



8.0 INVENTORY OF MITIGATION MEASURES

8.1 LAND USE

LAND USE COMPATIBILITY AND ACCESS

- 5.1-1 Refer to Mitigation Measures 5.4-1a, 5.4-1b, and 5.4-4 in Section 5.4, TRAFFIC AND CIRCULATION; Mitigation Measures 5.5-1a through 5.5-1d in Section 5.5, AIR QUALITY; and Mitigation Measures 5.6-1a through and 5.6-2 in Section 5.6, NOISE.

CONSISTENCY WITH RELEVANT PLANNING POLICIES

- 5.1-2 No mitigation measures have been identified. Project implementation shall require consultation and acquisition of required permits and approvals by responsible and trustee agencies that have jurisdiction over the Project site (refer to Section 5.7, BIOLOGICAL RESOURCES).

CUMULATIVE IMPACTS

No mitigation measures are required.

8.2 AESTHETICS, LIGHT, AND GLARE

SHORT-TERM (CONSTRUCTION) AESTHETIC IMPACTS

- 5.2-1 Construction equipment staging areas shall use appropriate screening (i.e., temporary fencing with opaque material) to buffer views of construction equipment and material. Staging locations shall be indicated on final plans and grading plans are subject to review and approval of the City. Compliance with this measure is subject to periodic field inspection by City Staff.

IMPACTS TO SCENIC VISTAS

- 5.2-2a To maintain the context of the Project area, roadway landscaping within the roadway median and parkways shall be similar in appearance to the existing ornamental landscaping along Green River Road and Foothill Parkway.
- 5.2-2b Disrupted areas of vegetation, wildlife habitat, natural watercourses, and drainage swales shall be replaced. Vegetation shall be arranged in informal masses to create a textured slope that is characteristic to a natural chaparral mountain slope terrain. Hillside and canyon slopes shall be planted with drought tolerant species to soften the impact of land grading, retaining walls, structures, and roads. All proposed landscaping species shall be selected to agree with the local climate, humidity, soil types, and local wind. All selected species shall share similar water



requirements. The street tree maintenance and enhancement program and new landscaping palette and location shall be developed in consultation with the City Public Works Department.

- 5.2-2c All cut and fill activities for the Project shall be developed in consultation with the City Public Works Department during the Plans, Specifications, and Estimate (PS&E) phase. The area and height of cut and fill shall be minimized, to the extent technically achievable, ensuring that slope tops and bottoms are rounded and facilitate a smooth and seamless transition where natural and built slopes intersect to the extent feasible.

IMPACTS TO VISUAL CHARACTER/QUALITY

- 5.2-3a To maintain consistency with the existing infrastructure (i.e., bridges, roadways, walls, sidewalks, signage, etc.) of the surrounding Project area, architectural treatments (which may include vine treatment) for the structural elements of the Project shall be determined in consultation with the City Public Works Department during the Plans, Specifications, and Estimate (PS&E) phase.
- 5.2-3b All aesthetic treatments to retaining walls and other wall features shall be developed in consultation with the City Public Works Department during the Plans, Specifications, and Estimate (PS&E) phase. The height of wall features shall be minimized and all walls shall be designed with smooth flowing forms that follow topography and utilize material, colors, and textures that blend in with the surrounding landscape, to the extent feasible.

LONG-TERM LIGHT AND GLARE

- 5.2-4a Traffic signal and streetlights shall comply with the City of Corona's *Street Light Standard* (Standard Plan 502-0), in consultation with the City Public Works Department.
- 5.2-4b All on-site street lighting shall utilize directional lighting techniques and low wattage bulbs that direct light downwards and minimize light spillover, without compromising site safety or security. Lighting fixtures shall use shielding, if necessary, to prevent spill lighting on adjacent off-site uses. Streetlights shall include high-pressure sodium vapor luminaire with 240 volt, swing down power module integral regulator ballast and lexan or glass refractor.

CUMULATIVE IMPACTS

Refer to Mitigation Measures 5.2-1 through 5.2-4b.



8.3 PUBLIC HEALTH AND SAFETY

HAZARDOUS MATERIALS

- 5.3-1a The interior of individual structures shall be visually inspected prior to demolition or renovation activities (if necessary). If hazardous materials are encountered, the materials shall be tested and properly disposed of in accordance with State and Federal regulatory requirements. Any stained soils or surfaces underneath the removed materials shall be sampled. Results of the sampling would indicate the appropriate level of remediation efforts that may be required. Testing and remediation of unknown wastes or suspect materials shall be conducted under the purview of the applicable agency (i.e., DTSC, Santa Ana RWQCB, and/or RCDEH). Remediation shall be conducted to the standards established by the Lead Agency (i.e., DTSC, Santa Ana RWQCB, and/or RCDEH). All contaminated soil locations identified shall be remediated below hazardous levels established by Title 22 of the California Code of Regulations and to the satisfaction of the applicable Lead Agency.
- 5.3-1b Prior to property acquisition, the presence or absence of septic tanks, underground storage tanks, as well as the presence or absence of hydraulic lifts located within the former automobile shop (APN 102-320-009) shall be confirmed by the City, or designee, through an interview with the current owner of the property. If present, the specific location of the tanks shall be identified, removed, and properly disposed of at an approved landfill facility, under the purview of the applicable agency (i.e., DTSC, Santa Ana RWQCB, and/or RCDEH). Once the tanks are removed, a visual inspection of the areas beneath and around the removed tanks shall be performed, by the appropriate agency. Any stained soils observed underneath the septic tanks shall be sampled. Results of the sampling, if necessary, would indicate the level of remediation efforts that may be required. Testing and remediation of unknown wastes or suspect materials shall be conducted under the purview of the applicable agency (i.e., DTSC, Santa Ana RWQCB, and/or RCDEH). Remediation shall be conducted to the standards established by the Lead Agency (i.e., DTSC, Santa Ana RWQCB, and/or RCDEH). All contaminated soil locations identified shall be remediated below hazardous levels established by Title 22 of the California Code of Regulations and to the satisfaction of the applicable Lead Agency.
- 5.3-1c All miscellaneous debris (i.e., wood, concrete, 55-gallon drums, miscellaneous household debris, automobiles, scrap metal, and plastic piping, etc.) shall be removed and disposed of at an approved landfill facility prior to construction activities under the purview of the appropriate agency (i.e., DTSC, Santa Ana RWQCB, and/or RCDEH). Once removed, a visual inspection of the areas beneath the removed materials shall be performed. Any stained soils observed underneath the removed materials shall be sampled. Results of the sampling, if necessary, would indicate the level of remediation efforts that may be required. Remediation shall be conducted to the standards established by the Lead



Agency (i.e., DTSC, Santa Ana RWQCB, and/or RCDEH). All contaminated soil locations identified shall be remediated below hazardous levels established by Title 22 of the California Code of Regulations and to the satisfaction of the applicable Lead Agency.

5.3-1d Any transformers or hydraulic lifts to be relocated during construction shall be conducted under the purview of the local utility purveyor to identify property-handling procedures regarding potential PCBs.

5.3-1e The terminus of the undocumented metal pipe shall be defined to determine if any undocumented UST exists. Should a UST be present, the tank shall be removed and properly disposed of at an approved landfill facility. Once the UST is removed, a visual inspection of the areas beneath and around the removed UST shall be performed. Any stained soils observed underneath the UST shall be sampled. Results of sampling, if necessary, would indicate the level of remediation efforts that may be required. Testing and remediation of unknown wastes or suspect materials shall be conducted under the purview of the applicable agency (i.e., DTSC, Santa Ana RWQCB, and/or RCDEH). Remediation shall be conducted to the standards established by the Lead Agency (i.e., DTSC, Santa Ana RWQCB, and/or RCDEH). All contaminated soil locations identified shall be remediated below hazardous levels established by Title 22 of the California Code of Regulations and to the satisfaction of the applicable Lead Agency.

5.3-1f ASTs shall be removed and properly disposed of at an approved landfill facility. Once the ASTs are removed, a visual inspection of the areas beneath and around the removed ASTs shall be performed. Any stained soils observed underneath the ASTs shall be sampled. Results of the sampling, if necessary, would indicate the level of remediation efforts that may be required. Testing and remediation of unknown wastes or suspect materials shall be conducted under the purview of the applicable agency (i.e., DTSC, Santa Ana RWQCB, and/or RCDEH). Remediation shall be conducted to the standards established by the Lead Agency (i.e., DTSC, Santa Ana RWQCB, and/or RCDEH). All contaminated soil locations identified shall be remediated below hazardous levels established by Title 22 of the California Code of Regulations and to the satisfaction of the applicable Lead Agency.

5.3-1g If unknown wastes or suspect materials are discovered during construction by the Project Contractor, which is thought to include hazardous waste and/or materials, the following shall occur:

- ❑ Immediately stop work in the vicinity of the suspected contaminant, removing workers and the public from the area;
- ❑ Notify the City of Corona Fire Department
- ❑ Notify the Project Engineer of the implementing agency (the City of Corona);
- ❑ Secure the area as directed by the Project Engineer; and



- Notify the implementing agency's Hazardous Waste/Materials Coordinator. Testing and remediation of unknown wastes or suspect materials shall be conducted under the purview of the applicable agency (i.e., DTSC, Santa Ana RWQCB, and/or RCDEH). Remediation shall be conducted to the standards established by the Lead Agency (i.e., DTSC, Santa Ana RWQCB, and/or RCDEH). All contaminated soil locations identified shall be remediated below hazardous levels established by Title 22 of the California Code of Regulations and to the satisfaction of the applicable Lead Agency.

- 5.3-1h Prior to construction, an asbestos survey shall be conducted by an Asbestos Hazard Emergency Response Act and California Occupational Safety and Health Administration certified building inspector to determine the levels of asbestos in structures should renovation or demolition occur. District Rule 1403 (Asbestos Emissions From Demolition/Renovation Activities) would be required for any demolition or renovation work involving asbestos-containing materials (ACMs). District Rule 1403 specifies work practice requirements to limit asbestos emissions from building demolition and renovation activities, including the removal and associated disturbance of ACM. The requirements for demolition and renovation activities include asbestos surveying, notification, ACM removal procedures and time schedules, ACM handling and clean-up procedures, and storage, disposal, and landfilling requirements for asbestos-containing waste materials. All operators are required to maintain records, including waste shipment records, and are required to use appropriate warning labels, signs, and markings.

- 5.3-1i Prior to construction, a survey shall be conducted to determine the presence or absence of lead-based paint. If lead-based paint is found, abatement shall be required before any demolition activities occur that would create a lead dust or fume hazard. Lead-based paint removal shall be performed in accordance with California Code of Regulation Title 8, Section 1532.1, which specifies exposure limits, exposure monitoring, and respiratory protection, and mandates good working practices by workers exposed to lead. The individual(s) performing lead-based paint removal shall provide evidence of certified training for lead-related construction work.

- 5.3-1j The specific location, use, and terminus of the on-site well (noted in building records) shall be defined. If located on the subject site, the well shall be surveyed and evaluated immediately prior to preceding with site development. Once the well is removed, any stained soils, if observed underneath the removed materials, shall be tested to identify appropriate remedial activities, if necessary. Remediation shall be conducted to the standards established by the Lead Agency (i.e., DTSC, Santa Ana RWQCB, and RCDEH). All contaminated soil locations identified shall be remediated below hazardous levels established by Title 22 of the California Code of Regulations and to the satisfaction of the applicable Lead Agency.



- 5.3-1k Prior to construction, within areas associated with known historic agricultural uses (eastern portion of the Project site), the City shall perform soil tests within the project grading limits to determine concentrations of pesticide and fungicide residues that may be present. Should contamination levels be in excess of acceptable Federal, State, and/or County of Riverside levels, a remedial action plan (subject to approval by the Riverside County Department of Environmental Health and responsible regulatory agencies) shall be implemented to reduce contaminants to acceptable levels.

RISK OF UPSET

- 5.3-2 No mitigation measures are required.
- 5.3-3a Prior to excavation/grading activities on the Project site, the City of Corona shall coordinate and provide pre-construction notification to purveyors with underground pipelines traversing the Project site prior to excavation/grading activities. Prior to excavation/grading activities on the Project site, the contractor shall obtain information on the location of underground pipelines located within the Project area, and any information regarding safety concerns of these pipelines.
- 5.3-3b Prior to excavation/grading activities on the Project site, the City of Corona shall coordinate the design and construction planning for the roadway extension over the MWD pipeline. At the discretion of the MWD, the MWD shall enter into an agreement with the City to allow its personnel to monitor grading and construction within 100 feet of the pipeline.
- 5.3-3c Prior to construction, Underground Service Alert (i.e., Dig Alert) shall be contacted at (800) 227-2600 in order to determine the location of underground pipelines. The proposed excavation area shall be delineated with white marking paint or with other suitable markers such as flags or stakes at least two days prior to commencing any excavation work. A "Dig Alert" ticket number shall be issued at the time Underground Service Alert is contacted. Excavating is not permitted without this ticket number. Underground Service Alert shall notify its member utilities having underground facilities in the area.
- 5.3-3d If any pipeline is ruptured during construction, the Corona Fire Department shall be notified. Should the rupture of an unmarked pipeline occur, the Corona Fire Department shall be contacted for on-site guidance during pipeline removal activities. If the rupture indicates an emergency, 911 shall be dialed.
- 5.3-4 Refer to Mitigation Measures 5.4-1a and 5.4-1b in Section 5.4, TRAFFIC AND CIRCULATION.



WILDLAND FIRES

5.3-5 No mitigation measures are required.

CUMULATIVE IMPACTS

Refer to Mitigation Measures 5.3-1a through 5.3-1k, and 5.3-3a through 5.3-3d.

8.4 TRAFFIC AND CIRCULATION

SHORT-TERM (CONSTRUCTION) IMPACTS

- 5.4-1a Short-term mitigation for roadways shall be mitigated by a Traffic Management Plan (TMP) to be established by the City prior to construction. This Plan shall consist of prior notices, adequate sign-posting, and detours (including pedestrian, horseback, and bicycle paths). The TMP shall specify implementation timing of each plan element (prior notices, sign-posting, detours, etc.) as determined appropriate by the City Engineer. Adequate access to and from adjacent residential areas shall be provided at all times. The TMP shall be revised and approved by the City Police and Fire Departments so that construction shall not interfere with any emergency response or evacuation plans. Construction activities shall proceed in a timely manner in an effort to reduce impacts.
- 5.4-1b Proper detours and warning signs shall be established to ensure public safety. Alternative routes for the existing bicycle, horseback, and hiking trails along the Project site into the Cleveland National Forest shall be clearly marked and safety of those that utilize the path shall be considered at all times. This includes the use of proper lighting (where appropriate), fencing/shielding, sufficient headway for horse riders to pass through, proper storage of equipment and construction supplies, covering loose piles of soil, silt, clay, sand debris, or other earthen material so as to eliminate any discharge onto the existing pathway or temporary pathway, and immediately hosing down/cleaning such areas of the existing pathway or temporary pathway that have been affected by construction debris or sedimentation from the Project. Upon completion of construction, access to the existing bicycle, horseback, and hiking trails into the Cleveland National Forest shall be maintained. Trails that are impacted during construction, and remain in place after construction, shall be returned to pre-project conditions.

TRIP DISTRIBUTION AND ASSIGNMENT

5.4-2 No mitigation measures are required.

CONGESTION MANAGEMENT PROGRAM

5.4-3 No mitigation measures are required.



DESIGN ELEMENTS

5.4-4 A traffic signal warrant analysis shall be prepared by a registered Civil Engineer prior to construction of the proposed alignment at the following intersection:

- Foothill Parkway/Trudy Way

Additional intersections may require traffic signal warrant analysis based on direction from the City of Corona Public Works Director. A traffic signal will be installed at an intersection where it is deemed appropriate, based on the traffic signal warrant determination and the professional recommendation of the City Traffic Engineer.

ALTERNATIVE TRANSPORTATION

5.4-5 No mitigation measures are required.

PROJECT ACCESS

5.4-6 No mitigation measures are required.

CUMULATIVE IMPACTS

Mitigation Measures 5.4-1a, 5.4-1b, and 5.4-4.

8.5 AIR QUALITY

SHORT-TERM (CONSTRUCTION) EMISSIONS

5.5-1a Prior to approval of the Project plans and specifications, the Public Works Director, or his designee, shall confirm that the plans and specifications stipulate that, in compliance with SCAQMD Rule 403, excessive fugitive dust emissions shall be controlled by regular watering or other dust preventive measures, as specified in the SCAQMD's Rules and Regulations. In addition, SCAQMD Rule 402 requires implementation of dust suppression techniques to prevent fugitive dust from creating a nuisance off-site. Implementation of the following measures would reduce short-term fugitive dust impacts on nearby sensitive receptors:

- All active portions of the construction site shall be watered to prevent excessive amounts of dust;
- On-site vehicles speed shall be limited to 15 miles per hour (mph);
- All on-site roads shall be paved as soon as feasible, watered periodically, or chemically stabilized;
- All material excavated or graded shall be sufficiently watered to prevent excessive amounts of dust. Watering, with complete



coverage, shall occur at least twice daily, preferably in the late morning and after work is done for the day;

- If dust is generated and visibly occurs beyond the site boundaries, clearing, grading, earth moving, or excavation activities that generate dust shall cease during periods of high winds (i.e., greater than 25 mph averaged over one hour); and
- All material transported off site shall be either sufficiently watered or securely covered to prevent excessive amounts of dust.

5.5-1b Prior to approval of the Project plans and specifications, the Public Works Director shall confirm that the plans and specifications stipulate that, in compliance with SCAQMD Rule 403, ozone precursor emissions from construction equipment vehicles shall be controlled by maintaining equipment engines in good condition and in proper tune per manufacturer's specifications, to the satisfaction of the Resident Engineer. The City inspector shall be responsible for ensuring that contractors comply with this measure during construction.

5.5-1c Prior to approval of the Project plans and specifications, the Director of Field Services, or his designee, shall confirm that the construction bid packages include a separate "Diesel Fuel Reduction Plan." This plan shall identify the actions to be taken to reduce diesel fuel emissions during construction activities (inclusive of grading and excavation activities). Reductions in diesel fuel emissions can be achieved by measures including, but not limited to, the following: a) use of alternative energy sources, such as compressed natural gas or liquefied petroleum gas, in mobile equipment and vehicles; b) use of "retrofit technology," including diesel particulate traps, on existing diesel engines and vehicles; and c) other appropriate measures with equal or better efficiency (as determined in consultation with the South Coast Air Quality Management District). Prior to the issuance of a grading permit, the Diesel Fuel Reduction Plan shall be filed with the City of Corona. The Diesel Fuel Reduction Plan shall include the following provisions:

- All diesel fueled off-road construction equipment shall be CARB certified or use post-combustion controls that reduce pollutant emissions to the same level as CARB certified equipment. CARB certified off-road engines are engines that are three years old or less and comply with lower emission standards. Post-combustion controls are devices that are installed downstream of the engine on the tailpipe to treat the exhaust. These devices are now widely used on construction equipment and are capable of removing over 90 percent of the PM₁₀, carbon monoxide, and volatile organic compounds from engine exhaust, depending on the specific device, sulfur content of the fuel, and specific engine type. The most common and widely used post-combustion control devices are particulate traps (i.e., soot filters), oxidation catalysts, and combinations thereof.



- All diesel fueled on-road construction vehicles shall meet the emission standards applicable to the most current year to the greatest extent possible. To achieve this standard, new vehicles shall be used or older vehicles shall use post-combustion controls that reduce pollutant emissions to the greatest extent feasible.
- The effectiveness of the latest diesel emission controls is highly dependant on the sulfur content of the fuel. Therefore, diesel fuel used by on-road and off-road construction equipment shall be low sulfur (>15 ppm) or other alternative low polluting diesel fuel formulation.

5.5-1d All trucks that are to haul excavated or graded material on-site shall comply with State Vehicle Code Section 23114, with special attention to Sections 23114(b)(F), (e)(4) as amended, regarding the prevention of such material spilling onto public streets and roads.

LONG-TERM (OPERATIONAL) EMISSIONS

5.5-2 No mitigation measures are required.

CONFORMITY WITH REGIONAL PLANS

5.5-3 No mitigation measures are required.

CUMULATIVE IMPACTS

Short-Term Cumulative Impacts

Refer to Mitigation Measures 5.5-1a though 5.5-1d.

Cumulative Operational Impacts

No mitigation measures are required.

8.6 NOISE

SHORT-TERM (CONSTRUCTION) EMISSIONS

5.6-1a Prior to issuance of grading permits for the proposed alignment, the Project Contractor shall provide evidence acceptable to the City of Corona Public Works Director, or designee, that (1) all construction equipment, fixed and/or mobile, shall be equipped with properly operating and maintained mufflers consistent with manufacturers' standards, (2) construction activities shall be limited to the designated daytime hours as specified by the City of Corona, currently 7:00 a.m. to 8:00 p.m. on Monday through Saturday and 10:00 a.m. and 6:00 p.m. on Sunday and federal holidays. These restrictions apply to all trucks, vehicles, and equipment that are making or involved with material deliveries, loading or



transfer of materials, equipment service, and maintenance of any devices for or within the Project construction site.

- 5.6-1b During construction, the Project Contractor shall place all stationary construction equipment such that emitted noise is directed away from noise-sensitive receptors. The placement of the equipment shall meet the satisfaction of the Building Official and is subject to site inspection. Additionally, the Project Contractor shall provide evidence of the placement of the stationary equipment to the Building Official.
- 5.6-1c Prior to approval of the Project plans and specifications, the City of Corona Public Works Director, or designee, shall confirm that the Project plans and specifications stipulate that the Project Contractor shall incorporate feasible muffling features into all construction vehicles and equipment and into construction methods, and shall maintain all construction vehicles and equipment in efficient operating condition. The Project Contractor shall provide evidence to the City Planning Department that the above muffling and maintenance measures have been implemented.
- 5.6-1d Prior to approval of the Project plans and specifications, the City of Corona Public Works Director, or designee, shall confirm the Project plans and specifications stipulate that the Project Contractor shall locate stockpiling and construction vehicle staging areas as far away as practical from noise sensitive receptors during construction activities.
- 5.6-1e During construction, the Project Contractor shall install temporary construction barriers with an effective height of 8 to 10 feet around construction activities located within 100 feet of residences, where it is feasible, to provide a noise reduction of 8 to 10 dBA. These barriers shall be provided along Green River Road, Paseo Grande, and Meadowcrest Street and near the cul-de-sacs of Condor Circle, Clearview Circle, and Folsom Circle.
- 5.6-1f Prior to issuance of grading permits for the proposed alignment, the Project Contractor shall develop and execute a community information program, notifying neighbors of planned construction schedules and periods of maximum activity. The notice shall provide a construction schedule, required noise conditions applied to the proposed alignment, and the name and telephone number of the Construction Project Manager who can address questions and problems that may arise during construction.
- 5.6-1g If pile driving occurs within 200 feet of sensitive receptors, alternative construction methods such as pre-drilling, drilled piles, Giken silent piling, pile cushioning, or any non-impact drivers shall be implemented to significantly reduce vibration levels generated by construction activities.



LONG TERM OPERATIONAL IMPACTS

- 5.6-2 Noise barriers (i.e., walls and/or earthen berms) shall be constructed at the following locations and heights; however, if the noise barriers identified below are already constructed as a community perimeter wall, during final design, these walls shall be examined to determine their efficiency at mitigating noise to the levels specified:
- A minimum barrier height of 6 feet for Sound Barrier 1 located along Foothill Parkway west of Trudy Way.¹
 - A minimum barrier height of 6 feet for Sound Barrier 2 located along Foothill Parkway east of Trudy Way.² Prior to issuance of grading permits, the existing wall's acoustical barrier efficiency shall be tested to ensure it meets the requirements to reduce noise levels below 65 dBA.
 - A minimum barrier height of 8 to 10 feet for Sound Barrier 3 located along Foothill Parkway between Elysia Street and Lincoln Avenue.

STATIONARY NOISE IMPACTS

- 5.6-3 No mitigation measures are required.

CUMULATIVE IMPACTS

Refer to Mitigation Measures 5.6-1a through 5.6-1e, and 5.6-2.

8.7 BIOLOGICAL RESOURCES

SHORT-TERM (CONSTRUCTION) IMPACTS

- 5.7-1a Refer to Mitigation Measure 5.5-1a in Section 5.5, AIR QUALITY; Mitigation Measures 5.9-1a through 5.9-1c in Section 5.9, HYDROLOGY AND WATER QUALITY; and Mitigation Measures 5.6-1a through 5.6-1e, and 5.6-1g in Section 5.6, NOISE.
- 5.7-1b The following Construction Minimization Measures (Section 7.5.3 of the MSHCP) shall be implemented during Project construction to minimize impacts on biological resources during construction:
- Plans for water pollution and erosion control shall be prepared for all Discretionary Projects involving the movement of earth in excess of 50 cubic yards. The plans shall describe sediment and hazardous materials control, dewatering or diversion structures,

¹ Trudy Way is identified as Bartol Street in the *Noise Impact Analysis: Foothill Parkway Westerly Extension*, prepared by LSA Associates, Inc., dated January 2008. However, Bartol Street has been renamed as Trudy Way.

² Ibid.



fueling and equipment management practices, and use of plant material for erosion control. Plans shall be reviewed and approved by the City of Corona, prior to construction.

- ❑ Timing of construction activities shall consider seasonal requirements for breeding birds and migratory non-resident species covered under the Migratory Bird Treaty Act. Habitat clearing shall be avoided during species active breeding season, defined as March 1 to June 30.
- ❑ Sediment and erosion control measures shall be implemented until such time soils are determined to be successfully stabilized.
- ❑ Short-term stream diversions shall be accomplished by use of sand bags or other methods that will result in minimal instream impacts. Short-term diversions shall consider effects on wildlife.
- ❑ Silt fencing or other sediment trapping materials shall be installed at the downstream end of construction activities to minimize the transport of sediments off-site.
- ❑ Settling ponds where sediment is collected shall be cleaned in a manner that prevents sediment from re-entering the stream or damaging/disturbing adjacent areas. Sediment from settling ponds shall be removed and diverted to a location where sediment cannot re-enter the stream or surrounding drainage area. Caution shall be exercised during removal of silt fencing to minimize release of debris or sediment into streams.
- ❑ No erodible materials shall be deposited into water courses. Brush, loose soils, or other debris material shall not be stockpiled within stream channels or on adjacent banks.
- ❑ The footprint of disturbance shall be minimized to the maximum extent feasible. Access to the Project site shall occur on pre-existing access routes to the greatest extent possible.
- ❑ Equipment storage, fueling and staging areas shall be sited on non-sensitive upland habitat types with minimal risk of direct discharge into riparian areas or other sensitive habitat types.
- ❑ The limits of disturbance, including the upstream, downstream and lateral extents, shall be clearly defined and marked in the field. Mitigation Monitoring Program personnel shall review the limits of disturbance prior to initiation of construction activities.
- ❑ During construction, the placement of equipment within the stream or on adjacent banks or adjacent upland habitats occupied by Covered Species that are outside of the Project footprint shall be avoided.



- ❑ Exotic species removed during construction shall be properly handled to prevent sprouting or regrowth.
- ❑ Training of construction personnel shall be provided.
- ❑ Ongoing monitoring and reporting shall occur for the duration of the construction activity to ensure implementation of best management practices (BMPs).
- ❑ When work is conducted during the fire season (as identified by the Riverside County Fire Department) adjacent to coastal sage scrub or chaparral vegetation, appropriate fire-fighting equipment (e.g., extinguishers, shovels, water tankers) shall be available on the site during all phases of Project construction to help minimize the chance of human-caused wildfires. Shields, protective mats, and/or other fire preventative methods shall be used during grinding, welding, and other spark-inducing activities. Personnel trained in fire hazards, preventative actions, and responses to fires shall advise contractors regarding fire risk from all construction-related activities.
- ❑ Active construction areas shall be watered regularly to control dust and minimize impacts to adjacent vegetation.
- ❑ All equipment maintenance, staging, and dispensing of fuel, oil, coolant, or any other toxic substances shall occur only in designated areas within the proposed grading limits of the Project site. These designated areas shall be clearly marked and located in such a manner as to contain run-off.
- ❑ Waste, dirt, rubble, or trash shall not be deposited in the Conservation Area or on native habitat.

5.7-1c Proposed noise-generating land uses affecting the MSHCP Conservation Area shall incorporate setbacks, berms, or walls to minimize the effects of noise on MSHCP Conservation Area resources pursuant to applicable rules, regulations, and guidelines related to land use noise standards. For planning purposes, wildlife within the MSHCP Conservation Area shall not be subject to noise that would exceed 60 dBA CNEL. Refer to Section 5.6, NOISE, for further discussion regarding the City's noise standards.

VEGETATION TYPES

5.7-2a The City of Corona shall obtain all appropriate permits for impacts on USACE and CDFG jurisdictional areas. Mitigation for the loss of jurisdictional areas shall consist of restoration of riparian habitat at no less than a 2:1 ratio to ensure no net loss of habitat. Any creation of habitat will be in kind and proportional to Project impacts. Native trees within the riparian habitat shall be replaced as follows per the City (Coletta 2008): coast live oaks 4:1; sycamore 3:1; cottonwood 3:1; willow 2:1; and scrub oak 2:1. Prior to issuance of a grading permit, a detailed restoration



program shall be prepared for approval by the USACE and CDFG with the following items:

- ❑ *Responsibilities and qualifications of the personnel to implement and supervise the plan.* The responsibilities of the landowner, specialists, and maintenance personnel that would supervise and implement the plan will be specified.
- ❑ *Site selection.* The site for the mitigation will be determined in coordination with the City of Corona and the resource agencies. The site shall either be located on the Project site in a dedicated open space area or land will be purchased off the site.
- ❑ *Site preparation and planting implementation.* The site preparation will include: (1) protection of existing native species; (2) trash and weed removal; (3) native species salvage and reuse (i.e., duff); (4) soil treatments (i.e. imprinting, decompacting); (5) temporary irrigation installation; (6) erosion control measures (i.e. rice or willow wattles); (7) seed mix application; and (8) container species.
- ❑ *Schedule.* A schedule will be developed which includes planting to occur in late fall and early winter, between October 1 and January 30.
- ❑ *Maintenance Plan/Guidelines.* The maintenance plan will include: (1) weed control; (2) herbivory control; (3) trash removal; (4) irrigation system maintenance; (5) maintenance training; and (6) replacement planting.
- ❑ *Monitoring Plan.* The Monitoring Plan will include: (1) qualitative monitoring (i.e., photographs and general observations); (2) quantitative monitoring (i.e., randomly placed transects); (3) performance criteria as approved by the resource agencies; (4) monthly reports for the first year, and reports every other month thereafter; and (5) annual reports for five years, which will be submitted to the resource agencies on an annual basis. The site will be monitored and maintained for five years to ensure successful establishment of riparian habitat within the restored and created areas.
- ❑ *Long-term preservation.* Long-term preservation of the site will also be outlined in the conceptual mitigation plan to ensure the mitigation site is not impacted by future development.

In addition, the City of Corona will shall provide the Determination of Biologically Equivalent or Superior Preservation (DBESP) with the proposed Mitigation Plan to the USFWS and CDFG for review. The resource agencies shall review the Project for consistency with Section 6.1.2 of the MSHCP (i.e., Riparian/Riverine).



5.7-2b As outlined in the Native Tree Survey prepared for the proposed Project, the following mitigation for removal of native trees shall be required by the Project:

- ❑ Prior to grading, orange snow fencing shall be installed around trees (outside the dripline) that would not be impacted by construction. Fencing shall be in place and inspected by a qualified Biological Monitor prior to commencement of grading. This fencing shall remain in place throughout the entire period of Project construction, and shall be periodically checked by the Biological Monitor.
- ❑ For each native tree removed, trees will be replaced at the ratios indicated in Table 5.7-7.

**Table 5.7-7
Native Tree Mitigation**

Species	Total
(<i>Quercus agrifolia</i>) Coast live oak	4:1
(<i>Quercus berberidifolia</i>) Scrub oak	2:1
(<i>Platanus racemosa</i>) Western sycamore	3:1
(<i>Populus fremontii</i>) Fremont cottonwood	3:1
(<i>Salix goodingii</i>) Black willow	2:1

- ❑ The Landscape Architect shall design the replacement trees into the riparian revegetation to replace the habitat value of the woodlands and trees removed by the proposed alignment. At least 5.06 acres of replacement habitat shall be planted to compensate for the loss of coast live oak woodland habitat. The Planting Plan will be reviewed by a qualified biologist and to ensure that the replacement oak trees are located in such a way to provide comparable habitat quality.
- ❑ All replacement trees shall be located in the riparian and oak woodland revegetation areas if possible. If spacing requirements cannot accommodate the number of replacement trees, the trees may be planted adjacent to the proposed road as a transition to open space.
- ❑ Planting specifications shall consider the following:
 - a. Newly planted trees shall be planted above grade and maintained for five years, including irrigation, weed control, herbivore protections, and replacement.



- b. Amending the backfill soil with wood shavings, oak leaf-mold, etc. is not recommended when existing soil is high in natural organic matter with a sandy loam texture.
- c. Recommendations for the need of planting amendments and drainage systems shall be based on soil tests of this Project site and approved by the City.
- d. Any City approved work within the driplines of saved trees, including branch removal, shall be under the inspection of a qualified arborist.
- e. Landscaping requiring irrigation shall not be planted within the dripline of oaks due to the susceptibility of native oaks to root rot caused by excessive unseasonable irrigation. The design and installation of landscape irrigation systems outside the dripline of the oaks shall be such that the area within the dripline is not wetted during operation of the system. In addition, surface runoff from impermeable surfaces shall be directed away from oaks; where natural topography has been altered, provisions shall be made for drainage away from trunks of oaks so that water will not pond or collect within the dripline of any oak.

GENERAL HABITAT LOSS AND WILDLIFE LOSS

5.7-3 No mitigation measures are required.

WILDLIFE MOVEMENT AND HABITAT FRAGMENTATION

5.7-4 It is recommended that the base of the manufactured slope west of the constructed roadway be vegetated with native species to encourage the continued use of Wardlow Wash for wildlife movement. This area may count toward the mitigation requirement for riparian vegetation (Mitigation Measure 5.7-2a), oak tree replacement (Mitigation Measure 5.7-2b), and special status plant relocation (Mitigation Measure 5.7-5) if determined to be appropriate for these mitigation areas.

The culvert under Paseo Grande should be designed following guidelines in Section 7.5.2 of the MSHCP. Guidelines in Section 7.5.2 recommend a width of at least five feet to allow for passage by medium-sized wildlife. (The existing 8-foot culvert under Paseo Grande exceeds these minimum requirements.) In addition, the crossing should be designed in a manner which allows a dry crossing under most circumstances. This may include designing an elevated bench above the normal high water line or providing a textured gentle slope up the side of the culvert/undercrossing. Barriers to small terrestrial wildlife movement should be encouraged along new and modified roadways, so that they are guided toward appropriate undercrossings.



SPECIAL STATUS PLANTS

5.7-5 If construction occurs after fall 2008, a pre-construction survey during the peak flowering period for the intermediate mariposa lily and Coulter's matilija poppy, approximately March through June, shall be conducted by the Project biologist the spring prior to construction. The limits of each plant location within the impact area shall be clearly delineated with brightly colored flagging. The plants shall be mitigated by transplantation (for matilija poppy), bulb collection (mariposa lily), and seed collection (both matilija poppy and mariposa lily). The plants, seeds or bulbs shall then be placed into a suitable mitigation site in the undeveloped portion of the Project site or at an approved off-site location. A qualified biologist shall be selected by the Project Applicant to prepare and implement the mitigation plan. The detailed mitigation plan will include the following requirements and be approved by the City of Corona prior to issuance of the grading permit:

- ❑ Seed ripeness will be monitored every two weeks by a qualified biologist and/or a qualified seed collector at the existing locations of lilies and poppies to determine when the seeds are ready for collection. A qualified seed collector shall collect all of the seeds from the plants to be impacted when the seeds are ripe. The seeds shall be cleaned and stored by a qualified nursery or institution with appropriate storage facilities.
- ❑ Following the seed collection, the bulbs/plants shall be removed by bulb/plant collection, block transplantation method, or root cuttings, whichever is believed to be the most successful method for each species. The bulbs/plants shall either be transplanted directly or stored by a qualified nursery or institution with appropriate storage facilities. If the bulbs/plants are collected and the block transplantation method is not used, then the top 12 inches of topsoil from the lily/poppy locations shall be scraped, stockpiled, and used at the selected mitigation site.
- ❑ The mitigation site shall be located in dedicated open space on the Project site or at an off-site mitigation site. The mitigation site will not be within the road easement and will not be located in a fuel modification zone. The mitigation site shall not attempt to enhance existing populations and shall not be impacted by any pesticides or herbicides used on adjacent properties.
- ❑ The lily/poppy mitigation site shall be prepared for seeding as described in a conceptual restoration plan.
- ❑ The topsoil shall be respread in the selected location as approved by the Project biologist. Approximately 60 to 80 percent of the seeds and bulbs/plants collected shall be spread/placed in the fall following soil preparation. The remainder of the seed and bulbs/plants shall be kept in storage for subsequent seeding, if necessary.



- A detailed maintenance and monitoring plan shall be developed by a qualified biologist. The plan shall include detailed descriptions of maintenance appropriate for the mitigation site, monitoring requirements, and annual report requirements, and shall have the full authority to suspend any operation in the study area which is, in the qualified biologist's opinion, not consistent with the restoration plan. Any disputes regarding the consistency of an action with the restoration plan shall be resolved by the City of Corona and the biologist.
- The performance criteria for intermediate mariposa lily and Coulter's matilija poppy will be 80 percent of transplanted bulbs/plants established within the mitigation site producing leaves each year of the long-term maintenance and monitoring program. If the performance criteria is not achieved following the first season, remediation measures shall be implemented prior to seeding with the remaining contingency seed and bulbs. Remedial measures shall include at a minimum: soils testing, control of invasive species, soil amendments, and physical disturbance (to provide scarification of the seed) of the planted areas by raking or similar actions. Additional mitigation measures may be suggested as determined appropriate by the Project biologist.

SPECIAL STATUS WILDLIFE

Least Bell's Vireo

- 5.7-6a The habitat creation included in Mitigation Measure 5.7-2a will be required to mitigate for impacts on the least Bell's vireo. In addition, the following conditions will apply:
- Vegetation clearing activities shall occur during the non-breeding season (September 16 to March 14). If the construction is scheduled to occur during the breeding season, a pre-construction protocol survey will be conducted the spring/summer prior to construction to confirm the absence of this species from the impact area and vicinity (i.e., within 500 feet) prior to the start of construction activities.
 - The 2008 focused survey results shall be provided to the USACE, USFWS, and CDFG for consideration during jurisdictional permitting and review of the revised DBESP.

Burrowing Owl

- 5.7-6b Pursuant to the MSHCP Objective 6, for burrowing owl, a pre-construction burrowing owl survey shall be conducted prior to issuance of a grading permit to verify the presence/absence of the owl on the Project site. Within thirty days of the onset of construction activities, a qualified biologist shall survey within 500 feet of the Project site for the presence of any active owl burrows. Any active burrow found during survey efforts



shall be mapped on the construction plans. If no active burrows are found, no further mitigation would be required. Results of the surveys shall be provided to the City of Corona.

If nesting activity is present at an active burrow, the active site shall be protected until nesting activity has ended to ensure compliance with Section 3503.5 of the California Fish and Game Code. Nesting activity for burrowing owl in the region normally occurs between March and August. To protect the active burrow, the following restrictions to construction activities shall be required until the burrow is no longer active as determined by a qualified biologist: (1) clearing limits shall be established within a 500-foot buffer around any active burrow, unless otherwise determined by a qualified biologist, and (2) access and surveying shall be restricted within 300 feet of any active burrow, unless otherwise determined by a qualified biologist. Any encroachment into the buffer area around the active burrow shall only be allowed if the biologist determines that the proposed activity will not disturb the nest occupants. Construction can proceed when the qualified biologist has determined that fledglings have left the nest.

If an active burrow is observed during the non-nesting season, the nest site shall be monitored by a qualified biologist, and when the raptor is away from the nest, the biologist will either actively or passively relocate the burrowing owl based on direction from the WRC RCA. The biologist shall then remove the burrow so the burrowing owl cannot return to the burrow.

- 5.7-6c Seven days prior to the onset of construction activities during the raptor nesting season (February 1 to June 30), a qualified biologist shall survey within 500 feet of the Project impact area for the presence of any active raptor nests (common or special status). Any nest found during survey efforts shall be mapped on the construction plans. If no active nests are found, no further mitigation would be required. Results of the surveys shall be provided to the CDFG.

If nesting activity is present at any raptor nest site, the active site shall be protected until nesting activity has ended to ensure compliance with Section 3503.5 of the California Fish and Game Code. To protect any nest site, the following restrictions to construction activities are required until nests are no longer active as determined by a qualified biologist: (1) clearing limits shall be established within a 500-foot buffer around any occupied nest, unless otherwise determined by a qualified biologist, and (2) access and surveying shall be restricted within 300 feet of any occupied nest, unless otherwise determined by a qualified biologist. Any encroachment into the buffer area around the known nest shall only be allowed if the biologist determines that the proposed activity will not disturb the nest occupants. Construction can proceed when the qualified biologist has determined that fledglings have left the nest.

If an active nest is observed during the non-nesting season, the nest site shall be monitored by a qualified biologist, and when the raptor is away



from the nest, the biologist will flush any raptor to open space areas. A qualified biologist, or construction personnel under the direction of the qualified biologist, shall then remove the nest site so raptors cannot return to a nest.

URBAN/WILDLANDS INTERFACE

- 5.7-7a Refer to Mitigation Measures 5.9-1a through 5.9-1c, and 5.9-2 in Section 5.9, HYDROLOGY AND WATER QUALITY.
- 5.7-7b Night lighting shall be directed away from the MSHCP Conservation Area to protect species within the MSHCP Conservation Area from direct night lighting. Shielding shall be incorporated in Project designs to ensure ambient lighting in the MSHCP Conservation Area is not increased.
- 5.7-7c Refer to Mitigation Measures 5.2-4a and 5.2-4b in Section 5.2, AESTHETICS, LIGHT, AND GLARE, regarding light spillover and glare mitigation measures.
- 5.7-7d When approving landscape plans for proposed landscaping adjacent to the MSHCP Conservation Area, the City shall consider the invasive, non-native plant species listed in the MSHCP and will require revisions to landscape plans to avoid the use of invasive species for the landscaping adjacent to the MSHCP Conservation Area. Considerations in reviewing the applicability of this list will include proximity of planting areas to the MSHCP Conservation Areas, species considered in the planting plans, resources being protected within the MSHCP Conservation Area and their relative sensitivity to invasion, and barriers to plant and seed dispersal, such as walls, topography and other features.
- 5.7-7e Where appropriate, barriers shall be placed in individual Project designs to minimize unauthorized public access, domestic animal predation, illegal trespass or dumping in the MSHCP Conservation Area. Such barriers may include native landscaping, rocks/boulders, fencing, walls, signage and/or other appropriate mechanisms.

PUBLIC/QUASI-PUBLIC LANDS

- 5.7-8 The DBESP Report includes replacement of Public/Quasi-public land permanently impacted by the proposed alignment through the purchase of equivalent or superior quality habitat at a 1:1 ratio that shall be dedicated in fee title or conservation easement to the Western Riverside County Regional Conservation Authority. The resource agencies shall review the proposed acquisition to ensure that the lands to be acquired by the City of Corona are of equivalent or superior quality to the Public/Quasi-public lands impacted by the proposed alignment. The dedicated lands shall be managed by the Western Riverside County Regional Conservation Authority in a manner that is consistent with the goals of the MSHCP.



JURISDICTIONAL IMPACTS

5.7-9 Refer to Mitigation Measures 5.7-2a and 5.7-2b.

CUMULATIVE IMPACTS

Refer to Mitigation Measure 5.7-1a through 5.7-8.

8.8 CULTURAL RESOURCES

HISTORIC RESOURCES

- 5.8-1a Recordation. If the historic arroyo stone footbridge is demolished or relocated, recordation (by photographs, measured drawings, and narrative) of the historic resource shall be made in order to ensure a permanent record of the present appearance and context of the historical resource is maintained. Demolition/relocation and recordation of historic resources shall be according to Historic American Engineering Record (HAER) standards prior to any construction activities. Once the HAER documentation is approved by a designated Project architectural historian, who meets the Secretary of the Interior's Professional Qualification Standards, the resulting archival documentation shall be filed with the State Office of Historic Preservation, City of Corona Planning Department, and Corona Public Library, Heritage Room.
- 5.8-1b Relocation. Relocate the historic arroyo stone footbridge to a comparable location/setting within the community, if feasible. Such relocation efforts shall be undertaken in accordance with a Relocation Plan prepared by a qualified architectural historian, historic architect, or historic preservation professional that satisfies the Secretary of the Interior's Professional Qualifications Standards for History, Architectural History, or Architecture. The Relocation Plan shall include relocation methodology recommended by the National Park Service, which are outlined in the booklet entitled "Moving Historic Buildings," by John Obed Curtis (1979), and the *Secretary of the Interior's Standards for the Treatment of Historic Properties*, as applicable. Upon relocation of the structure to the new site, any maintenance, repair, stabilization, rehabilitation, preservation, conservation, or reconstruction work performed in conjunction with the relocation of the footbridge shall be undertaken in a manner consistent with the Standards. At the relocation site, provide a public information sign/plaque that explains why the resource is significant.
- 5.8-1c Salvage. Offer the resource and/or elements of it to a local preservation group(s) for salvage or reuse, if relocation is not feasible.

ARCHAEOLOGICAL RESOURCES

- 5.8-2a If archaeological resources are discovered during excavation and grading activities on-site, the contractor shall stop all work and shall retain a qualified archaeologist to evaluate the significance of the finding and



appropriate course of action. Requirements may include, but not limited to, preservation, recordation, relocation, salvage, recovery, and/or collection of archaeological resources. The Project Contractor shall provide a reasonable period of time for salvage of discovered archaeological resources. Salvage operation requirements pursuant to Section 15064.5 of the CEQA Guidelines shall be followed and the treatment of discovered Native American remains shall comply with State codes and regulations of the Native American Heritage Commission.

- 5.8-2b If human remains are discovered as a result of the Project during development, all activity shall cease immediately, and the Contractor shall notify the Riverside County Coroner's Office immediately pursuant to California Health and Safety Section 7050.5, and a qualified archaeologist and Native American monitor shall be contacted. Should the Coroner determine the human remains to be Native American, the Native American Heritage Commission shall be contacted pursuant to California Public Resources Code Section 5097.98. The descendants or his or her authorized representative, with the permission of the City of Corona, may inspect the site of the discovery of the Native American remains and may recommend to the City or Project Contractor actions for treating or disposing, with appropriate dignity, the human remains and any associated grave goods. Native American descendants shall complete their inspection and make their recommendation within 48 hours of their notification by the Native American Heritage Commission. The recommendation may include the scientific removal and nondestructive analysis of human remains and items associated with Native American burials. If human remains are discovered, the City of Corona may be required to preserve, salvage, or relinquish the remains and associated items to the descendants for treatment, as well as recordation. The Project Contractor shall provide a reasonable period of time for salvage of discovered human remains.

PALEONTOLOGICAL RESOURCES

- 5.8-3a A qualified paleontologist shall be retained to examine earthwork spoils generated during construction activities. If paleontological resources are discovered, the Project Contractor shall stop all work and the paleontologist shall evaluate the significance of the finding and the appropriate course of action. Requirements may include, but not limited to, preservation, recordation, relocation, salvage, recovery, and/or collection of paleontological resources. The Project Contractor shall provide a reasonable period of time for salvage of discovered paleontological resources. Any measures applied shall include the preparation of a report meeting professional standards, which shall be submitted to the Riverside County Museum of Natural History.
- 5.8-3b A pre-construction meeting shall be conducted in which the Project paleontologist shall explain procedures necessary to protect and safely mitigate impacts to potentially significant fossil materials for study and curation.



CUMULATIVE IMPACTS

No mitigation measures are required.

8.9 HYDROLOGY AND WATER QUALITY

WATER QUALITY

Short-Term (Construction) Impacts

- 5.9-1a Prior to approval of the Project plans and specifications, the City Engineer, or his designee, shall confirm that the plans and specifications stipulate that prior to the issuance of any grading permits, the Project Applicant shall be responsible for filing a Notice of Intent (NOI) and for filing the appropriate fees pursuant to the NPDES program. The Project Contractor shall incorporate stormwater pollution control measures into a SWPPP. A copy of the SWPPP shall be available and implemented at the construction site at all times. BMPs shall be implemented to the maximum extent possible by incorporating water pollution control practices in the following categories: soil stabilization, sediment control, wind erosion control, tracking control, non-storm water management, and waste management and materials pollution control. BMPs may include, but not limited to, sandbag barriers, sediment basins, debris removal wheel washes, biofiltration strips or swales, and debris basins. Evidence that proper clearances have been obtained through the SWRCB, including coverage under the NPDES statewide General Stormwater Permit for Construction Activities, must be demonstrated.
- 5.9-1b Prior to the approval of final Project plans and specifications, the City Engineer, or his designee, shall confirm that the plans and specifications stipulate that prior to the issuance of grading permits, on-site drainage plans shall be in compliance with the NPDES guidelines. BMPs may include, but not be limited to, sandbag barriers, sediment basins, debris removal wheel washes, biofiltration strips or swales, and debris basins.
- 5.9-1c Prior to the approval of final Project plans and specifications, the City Engineer, or his designee, shall confirm that the plans and specifications illustrate that the proposed alignment complies with the DAMP guidelines and procedures. The proposed alignment is required to implement pollution prevention, treatment controls, and construction BMPs consistent with the requirements of DAMP. BMPs may include, but not limited to, biofiltration strips or swales, and a debris basin. During final design of the proposed alignment, the type, selection, and sizing of biofiltration strips or swales, and debris basins shall be specified and illustrated on Project plans and specifications.
- 5.9-1d In the event that previously unknown soil or groundwater contamination is encountered during Project construction, construction activities shall be suspended and appropriate health and safety procedures shall be implemented, including implementation of an appropriate remediation



strategy that is approved by the City and Department of Toxic Substance Control. If concentrations of materials are detected above regulatory cleanup levels during demolition or construction activities, the following mitigation measure shall include:

- ❑ Excavation and disposal at a permitted off-site facility;
- ❑ On-site treatment; or
- ❑ Other measures as appropriate.

Should contamination levels be in excess of acceptable Federal, State, and/or County of Riverside levels, a remedial action plan (subject to approval by the Department of Toxic Substance Control, Riverside County Department of Environmental Health, and responsible regulatory agencies) shall be implemented to reduce contaminants to acceptable levels. Additionally, refer to Mitigation Measure 5.3-1k in Section 5.3, PUBLIC HEALTH AND SAFETY.

Long-Term (Operational) Impacts

5.9-2 The following BMPs shall be utilized for development of the proposed roadway alignment for the Foothill Parkway extension Project:

- ❑ Excavation within and outside the existing basin RCFC&WCD RW to retain the original storage volume through extending the southern end of the basin approximately 150 feet;
- ❑ Construction of a new low-level outlet upgraded to be consistent with other debris basin outlet structures constructed by RCFC&WCD;
- ❑ Construction of an extension of the existing spillway, which would consist of a triple-box culvert; and
- ❑ New access ramps to the bottom of the roadway and perimeter access roadway.

GROUNDWATER

5.9-3 No mitigation measures are required.

DRAINAGE PATTERNS

Erosion/Siltation

5.9-4 No mitigation measures are required.



Flooding

5.9-5 No mitigation measures are required.

Drainage System Capacity

5.9-6 During the PS&E Phase a design level Hydraulic Report shall be prepared and include an analysis of hydrologic conditions for the proposed alignment and recommend specific drainage improvement required to accommodate storage volumes and flood protection for existing and future runoff, such as culvert, detention basins, and debris basins. This report shall be subject to review and approval by the City Engineer.

CUMULATIVE IMPACTS

Refer to Mitigation Measures 5.9-1a through 5.9-1d, 5.9-2, and 5.9-6.

8.10 GEOLOGIC AND SEISMIC HAZARDS

SOILS

5.10-1 Refer to Mitigation Measures 5.9-1a through 5.9-1c in Section 5.9, HYDROLOGY AND WATER QUALITY.

FAULT RUPTURE

5.10-2 Prior to the approval of final Project plans and specifications, the City Engineer, or his designee, shall confirm that the plans and specifications illustrate the proposed alignment complies with Uniform Building Code and the most current engineering standards related to design and siting for seismic hazards.

SEISMIC GROUND SHAKING

5.10-3a Prior to the issuance of a grading permit, a site-specific geotechnical report shall be prepared by a registered geologist or soils engineer and submitted to the City Engineer, or his designee, for approval. The geotechnical report shall provide construction recommendations to minimize impacts related to seismic ground shaking. All recommendations in the geotechnical report shall be implemented during site preparation, grading, and construction.

5.10-3b Prior to the approval of final Project plans and specifications, the City Engineer, or his designee, shall confirm that the plans and specifications illustrate the proposed alignment complies with Uniform Building Code and the most current engineering standards related seismic ground shaking.



LIQUEFACTION

- 5.10-4a Prior to the issuance of a grading permit, a site-specific geotechnical report shall be prepared by a registered geologist or soils engineer and submitted to the City Engineer, or his designee, for approval. The geotechnical report shall provide construction recommendations to minimize impacts related to liquefaction. All recommendations in the geotechnical report shall be implemented during site preparation, grading, and construction.
- 5.10-4b Prior to the approval of final Project plans and specifications, the City Engineer, or his designee, shall confirm that the plans and specifications illustrate the proposed alignment complies with Uniform Building Code and the most current engineering standards related design for development on liquefiable soils.

LANDSLIDES

- 5.10-5 No mitigation measures are required.

EXPANSIVE SOILS/SLOPE STABILITY

- 5.10-6a Cut slopes which expose loose sands and gravels shall be required to include over excavation and replacement with a drained stabilization fill.
- 5.10-6b Fill slopes shall be designed at a two to one ratio (or flatter), in a horizontal to vertical direction. Locally steeper fill slopes shall be considered but shall be constructed with geosynthetics to enhance the shear strength of fill materials. Higher compaction standards, which are typically 93 percent of the laboratory maximum dry density, should be implemented in deeper fills of greater than 40 feet to enhance engineering characteristics and reduce the amount of potential settlement. Subsurface drainage devices shall be installed below fills to intercept and direct water that may seep from the bedrock or be introduced from the surface.
- 5.10-6c Natural slopes that expose loose sands and gravels shall require and include over excavation and replacement with a drained stabilization fill/shear key.
- 5.10-6d To ensure stability of expansive soils, the following techniques shall be followed: proper design of foundations, slabs, streets and other improvements subject to the influence of soils; over excavation of the expansive soils and replacement with less expansive fill soils; utilizing selective grading techniques to place more highly expansive soils well below foundation elements; employment of presaturation techniques to lessen expansion potential; control of surface and subsurface drainages to prevent moisture variations; and combinations of these various techniques.



CUMULATIVE IMPACTS

Refer to Mitigation Measures 5.10-1 through 5.10-4b, and 5.10-6a through 5.10-6d.