect earth moving activities in the affected area in the event that suspected archaeological resources are unearthed.				
<b>MM TRI-02 Native American Monitoring:</b> Prior to the issuance of a grading permit, the Developer shall secure agreements with the Pechanga Tribe, Temecula Band of Luiseño Mission Indians, for tribal monitoring. The City is also required to provide a minimum of 30 days' advance notice to the tribes of all ground disturbing activities. The Native American Tribal Representatives shall have the authority to temporarily halt and redirect earth moving activities in the affected area in the event that suspected archaeological resources are unearthed. The Native American Monitor(s) shall attend the pre-grading meeting with the Project Archaeologist, City, the construction manager and any contractors and will conduct the Tribal Perspective of the mandatory Cultural Resources Worker Sensitivity Training to those in attendance.				
<b>MM TRI-03 Cultural Resource Monitoring Plan (CRMP):</b> The Project Archaeologist, in consultation with the Consulting Tribe(s), the contractor, and the City, shall develop a CRMP prior to start of construction in consultation pursuant to the definition in AB 52 to address the details, timing and responsibility of all archaeological and cultural activities that will occur on the Project Site. A consulting Tribe is defined as a Tribe that initiated the AB 52 tribal consultation process for the Project, has not opted out of the AB 52 consultation process, and has completed AB 52 consultation with the City as provided for in Cal Pub Res Code Section 21080.3.2(b)(1) of AB52. Details in the Plan shall include: a) Project description and location b) Project grading and development scheduling c) Roles and responsibilities of individuals on the Project				

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d) The pre-grading meeting and Cultural Resources Worker Sensitivity Training details  e) The protocols and stipulations that the contractor, City, Consulting Tribe (s) and Project archaeologist will follow in the event of inadvertent cultural resources discoveries, including any newly discovered cultural resource deposits that shall be subject to a cultural resources evaluation <ul style="list-style-type: none"> <li>a) The type of recordation needed for inadvertent finds and the stipulations of recordation of sacred items</li> <li>b) Contact information of relevant individuals for the Project</li> </ul>				
<b>MM TRI-04 Cultural Resource Disposition:</b> In the event that Native American cultural resources are discovered during the course of ground disturbing activities (inadvertent discoveries), the following procedures shall be carried out for final disposition of the discoveries: <ul style="list-style-type: none"> <li>a) One or more of the following treatments, in order of preference, shall be employed with the tribes. Evidence of such shall be provided to the City of Moreno Valley Planning Department:                             <ul style="list-style-type: none"> <li>1. Preservation-In-Place of the cultural resources, if feasible. Preservation in place means avoiding the resources, leaving them in the place they were found with no development affecting the integrity of the resources.</li> <li>2. Onsite reburial of the discovered items as detailed in the treatment plan required pursuant to Mitigation Measure TRI-01. This shall include measures and provisions to protect the future reburial area from any future impacts in perpetuity. Reburial shall not occur until all legally required cataloging and basic recordation have been completed. No recordation of sacred items is permitted without the written consent of all Consulting Native American Tribal Governments as defined in TRI-03 The location for the future reburial area shall be identified on a</li> </ul> </li> </ul>				

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confidential exhibit on file with the City, and concurred to by the Consulting Native American Tribal Governments prior to certification of the environmental document.				
<b>MM TRI-05</b> The City shall verify that the following note is included on the Grading Plan: "If any suspected archaeological resources are discovered during ground –disturbing activities and the Project Archaeologist or Native American Tribal Representatives are not present, the construction supervisor is obligated to halt work in a 100-foot radius around the find and call the Project Archaeologist and the Tribal Representatives to the site to assess the significance of the find."				
<b>MM TRI-06 Inadvertent Finds:</b> If potential historic or cultural resources are uncovered during excavation or construction activities at the Project Site that were not assessed by the archaeological report(s) and/or environmental assessment conducted prior to Project approval, all ground disturbing activities in the affected area within 100 feet of the uncovered resource must cease immediately and a qualified person meeting the Secretary of the Interior's standards (36 CFR 61), Tribal Representatives, and all site monitors per the Mitigation Measures, shall be consulted by the City to evaluate the find, and as appropriate recommend alternative measures to avoid, minimize or mitigate negative effects on the historic, or prehistoric resource. Further ground disturbance shall not resume within the area of the discovery until an agreement has been reached by all parties as to the appropriate mitigation. Work shall be allowed to continue outside of the buffer area and will be monitored by additional archeologist and Tribal Monitors, if needed. Determinations and recommendations by the consultant shall be immediately submitted to the Planning Division for consideration and implemented as deemed appropriate by the Community Development Director, in consultation with the State Historic Preservation Officer (SHPO) and any and all Consulting Native American Tribes as defined in TRI-02 before any further work commences in the affected area. If the find is determined to be significant and avoidance of the site has not been achieved, a Phase III data recovery plan shall be				

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prepared by the Project Archeologist, in consultation with the Tribe, and shall be submitted to the City for their review and approval prior to implementation of the said plan.				
<b>MM TRI-07 Human Remains:</b> If human remains are discovered, no further disturbance shall occur in the affected area until the County Coroner has made necessary findings as to origin. If the County Coroner determines that the remains are potentially Native American, the California Native American Heritage Commission shall be notified within 24 hours of the published finding to be given a reasonable opportunity to identify the “most likely descendant”. The “most likely descendant” shall then make recommendations and engage in consultations concerning the treatment of the remains (California Public Resources Code 5097.98). (GP Objective 23.3, CEQA).				
<b>MM TRI-08 Non-Disclosure of Reburial Locations:</b> It is understood by all parties that unless otherwise required by law, the site of any reburial of Native American human remains or associated grave goods shall not be disclosed and shall not be governed by public disclosure requirements of the California Public Records Act. The coroner, pursuant to the specific exemption set forth in California Government Code 6254 (r), parties, and Lead Agencies, will be asked to withhold public disclosure information related to such reburial, pursuant to the specific exemption set forth in California Government Code 6254 (r).				
<b>MM TRI-09 Archeology Report - Phase III and IV:</b> Prior to final inspection, the developer/permit holder shall prompt the Project Archeologist to submit two (2) copies of the Phase III Data Recovery report (if required for the Project) and the Phase IV Cultural Resources Monitoring Report that complies with the Community Development Department's requirements for such reports. The Phase IV report shall include evidence of the required cultural/historical sensitivity training for the construction staff held during the pre-grade meeting. The Community Development Department shall review the reports to determine adequate mitigation compliance. Provided the reports are adequate, the Community Development Department shall clear this condition. Once the report(s) are determined to be adequate, two (2) copies shall be submitted to the Eastern				



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Information Center (EIC) at the University of California Riverside (UCR) and one (1) copy shall be submitted to the Consulting Tribe(s) Cultural Resources Department(s).				