

4.0 FINAL MITIGATION MONITORING PROGRAM

MONITORING MATRIX PROGRAM FOR  
VILLA TICINO WEST DEVELOPMENT (MMIP)

Mitigation Measure	Timing	Agency/Department Consultation	Verification (Date and Initials)
<p><b>AESTHETICS</b></p>			
<p>MM 4.1.3 Prior to final site plan approval, the project applicant shall submit a landscaping plan to the City for its review and approval. The landscaping plan shall include, but not be limited to, detail on the landscaping that would be installed along the Louise Avenue and Airport Way frontages, and landscaping along the western boundary of the project site adjacent to the railroad tracks.</p>	<p>Prior to final site plan approval</p>	<p>City of Manteca Community Development Department</p>	
<p>MM 4.1.4a Lighting on the project site shall not indirectly illuminate adjacent residences at a level greater than one foot-candle in intensity when measured from the portion of the residence facing the project site. All lighting in such areas shall be shielded and directed inward onto the project site. Nothing in this mitigation measure shall be construed so as to prohibit the installation of lighting necessary for safety and/or security purposes.</p>	<p>Upon commencement of lighting installation</p>	<p>City of Manteca Community Development Department.</p>	
<p>MM 4.1.4b The use of reflective materials in the construction of commercial buildings, the fire station and walls is prohibited. Earth tones that do not reflect sunlight for colors of these structures shall be used. Prior to issuance of a building permit for these structures, the project applicant shall demonstrate compliance with this mitigation measure to the City.</p>	<p>Prior to issuance of building permit.</p>	<p>City of Manteca Community Development Department.</p>	
<p><b>AIR QUALITY</b></p>			
<p>MM 4.2.1a The project developer shall prepare and submit a dust control plan to the SJVAPCD that incorporates all provisions of Regulation VIII and the following additional measures:</p>	<p>Prior to issuance of grading permit.</p>	<p>City of Manteca Community Development Department, San Joaquin Valley Air Pollution Control District.</p>	

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<ul style="list-style-type: none"> <li>▪ Limit traffic speeds on unpaved roads to 15 mph.</li> <li>▪ Install wheel washers for all exiting trucks, or wash off all trucks and equipment leaving the site.</li> <li>▪ Suspend excavation and grading activities when winds exceed 20 mph.</li> <li>▪ Limit size of area subject to excavation, grading or other construction activity at any one time to avoid excessive dust.</li> <li>▪ Install sandbags or other erosion control measures to prevent silt runoff to public roadways from sites with a slope greater than one percent.</li> <li>▪ Expeditiously remove the accumulation of mud or dirt <i>resulting from carryout and trackout</i> from adjacent public streets at least once every 24 hours when operations are occurring.</li> </ul>			
<p>MM 4.2.1b The following are appropriate measures that would reduce exhaust emissions during construction:</p> <ul style="list-style-type: none"> <li>▪ Equipment not in use for more than ten minutes should be turned off.</li> <li>▪ Limit the hours of operation of heavy-duty equipment and/or the amount of equipment in use.</li> <li>▪ Whenever feasible and cost effective, use electrically driven equipment, provided they are not run via a portable generator set.</li> </ul>	<p><i>Upon commencement of construction activities.</i></p>	<p><i>City of Manteca Community Development Department, San Joaquin Valley Air Pollution Control District.</i></p>	
<p>MM 4.2.3 The following are mitigation measures deemed feasible and effective for the proposed project:</p> <ul style="list-style-type: none"> <li>▪ Use energy-efficient design including automated control system for heating/air</li> </ul>	<p><i>Prior to final site plan approval.</i></p>	<p><i>City of Manteca Community Development Department, San Joaquin Valley Air Pollution Control District.</i></p>	

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<p>conditioning and energy efficiency, utilize lighting controls and energy-efficient lighting in buildings and use light colored roof materials to reflect heat.</p> <ul style="list-style-type: none"> <li>▪ Plant deciduous trees on the south and westerly facing sides of buildings.</li> <li>▪ Provide low nitrogen oxide (NOx) emitting and/or high efficiency water heaters.</li> <li>▪ Appropriate easements should be reserved to provide for future improvements such as bus turnouts, loading areas, and shelters.</li> <li>▪ Sidewalks and bike paths should be installed throughout as much of the project as possible and should be connected to any nearby open space areas, parks, schools, commercial areas, etc</li> <li>▪ Provide for efficient interior circulation and pedestrian access within the project area and provide logical connection points for future development on the surrounding properties.</li> <li>▪ Provide secure bicycle parking to encourage non-motorized forms of transportation to and from the site.</li> <li>▪ Natural gas lines and electrical outlets should be installed in patio areas to encourage the use of gas and/or electric barbeques.</li> </ul>			
<b>BIOLOGICAL RESOURCES</b>			
<p>MM 4.3.3a During project plan development, the project applicant shall conduct a rare plant survey. Surveys shall be conducted by qualified biologists in accordance with the most current CDFG and/or USFWS guidelines or protocols and shall be conducted at the time of year when Sanford's arrowhead is identifiable (i.e., May – August). Based on the results of the survey, the project applicant shall determine whether the</p>	<p><i>Prior to issuance of grading permit or recordation of final map, whichever occurs first.</i></p>	<p><i>City of Manteca Community Development Department, California Department of Fish and Game, U.S. Fish and Wildlife Service.</i></p>	

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<p>project would result in a significant impact to any special-status plant species, in consultation with CDFG and/or USFWS.</p> <p>If the survey reveals no occurrences of any special-status plant species, or if it is determined that no significant impacts to any special-status plant species would result from project implementation, then no further mitigation would be required. Should one or more special-status plant species occur in the project site, and a determination of significant impact be made, the project applicant shall prepare and implement a mitigation plan that reduces impacts to special-status plants, in consultation with CDFG and/or USFWS. Mitigation measures should include one or more of the following options:</p> <ul style="list-style-type: none"> <li>▪ Avoid and preserve the population.</li> <li>▪ Reduce impacts to the special-status plant population by altering project plans.</li> <li>▪ Develop and implement a plan to remove and transplant the subject population, as approved by CDFG and/or USFWS.</li> </ul> <p>The mitigation plan must be in accordance with any applicable state and/or federal statutes and laws.</p>			
<p>Alternatively, this mitigation measure may be implemented:</p> <p><b>MM 4.3.3b</b> As an alternative to MM 4.3.3a, the project applicant may choose to participate in the SJMSCP. If the project applicant chooses to participate in the SJMSCP, the project applicant shall notify SJCOG of plans to commence ground disturbance to allow for pre-construction surveys</p>	<p><i>Prior to issuance of grading permit or recordation of final map, whichever occurs first.</i></p>	<p><i>SJCOG Technical Advisory Committee, City of Manteca Community Development Department.</i></p>	

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<p>for special-status plants. If Sanford's arrowhead or other special-status plant species is/are identified in the project site during preconstruction surveys, the Joint Powers Authority (JPA), in consultation with the SJCOG Technical Advisory Committee (TAC), will determine whether or not additional measures will be required to ensure that the long-term survival of the species will not be jeopardized. Additional measures may include project redesign, relocation of the special-status plant population, and/or seed collection.</p>			
<p>MM 4.3.5a The project applicant may choose to minimize the loss of giant garter snake habitat through project redesign (e.g., reducing the size of the project site, or providing for preserved areas). Full avoidance of impacts to giant garter snake would require the project to avoid all suitable aquatic habitat (i.e., irrigation canal) and adjacent upland habitat (i.e., within 200 feet of suitable aquatic habitat). The amount of aquatic and upland habitat present in the project site will be determined by the USFWS based upon a U.S. Army Corps of Engineers verified wetland delineation. The wetland delineation will be performed as a requirement of mitigation measure MM 4.3.10 below.</p>	<p><i>Prior to issuance of grading permit or recordation of final map, whichever occurs first.</i></p>	<p><i>City of Manteca Community Development Department, U.S. Fish and Wildlife Service.</i></p>	
<p>MM 4.3.5b After implementation of MM 4.3.5a, if the project applicant cannot fully avoid impacts to giant garter snake aquatic and adjacent upland habitat, the project applicant shall mitigate for loss of giant garter snake habitat at a 3:1 replacement ratio by providing for:</p> <ul style="list-style-type: none"> <li>▪ The preservation and management (in perpetuity) of off-site giant garter snake</li> </ul>	<p><i>After implementation of MM 4.3.5a and prior to issuance of grading permit or recordation of final map, whichever occurs first.</i></p>	<p><i>City of Manteca Community Development Department, U.S. Fish and Wildlife Service</i></p>	

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<p>habitat;</p> <ul style="list-style-type: none"> <li>▪ By providing in-lieu fees to USFWS for such purposes; and/or</li> <li>▪ Restoration and/or construction of on-site replacement habitat following the "Guidelines for Restoration and/or Replacement of Giant Garter Snake Habitat" outlined in the Giant Garter Snake Programmatic, Appendix A (USFWS 1997).</li> </ul>			
<p>MM 4.3.5c</p> <p>Upon commencement of project construction, incidental take and minimization measures according to the Giant Garter Snake Programmatic (USFWS 1997) shall be implemented. Incidental take and minimization measures may include, but are not limited to:</p> <ul style="list-style-type: none"> <li>▪ All construction activity within giant garter snake habitat shall be conducted between May 1 and October 1 (the active period for giant garter snake). Between October 2 and April 30 contact the USFWS to determine if additional measures are necessary to minimize and avoid take.</li> <li>▪ Any dewatered habitat must remain dry for at least 15 consecutive days after April 15 and prior to excavating or filling of the dewatered habitat.</li> <li>▪ Prior to construction activities, a qualified biologist approved by the USFWS shall conduct an environmental awareness training session for construction personnel.</li> <li>▪ Within 24 hours prior to commencement of construction activities, the site shall be inspected by a qualified biologist who is approved by the USFWS. The biologist will provide the USFWS with a field report form</li> </ul>	<p>Upon commencement of project construction.</p>	<p>City of Manteca Community Development Department, USFWS.</p>	

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<p>documenting the monitoring efforts within 24 hours of commencement of construction activities. The project site shall be reinspected whenever a lapse in construction activity of two weeks or greater has occurred.</p> <ul style="list-style-type: none"> <li>▪ Clearing of wetland vegetation will be confined to the minimal area necessary to excavate toe of bank for riprap of fill placement. Excavation of channel for removal of accumulated sediments will be accomplished by using equipment located on and operated from top of banks, with the least interference practical for emergent vegetation.</li> <li>▪ Movement of heavy equipment to and from the project site shall be restricted to established roadways to minimize habitat disturbance.</li> <li>▪ Preserved giant garter snake habitat shall be designated as environmentally sensitive areas and shall be flagged by a qualified biologist approved by the USFWS and avoided by all construction personnel.</li> <li>▪ After completion of construction activities, any temporary fill and construction debris shall be removed and, wherever feasible, disturbed areas shall be restored to pre-project conditions.</li> </ul>			
<p>Alternatively, this mitigation measure may be implemented:</p> <p>MM 4.3.5d As an alternative to MM 4.3.5a, MM 4.3.5b and MM 4.3.5c, the project applicant may choose to participate in the SJMSCP. If the project applicant chooses to participate in the SJMSCP, the project applicant will either fully avoid impacts to the species or be required to provide</p>	<p><i>Prior to issuance of grading permit or recordation of final map, whichever occurs first.</i></p>	<p><i>SJCOG Technical Advisory Committee, City of Manteca Community Development Department</i></p>	

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<p>compensation for agricultural habitat land conversion, including irrigation canals, which would include the giant garter snake aquatic and upland habitat in the project site.</p> <p>In accordance with Section 5.5.9 of the SJMSCP, if the project applicant chooses full avoidance of impacts to potential giant garter snake habitat, buffers must be established around potential habitat. Buffers shall be a minimum of 275 feet, and up to 525 feet, from the edge of the suitable aquatic habitat (i.e., a minimum of 275 feet from the edge of the irrigation canals). The size of the buffer shall be determined on a case-by-case basis in consultation with the TAC and with the concurrence of the permitting agencies (i.e., USFWS and CDFG). Additionally, the following measures must be implemented:</p> <ul style="list-style-type: none"> <li>▪ Construction and other ground disturbances (e.g., working areas, spoils, and equipment storage areas) shall be prohibited within established setbacks. Natural vegetation shall be maintained within the setback. The use of insecticides, herbicides and fertilizers is not permitted within established setbacks.</li> <li>▪ All on-site construction personnel shall be given instruction regarding the presence of listed species and the importance of avoiding impacts to these species and their habitats. Instruction shall be provided by a biologist qualified by the TAC, and shall occur on the first day of construction, prior to any ground-breaking activities.</li> <li>▪ Maintain water quality and limit construction runoff into aquatic areas through use of hay</li> </ul>			

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<p>bales, filter fences, vegetative buffer strips, or other accepted equivalents.</p> <ul style="list-style-type: none"> <li>▪ Setbacks shall be marked by brightly colored fencing or flagging throughout the construction process. Setbacks shall be indicated on recorded maps, whenever projects involve parcel or subdivision maps.</li> </ul> <p>If the project applicant chooses to compensate for habitat loss (instead of full avoidance), compensation would provide for establishment of preserves to mitigate for loss of habitat for giant garter snake. Compensation would be provided as directed in mitigation measure MM 4.3.6b.</p> <p>In addition to either full avoidance or compensation, all on-site construction personnel shall be given instruction regarding the potential presence of giant garter snake and the importance of avoiding impacts to the species and its habitat. Instruction shall be provided by a biologist qualified by the TAC, and shall occur on the first day of construction, prior to any ground-breaking activities.</p>			
<p><b>MM 4.3.6a</b> The project applicant may choose to minimize the loss of Swainson's hawk foraging habitat through project redesign (e.g., reducing the size of the project site, or providing for open space areas). If project redesign is not feasible, the project applicant shall mitigate for the loss of Swainson's hawk foraging habitat by providing for the preservation and management (in perpetuity) of off-site Swainson's hawk foraging habitat, or by providing in-lieu fees to CDFG for such purposes. The mitigation ratio will be determined in consultation with CDFG.</p>	<p><i>Prior to issuance of grading permit or recordation of final map, whichever occurs first.</i></p>	<p><i>City of Manteca Community Development Department, California Department of Fish and Game.</i></p>	

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<p>Alternatively, this mitigation measure may be implemented:</p> <p>MM 4.3.6b As an alternative to MM 4.3.6a, the project applicant may choose to participate in the SJMSCP. If the project applicant chooses to participate in the SJMSCP, the project applicant will be required to provide compensation for agricultural habitat land conversion, which would include the Swainson's hawk foraging habitat in the project site. Compensation would provide for establishment of preserves to mitigate for loss of Swainson's hawk foraging habitat.</p> <p>As outlined in Section 4.1 of the SJMSCP, the project applicant shall mitigate at a 1:1 ratio for every acre of agricultural land impacted (SJCOG, 2000). Methods by which the project applicant may provide mitigation are outlined in Section 5.3.2 of the SJMSCP, and may include one or more of the following options:</p> <ul style="list-style-type: none"> <li>A. Provide impact fees at the current rate (contact SJCOG for current rates) per acre of agricultural land impacted;</li> <li>B. Dedicate, as conservation easements or fee title, or in-lieu dedications (at a ratio of 1:1) as specified in Sections 5.3.2.2 and 5.3.2.3 of the SJMSCP;</li> <li>C. Purchase approved mitigation bank credits (at a ratio of 1:1) as specified in Section 5.3.2.4 of the SJMSCP;</li> <li>D. Propose an alternative mitigation plan that is consistent with the goals of the SJMSCP and equivalent in biological value to options A, B, or C above, subject to approval by the JPA with the concurrence of the permitting</li> </ul>	<p>As outlined in Section 5.3.2.3 of the SJMSCP, collection of fees/purchase of mitigation banking credits will occur prior to issuance of a grading permit, or a grading permit, or disturbance. Land dedications in lieu of fees payments/mitigation banking credits shall occur prior to the issuance of a grading or building permit, whichever comes first.</p>	<p>SJCOG Technical Advisory Committee, City of Manteca Community Development Department.</p>	

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<p>agencies; representatives on the TAC.</p> <p>Establishment of preserves shall follow preserve design criteria outlined in Section 5.4.4 of the SJMSCP.</p>			
<p><b>MM 4.3.7a</b> The project applicant shall retain a qualified biologist to conduct a focused survey for active raptor nest sites within one-half (0.5) mile prior to (i.e., within 30 days of) the onset of each construction phase initiated during the nesting season (March 15 – August 15). Surveys shall be conducted in accordance with the most current CDFG and/or USFWS guidelines or protocols. If active nests of target species are located during preconstruction surveys, CDFG and/or USFWS shall be notified on the status of the nests, and construction delayed within 0.5-mile of the nest to avoid disturbance until the birds leave the nest, or a time deemed acceptable (e.g., when the juveniles have fledged) by CDFG and/or USFWS. CDFG and/or USFWS may choose to reduce the 0.5-mile buffer based on various factors, such as vegetative and topographic screening, existing disturbance levels (e.g., roads, train tracks, development) and apparent sensitivity (or lack thereof) of the birds. If it is not feasible to maintain a 0.5-mile distance from an active nest, CDFG and/or USFWS shall be consulted to develop alternative mitigation measures (e.g., reduce the buffer zone, artificial screening).</p>	<p><i>Within 30 days prior to commencement of each construction phase initiated during the nesting season (March 15 – August 15).</i></p>	<p><i>City of Manteca Community Development Department, California Department of Fish and Game and/or U.S. Fish and Wildlife Service.</i></p>	
<p>Alternatively, this mitigation measure may be implemented:</p> <p><b>MM 4.3.7b</b> As an alternative to MM 4.3.7a, the project applicant may choose to participate in the SJMSCP. Under the SJMSCP, the project applicant has the option of retaining potential</p>	<p><i>Within 30 days prior to commencement of project construction.</i></p>	<p><i>SJCOG Technical Advisory Committee, City of Manteca Community Development Department.</i></p>	

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<p>nest trees or removing the nest trees. Known and potential nest trees may be removed during the non-breeding season (typically between September 1<sup>st</sup> and February 15<sup>th</sup>), either before raptors begin nesting, or after young have fledged and are independent of the nest tree.</p> <p>If the project applicant elects to retain a nest tree, the following measures shall be implemented during construction activities:</p> <ul style="list-style-type: none"> <li>▪ Between 14 and 30 calendar days before ground disturbance, the project applicant shall notify SJCOC of plans to commence ground disturbance to allow for preconstruction surveys for nesting raptors (e.g., Swainson's hawk, red-tailed hawk, red-shouldered hawk). Preconstruction surveys shall be conducted by a qualified biologist for all suitable nesting areas in the project site, and within 500 feet of the project site.</li> <li>▪ If any raptor nests are located in the project site, a minimum 500-foot setback will be established around nests until the fledglings have left the nest. The setback area will be clearly marked with brightly colored fencing. Setbacks may be reduced if a qualified biologist determines that the setback can be reduced without undue disturbance to the nesting hawks. No nest trees will be removed until the young fledge and are independent of the nest tree.</li> <li>▪ If a nest tree becomes occupied during construction activities, then all construction activities shall remain a distance of two times the dripline of the tree, measured from the</li> </ul>			

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<p>MM 4.3.8a                      nest.                      Within 30 days prior to start of construction, a qualified biologist shall conduct preconstruction surveys for western burrowing owl, in accordance with the most current CDFG guidelines. If these surveys reveal no occurrences of western burrowing owl, then no further mitigation would be required. If western burrowing owls occur on the project site, the project applicant shall prepare and implement a mitigation plan that reduces impacts to western burrowing owl, in consultation with CDFG. The mitigation plan must be in accordance with any applicable state and/or federal statutes and laws. The mitigation plan may include any or all of the following mitigation measures (adapted from CDFG 1995):</p> <ul style="list-style-type: none"> <li>▪ Minimization of impacts to the species through avoidance of occupied burrows (i.e., no ground disturbing activities within approximately 250 feet during the breeding season [February 1 through August 31], and within approximately 160 feet during the non-breeding season [September 1 through August 31]);</li> <li>▪ On-site mitigation by retaining a minimum of 6.5 acres of suitable habitat per pair or resident bird;</li> <li>▪ When destruction of occupies burrows is unavoidable, off-site mitigation at a 2:1 ratio on a protected lands site;</li> <li>▪ Passive relocation of western burrowing owls during the non-breeding season (September 1 through August 31);</li> <li>▪ Funding for long-term management and</li> </ul>	<p>Survey within 30 days prior to commencement of project construction. Mitigation plan, if necessary, to be implemented upon commencement of project construction.</p>	<p>City of Manteca Community Development Department, California Department of Fish and Game.</p>	<p>Less than significant</p>

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<p>monitoring of the protected lands; and</p> <ul style="list-style-type: none"> <li>▪ Mitigation success criteria, remedial measures, and reporting requirements.</li> </ul> <p>Alternatively, this mitigation measure may be implemented:</p> <p>MM 4.3.8b As an alternative to MM 4.3.8a, the project applicant may choose to participate in the SJMSCP. If the project applicant chooses to participate in the SJMSCP, the project applicant will be required to provide compensation for agricultural habitat land conversion, which would include the burrowing owl nesting/wintering and foraging habitat in the project site. Compensation would provide for establishment of preserves to mitigate for loss of habitat for western burrowing owl. Compensation would be provided as directed in Mitigation Measure MM 4.3.6b. Additionally, under the SJMSCP, the project applicant must notify SJCOG between 14 and 30 calendar days before ground disturbance to allow for preconstruction surveys for the burrowing owl.</p> <p>If burrowing owls are found during the non-breeding season (September 1 through January 31), burrowing owls occupying the project site shall be evicted from the project site by passive relocation as described in the California Department of Fish and Game's Staff Report on Burrowing Owls (CDFG 1995).</p> <p>If burrowing owls are found during the breeding season (February 1 through August 31), occupied burrows shall not be disturbed and shall be provided with a 75 meter (approximately 250-foot) protective buffer until and unless the TAC,</p>	<p>Within 30 days prior to commencement of project construction.</p>	<p>SJCOG Technical Advisory Committee, City of Manteca.</p>	

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<p>with the concurrence of the Permitting Agencies' representatives on the TAC; or unless a qualified biologist approved by the Permitting Agencies verifies through non-invasive means that either:</p> <p>1) the birds have not begun egg laying, or 2) juveniles from the occupied burrows are foraging independently and are capable of independent survival. Once the fledglings are capable of independent survival, the burrow can be destroyed. One-way eviction doors shall be installed over active burrows for a minimum of three days prior to the time any burrow is destroyed.</p> <p>If burrowing owls are not known to use the project site, or have been passively relocated from the project site, additional measures to discourage occupation or re-occupation shall be implemented. Section 5.2.4.15 of the SJMSCP provides several methods for discouraging burrowing owls from using a project site, including retaining tall vegetation on the site, disking or plowing the site, or using various chemicals or traps to kill ground squirrels.</p>			
<p>MM 4.3.10 The project applicant shall retain a qualified biologist to conduct a wetland delineation for the project site. The wetland delineation shall be performed according to the Corps wetland delineation manual (Environmental Laboratory 1987), and meet the minimum requirements of the Sacramento District of the Corps. The wetland delineation shall be submitted to the Corps for verification. If the Corps determines that there are no jurisdictional Waters of the United States in the project site, then no further mitigation is necessary. If the Corps determines</p>	<p><i>Prior to issuance of grading permit or recordation of final map, whichever occurs first.</i></p>	<p><i>City of Manteca Community Development Department, U.S. Army Corps of Engineers, RWQCB</i></p>	<p>Significant and unavoidable</p>

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<p>that any of the wetlands in the project site are jurisdictional Waters of the United States, then the project applicant shall obtain authorization for any fills, road crossings, utility crossings, or other direct impacts to Waters of the United States through a wetland fill permit from the Corps under Section 404 of the Clean Water Act, as specified by the Corps' permitting requirements. As part of this authorization, a mitigation plan shall be prepared and complied with for full compensation of Waters of the United States losses. Such a mitigation plan will include an on-site compensation or, if necessary, a combination of on-site and off-site compensation, and shall include provisions for re-evaluation in the event that mitigation success criteria are not met within specified time frames. The mitigation plan must also be submitted to the County Planning Department as a component of individual project applications. A request for water quality certification from the Regional Water Quality Control Board (RWQCB) will also be required pursuant to Section 401 of the Clean Water Act.</p>			
<p><b>HAZARDOUS MATERIALS</b>  <b>MM 4.4.1a</b> Prior to approval of the final map, a Phase II Environmental Site Assessment shall be performed to determine the extent of soil contamination at the diesel fuel tanks and waste oil tank locations at 511 South Airport Way. Also, soil sampling shall occur at random spots on the project site to determine the presence of agricultural chemicals. These soil samples shall be analyzed in order to determine if any hazardous materials found in the samples pose a health risk to human habitation. A registered</p>	<p>Prior to approval of final map.</p>	<p>City of Manteca Community Development Department, State Department of Toxic Substances Control and the Central Valley Regional Water Quality Control Board.</p>	

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<p>environmental assessor shall conduct the sampling and analysis. The report documenting the soil sampling and analysis shall present conclusions and, if necessary, make recommendations for remediation. All feasible recommendations shall be implemented, with costs of remediation to be allocated in a manner to be determined by the City, the project applicant and other parties of interest.</p>			
<p><b>MM 4.4.1b</b> Prior to approval of the final map, all batteries, buckets, drums and other chemical containers that could contain hazardous materials shall be removed from the project site. If any stained soils are discovered during the removal of these materials, a registered environmental assessor shall be contacted to determine the extent and severity of the potential contamination and to recommend remediation if necessary.</p>	<p><i>Prior to approval of final map.</i></p>	<p><i>City of Manteca Community Development Department, State Department of Toxic Substances Control and the Central Valley Regional Water Quality Control Board.</i></p>	
<p><b>MM 4.4.2a</b> If the project proposes to use existing wells on the project site, then prior to approval of the final map, groundwater sampling shall occur at all water wells located on the project site. These water samples shall be analyzed in order to determine if any hazardous materials found in the samples pose a health risk to human habitation. A registered environmental assessor shall conduct the sampling and analysis. The report documenting the water sampling and analysis shall present conclusions and, if necessary, make recommendations for remediation. All feasible recommendations shall be implemented, with costs of remediation to be allocated in a manner to be determined by the City, the project applicant and other parties of interest.</p>	<p><i>Prior to approval of final map</i></p>	<p><i>City of Manteca Community Development Department, Central Valley Regional Water Quality Control Board, California Department of Health Services Office of Drinking Water.</i></p>	
<p><b>MM 4.4.2b</b> If the project does not propose to use existing wells on the project site, then the project</p>	<p><i>Prior to commencement of</i></p>	<p><i>City of Manteca Community Development Department Central</i></p>	

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<p>applicant shall cap all wells on the project site, in accordance with County guidelines. No private wells shall be permitted on the project site, unless and until it is demonstrated that water from a well would pose no health hazard to residents on the project site.</p>	<p>construction activities.</p>	<p>Valley Regional Water Quality Control Board.</p>	
<p>MM 4.4.3</p> <p>As a condition of demolition permit approval for buildings within the project site, the project applicant shall implement the following measures:</p> <ol style="list-style-type: none"> <li>1) Thoroughly survey the project site and existing structures for the presence of asbestos-containing material and/or lead paint. The survey shall be performed by a person who is properly certified by the California Occupational Safety and Health Administration (Cal/OSHA) and who has passed an EPA-approved building inspector course.</li> <li>2) If building elements containing any amount of asbestos and/or lead paint are found, prepare an abatement plan describing activities and procedures for removal, handling and disposal of these building elements, using the most appropriate procedures, work practices and engineering controls.</li> <li>3) Provide the survey findings, the abatement plan if necessary, and notification of intent to demolish to the San Joaquin County Environmental Health Department at least ten days prior to commencement of activity.</li> </ol> <p>Perform removal of the identified asbestos-containing materials using a properly qualified</p>	<p>Prior to issuance of demolition permit.</p>	<p>City of Manteca Community Development Department, San Joaquin Valley Unified Air Pollution Control District.</p>	

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contractor with properly trained workers. Workers shall be provided with personal protective equipment and shall utilize procedures to minimize the generation of airborne asbestos fibers. Air monitoring during removal of asbestos-containing materials shall be performed to confirm that concentrations of airborne fibers are in compliance with applicable standards.			
MM 4.4.4 Upon the start of any work on electrical lines on the project site, all electrical transformers not clearly certified as being free of PCBs shall be removed and replaced with PCB-free transformers.	Upon commencement of electrical line work.	City of Manteca Community Development Department, State Department of Toxic Substances Control.	
<b>GEOLOGY AND SOILS</b>			
MM 4.5.1 Project applicant shall demonstrate compliance with the provisions of NPDES General Permit No. CAS000002, including preparation of the SWPPP, prior to issuance of a grading permit. Project applicant shall implement provisions of the approved SWPPP during project construction activities.	Compliance with General Permit procedures prior to issuance of grading permit. Implementation of SWPPP provisions upon commencement of project construction activities.	City of Manteca Community Development Department, City of Manteca Public Works Department.	
MM 4.5.2a Prior to issuance of a grading permit, the project applicant shall submit a design-level geotechnical exploration report that characterizes the loose surficial soils on the project to determine specific criteria for grading and foundation design. These criteria shall be incorporated in the final design plans for the project, which shall be reviewed and approved by the City Engineer.	Prior to issuance of grading permit.	City of Manteca Community Development Department, City Engineer.	Less than significant
MM 4.5.2b Prior to issuance of a grading permit, the project applicant shall submit design plans that incorporate consideration for shallow	Prior to issuance of grading permit.	City of Manteca Community Development Department, City Engineer.	

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groundwater conditions. The project applicant shall also submit plans for the disposition of groundwater removed during potential dewatering operations associated with project construction. Such plans shall be reviewed and approved by the City Engineer.			
MM 4.5.4 A characterization of the potential liquefaction hazard on the project site shall be included as part of the design-level geotechnical exploration report that the project applicant shall be required to submit (see MM 4.5.2a). If a liquefaction hazard is determined to exist, special stabilization measures shall be recommended to reduce the potential impact on project structures. These measures shall be incorporated in the final design plans for the project, which shall be reviewed and approved by the City Engineer.	Prior to issuance of grading permit.	City of Manteca Community Development Department, City Engineer.	Less than significant
<b>HYDROLOGY AND WATER QUALITY</b>			
MM 4.6.1 Prior to final site plan approval, the project applicant shall submit a final storm drainage system plan to both the City Department of Public Works and SSJD for their review and approval. The plan shall include an estimate of the amount of surface runoff that would be generated after project buildout, and a demonstration of the ability of the project drainage system to accommodate anticipated runoff. A hydraulic analysis shall be completed and certified by a registered Civil Engineer showing there will be no rise in the 100-year water surface elevations in French Camp Slough during a 100-year storm event as a result of the proposed development. Any changes necessary to comply with the requirements and standards of both agencies shall be incorporated in the final plan.	Prior to final site plan approval.	City of Manteca Department of Public Works, South San Joaquin Irrigation District.	Less than significant

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<p>MM 4.6.2 For projects within the project site requiring grading or other earth moving activities, a Stormwater Pollution Prevention Plan (SWPPP) shall be submitted that contains measures to control erosion and sedimentation. The SWPPP shall, at a minimum, conform to the standards of the <i>California Storm Water Best Management Practices Handbook</i>. Erosion control measures may include, but are not limited to, the following:</p> <ul style="list-style-type: none"> <li>▪ Immediately revegetate or otherwise protect all disturbed areas from both wind and water erosion upon the completion of grading activities.</li> <li>▪ Use water bars, temporary swales and culverts, mulch and jute netting, hydroseeding, silt fences, sediments and/or other measures where necessary to prevent surface water from eroding graded areas and to retain sediment.</li> <li>▪ Water soils susceptible to wind erosion at least twice per day during construction.</li> <li>▪ Whenever possible, grading or other earth moving activities shall take place during the dry weather season, generally from April 15 to October 15 in a calendar year. If grading is to be conducted outside of the dry weather season, erosion control measures approved by the City Department of Public Works shall be implemented prior to October 15.</li> </ul> <p>As part of the SWPPP, the project applicant shall outline a program for the maintenance of any detention basins and storm drain inlets that are part of the storm drainage system. The program</p>	<p>Prior to issuance of a grading permit.</p>	<p>Regional Water Quality Control Board.</p>	<p>Less than significant</p>

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shall describe the removal and disposal of sediments, which may contain pollutants from urban runoff, that accumulate within the basins.			
MM 4.6.5a Fertilizers used in park and open space areas, excluding residential lawns and gardens, shall be of the slow-release form, or the proper chemical release for the soil textural class and infiltration rate, or a more soluble type applied as a solution. Fertilization rates shall be applied so that nutrients will not leach below the root zone.	Upon installation of park and open space areas.	San Joaquin County Environmental Health Department.	Less than significant
MM 4.6.5b Herbicides and pesticides used in park and open space areas, excluding residential lawns and gardens, may only be applied with selective equipment such as recirculating spray systems, shielded applicators or wiper applicators. Application rates shall not exceed specific rates of application and instructions for control of the specific problem weed as recommended by the manufacturer.	Upon installation of park and open space areas.	San Joaquin County Environmental Health Department.	
MM 4.6.5c Irrigation rates for park and open space areas, excluding residential lawns and gardens, shall not exceed 90 percent of the infiltration rate for each soil type and turf management combination. Irrigation shall be timed to correspond with fertilizer and herbicide application as recommended by the chemical manufacturers.	Upon installation of park and open space areas.	San Joaquin County Environmental Health Department.	
<b>LAND USE AND PLANNING</b>			
MM 4.7.4a Construction staging areas shall be located as far as reasonably possible from existing residential uses located in proximity to the eastern project boundary. Construction staging areas shall be identified on project site improvement plans and shall be included as part of the submittal package for subsequent site plans/final maps for each phase of the project.	Identified on site improvement plans and included as part of the submittal package for subsequent site plans.	City of Manteca Public Works and Planning Departments.	Less than significant
MM 4.7.4b Construction and development related equipment	Concurrent with and	City of Manteca Public Works	

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shall be staged on the project site at the end of each workday rather than removing and returning them to the site.	during project construction activities.	Department.	
<b>NOISE</b>			
MM 4.8.2 Construction activities should adhere to the requirements of the City of Manteca policies with respect to hours of operation, muffling of internal combustion engines, and other factors which affect construction noise generation and its effects on noise-sensitive land uses.	Prior to Improvement Plan approval.	City of Manteca Department of Public Works.	
MM 4.8.3a. Noise barriers should be constructed along the boundaries of the residences proposed adjacent to Airport Way and Louise Avenue. A barrier 7 feet in height (relative to back yard elevation) would be required to reduce future traffic noise levels to 60 dB Ldn or less at the nearest backyards proposed adjacent to those roadways. Barriers can take the form of earthen berms, solid walls, or a combination of the two. Appropriate materials for noise walls include precast concrete or masonry block. Other materials may be acceptable provide they have a density of approximately 4 lbs per square foot.	Prior to Improvement Plan approval.	City of Manteca Department of Public Works.	
MM-4.8.3b. Standard residential construction practices conducted in accordance with local building codes provide approximately 25 dB exterior to interior noise level reduction with windows closed, and approximately 15 dB reduction with windows open. Because future traffic noise levels are not predicted to exceed 70 dB Ldn at the building facades of the residences proposed nearest to Louise Avenue and Airport Way, standard construction practices would be sufficient to achieve compliance with the City of Manteca 45 dB Ldn interior noise level standard, provided that windows can be closed. Therefore,	Prior to Improvement Plan approval.	City of Manteca Department of Public Works.	

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<p>mechanical ventilation (air conditioning) should be provided for all residences constructed within this development adjacent to Louise Avenue and Airport Way to allow those occupants to close doors and windows as desired for additional acoustic isolation.</p>			
<p>MM 4.8.4a When specific development plans have been provided for the high-density residential site, those plans should be reviewed by an acoustical consultant to ensure that the common outdoor activity areas are sufficiently shielded from Louise Avenue (by barriers or residential structures) to ensure compliance with the City of Manteca 60 dB Ldn exterior noise level standards.</p>	<p>Prior to Improvement Plan approval.</p>	<p>City of Manteca Department of Public Works.</p>	<p>Less than significant</p>
<p>MM 4.8.4b Standard residential construction practices conducted in accordance with local building codes provide approximately 25 dB exterior to interior noise level reduction with windows closed, and approximately 15 dB reduction with windows open. Because future traffic noise levels are not predicted to exceed 70 dB Ldn at the high-density residential development site located adjacent to Louise Avenue, standard construction practices would be sufficient to achieve compliance with the City of Manteca 45 dB Ldn interior noise level standard, provided that windows can be closed. Therefore, mechanical ventilation (air conditioning) should be provided for all residences constructed within the high-density residential portion of this development to allow occupants to close doors and windows as desired for additional acoustic isolation.</p>	<p>Prior to Improvement Plan approval.</p>	<p>City of Manteca Department of Public Works.</p>	
<p>MM 4.8.5a. Noise barriers should be constructed along the boundaries of the residences proposed adjacent to the railroad tracks. A barrier 8 feet in height</p>	<p>Prior to Improvement Plan approval.</p>	<p>City of Manteca Department of Public Works.</p>	<p>Less than significant</p>

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<p>(relative to back yard elevation) would be required to reduce future traffic noise levels to 60 dB Ldn or less at the nearest backyards proposed adjacent to the railroad tracks. Barriers can take the form of earthen berms, solid walls, or a combination of the two. Appropriate materials for noise walls include precast concrete or masonry block. Other materials may be acceptable provide they have a density of approximately 4 lbs per square foot.</p>			
<p>MM 4.8.5b. Standard residential construction practices conducted in accordance with local building codes provide approximately 25 dB exterior to interior noise level reduction with windows closed, and approximately 15 dB reduction with windows open. Because future railroad noise levels are not predicted to exceed 70 dB Ldn at the building facades of the residences proposed nearest to the railroad tracks, standard construction practices would be sufficient to achieve compliance with the City of Manteca 45 dB Ldn interior noise level standard, provided that windows can be closed. Therefore, mechanical ventilation (air conditioning) should be provided for all residences constructed within this development adjacent to the railroad tracks to allow occupants to close doors and windows as desired for additional acoustic isolation.</p>	<p>Prior to Improvement Plan approval.</p>	<p>City of Manteca Department of Public Works</p>	
<p>MM 4.8.6 A project specific noise assessment should be completed for future commercial uses proposed at the southwest quadrant of Airport Way and Louise Avenue to ensure that noise generated by activities related to the commercial use(s) are mitigated to a state of satisfaction with City of Manteca noise standards.</p>	<p>Prior Plan approval for commercial issues.</p>	<p>City of Manteca Department of Public Works.</p>	
<p>MM 4.8.7 An acoustic enclosure should be constructed</p>	<p>Prior Plan approval.</p>	<p>City of Manteca Department of Public</p>	

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<p>around the noise-producing equipment of the two existing well sites located on the project site. Specifically, a building should be constructed to enclose the existing wells, and that structure should be designed so as to provide a building façade noise level reduction of 30 dB. This degree of attenuation is easily achieved by acoustic enclosures, and provides a margin of safety relative to the City's nighttime noise level standards.</p>		<p>Works.</p>	
<p>TRANSPORTATION AND CIRCULATION</p>			
<p>MM 4.10.1a The project shall install a traffic signal at the Airport Way/Louise Avenue intersection and provide protected left-turns and through/right-turn lanes at all approaches. Based upon the traffic study prepared for the project, the addition of project-related trips to existing would result in the intersection operating at LOS F with delay of 163.3 seconds in the PM peak hour. However, implementation of the identified improvement would result in this intersection operating at LOS C with a Delay of 29.7 and 32.4 seconds in the AM and PM peak hours respectively. Signal Warrant are met at this intersection. Signal Warrant Sheets are provided in the Technical Appendix.</p>	<p>Prior to issuance of the first building permit.</p>	<p>City of Manteca Public Works Department.</p>	
<p>MM 4.10.1b The project shall install a traffic signal at the intersection of Airport Way and the SR 120 westbound ramps. Based upon the traffic study prepared for the project, the addition of project-related trips to existing traffic would result in LOS F for the worst-case movement with delay of 159.0 seconds in the PM peak hour. However, implementation of the identified improvement would result in this intersection operating at LOS C and B with delay of 20.5 and 19.5 seconds in</p>	<p>Prior to issuance of the first building permit.</p>	<p>California Department of Transportation, City of Manteca Public Works Department.</p>	

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the AM and PM peak hours respectively. Signal Warrant are met at this intersection. Signal Warrant Sheets are provided in the Technical Appendix.			
MM 4.10.1c The project shall convert the intersection of Airport Way and the SR 120 eastbound ramps to all-way stop sign control. Based on the traffic study prepared for the project, the addition of project-related trips to existing traffic would result in LOS F for the worst-case movement with delay of 409.3 seconds in the PM peak hour. However, implementation of the identified improvement would result in this intersection operating at LOS B and D with delay of 11.0 and 29.2 seconds in the AM and PM peak hours respectively. Signal Warrant are met at this intersection, however, all-way stop sign control will improve the intersection. Signal Warrant Sheets are provided in the Technical Appendix.	Prior to commencement of construction activities.	California Department of Transportation, City of Manteca Public Works Department.	
MM 4.10.2a A traffic signal shall be installed at the Louise Avenue/Swanson Road/Villa Ticino West Access/Assieh Industrial Access intersection prior to the completion of the first fifty (50) single-family residences.	Prior to completion of first 50 single family residences.	City of Manteca Community Development Department.	
MM 4.10.2b A traffic signal shall be installed at the Yosemite Avenue/Swanson Road Extension intersection prior to construction of the first single-family residence in Phase VI.	Prior to issuance of building permits for Phase VI.	City of Manteca Community Development Department.	
MM 4.10.4 The City shall synchronize traffic signals on Louise Avenue from the railroad crossing to Airport Way so as to reduce the amount of queuing that occurs on Louise Avenue during times train traffic closes the railroad crossing.	Upon installation of traffic signal at Louise Avenue access point (see MM 4.10.2a).	City of Manteca Community Development Department.	
MM 4.10.6 Prior to final site plan approval, the project applicant shall indicate on site plans that adequate provision has been made for a Class II	Prior to final site plan approval.	City of Manteca Community Development Department.	Less than significant

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<p>bicycle lane along the Airport Way frontage. The provision for the bicycle lane shall be in accordance with design standards that are adopted as part of a Bicycle Route Master Plan or standards otherwise adopted by the City.</p> <p>MM 4.10.7a The project shall contribute its fair share to the costs of the installation of a traffic signal at the Yosemite Avenue/McKinley Avenue intersection. Based upon the traffic study prepared for the project, the traffic generated by the project will contribute approximately 26 percent of the Existing Plus Project AM peak hour traffic passing through the intersection, and approximately 40 percent of the PM peak hour traffic. The project applicant and the City shall develop a formula that equitably distributes the cost of the installation of the signal at such time as the intersection meets warrants for such.</p>	<p>Prior to issuance of the first building permit.</p>	<p>City of Manteca Public Works Department.</p>	
<p>MM 4.10.7b The project shall contribute its fair share to the costs of the improvements to the traffic signal at the Yosemite Avenue/Union Road intersection. Based upon the traffic study prepared for the project, the traffic generated by the project will contribute approximately 12 percent of the Existing Plus Project AM peak hour traffic passing through the intersection, and approximately 14 percent of the PM peak hour traffic. The project applicant and the City shall develop a formula that equitably distributes the cost of improvements to the signal at such time as the intersection meets warrants for such.</p>	<p>Prior to issuance of the first building permit.</p>	<p>City of Manteca Public Works Department.</p>	
<p>Both of the driveway intersections meet Caltrans traffic signal warrant 11 (Peak Hour Volume) under cumulative conditions. To mitigate the traffic impacts to less-than-significant level, signalization is recommended. MM 4.10.2 requires traffic signals at both of the subject access points. The following</p>	<p>Prior to issuance of the first building permit.</p>	<p>City of Manteca Public Works Department.</p>	<p>Less than significant</p>

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mitigation measure applies to the Yosemite Avenue/Swanson Road access point.			