DRAFT INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

REPLACEMENT OF DRAINAGE INLET STRUCTURES ON FOOTHILL ROAD AND MINES ROAD

Alameda County Public Works Agency
399 Elmhurst St.
Hayward, CA 94544

July 2013

DRAFT
MITIGATED NEGATIVE DECLARATION

ALAMEDA COUNTY

Alameda County Public Works Agency (Lead Agency)

1. **Project Name:** Replacement of Drainage Inlet Structures on Foothill Road and Mines Road

2. **Description and Location:** The proposed project includes improvements at 26 locations along Foothill Road and 24 locations along Mines Road in unincorporated Alameda County, California. The project involves the removal and reconstruction of concrete splash walls and drainage inlets adjacent to the travel lanes at various locations along Foothill Road (from mile post 5.20 to 8.03) and along Mines Road (from mile post 5.24 to 9.70). The 50 drainage inlet structure locations are identified by mile-post markers along Foothill and Mines Roads. Seven of the sites include work on drainage inlet structures on both sides of the roadway (MP 5.83, MP 6.11, MP 6.17, MP 6.58, MP 6.79, MP 6.87 and MP 7.86). The new structures would not protrude above the earthen or paved surface, thus eliminating the safety hazard caused by the existing structures.

3. **Responsible Agency:** Alameda County Public Works Agency
   399 Elmhurst Street, Hayward, California 94544

4. **Findings:**
   Based on the attached Initial Study, the Lead Agency has found that:

   ☐ The project will not have significant effect on the environment.

   ☒ The significant effects of the project noted in the attached Initial Study have been eliminated or mitigated so that the potential adverse effects are reduced to a point where no significant effects would occur.

5. **Mitigation Measures (Biological Resources):**

(1) The relevant avoidance, minimization, and compensation measures contained in the East Alameda County Conservation Strategy (EACCS) and associated Biological Opinion have been incorporated into the proposed project and would be implemented to reduce impacts to California tiger salamander (CTS), California red-legged frog (CRLF), Alameda whipsnake (AWS), and San Joaquin kit fox (SJKF) to a less-than-significant level.

(2) The total Habitat Compensation to be provided is shown below. The amount of habitat compensation meets the requirements of the EACCS and has been approved by the USFWS.

CRLF:	0.39 acre (to be purchased at Ohlone Preserve)
CTS:	0.43 acre (to be purchased at Mountain House Preserve)
AWS:	0.82 acre (to be purchased at Ohlone Preserve)
SJKF:	0.17 acre (to be purchased at Mountain House Preserve)

(3) If construction activities would commence anytime during the nesting/breeding season of native bird species potentially nesting on the site (typically February through August in the project region), a pre-

construction survey for nesting birds would be conducted by a qualified biologist within two weeks of the commencement of construction activities. If active nests are found in areas that could be directly affected or are within 250 feet of construction and would be subject to prolonged construction-related noise, a no-disturbance buffer zone should be created around active nests during the breeding season or until a qualified biologist determines that all young have fledged.

6. **Date of Public Notice of Negative Declaration:** July 17, 2013

7. **End of Review Period:** August 16, 2013

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ISSUANCE OF THIS MITIGATED NEGATIVE DECLARATION DOES NOT IMPLY APPROVAL OF THE PROJECT

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_____
Signature

Environmental Services Manager

_____
Date

Environmental Checklist Form

1. Project Title: **Replacement of Drainage Inlet Structures on Foothill Road and Mines Road**

2. Lead Agency name and address:

   Alameda County Public Works Agency
   399 Elmhurst Street
   Hayward, CA 94544

3. Contact person and phone number:

   Jim Browne
   Phone: (510) 670-5796

4. Project location:

   The proposed project is located in unincorporated Alameda County, California. The project site consists of two roadway segments, the Foothill Road segment and Mines Road segment. The Foothill Road segment is approximately three miles long and is located between the Town of Sunol and City of Pleasanton in central Alameda County (Figure 1). This location corresponds to Township 4 South, Range 3 East and spans Dublin and Niles, California United States Geological Survey (USGS) 7.5-minute topographic quadrangles. The Mines Road roadway segment is approximately 6.5 miles long and is located southeast of the City of Livermore in western Alameda County (Figure 1). This location corresponds to Township 4 South, Range 3 East and spans Mendenhall Springs and Cedar Mountain, California USGS 7.5- minute topographic quadrangles. The locations of the individual work sites on Foothill Road and on Mines Road are shown in Appendix A.

5. Project sponsor's name and address:

   ☒ COUNTY OF ALAMEDA
   399 Elmhurst Street
   Hayward, CA 94544

   ☐ ALAMEDA COUNTY FLOOD CONTROL & WATER CONSERVATION DISTRICT
   399 Elmhurst Street
   Hayward, CA 94544

   ☐ OTHER:

6. General plan designation: Large Parcel Agriculture (Alameda County, Mines Road segment), Water Management (Alameda County portion of Foothill Road segment), Low Density Residential (Pleasanton portion of Foothill Road Segment)

7. Zoning: not zoned (project site is two segments of existing roadways)

8. Description of project:

Project Overview

The proposed Replacement of Drainage Inlet Structures on Foothill and Mines Road Project involves the removal and reconstruction of concrete splash walls and drainage inlets adjacent to the travel lanes at various locations along Foothill Road (from mile post 5.20 to 8.03) and along Mines Road (from mile post 5.24 to 9.70). The new structures would not protrude above the earthen or paved surface, thus eliminating the safety hazard caused by the existing structures. The proposed project includes improvements at 26 locations along Foothill Road (see Appendix A) and 24 locations along Mines Road (see Appendix A). The 50 drainage inlet structure locations are identified by mile-post markers along Foothill and Mines Roads. Seven of the sites include work on drainage inlet structures on both sides of Foothill Road (MP 5.83, MP 6.11, MP 6.17, MP 6.58, MP 6.79, MP 6.87 and MP 7.86).

The area of disturbance for all drainage structures on or adjacent to slopes of less than 50% would extend a maximum distance of 10 feet from the drainage structure towards the slope (away from the road) and 10 feet towards the road, and 12 feet in either direction parallel to the roadway. The drainage structures are located along the edge of the road shoulder, and therefore, approximately half of the disturbance area includes the paved roadway and shoulder where the majority of the work would occur. Therefore, of the potential 480-square-foot disturbance area around each of these drainage structures, approximately 240 square feet is currently undeveloped (i.e., does not consist of the roadway or shoulder). The excavation area for each drainage structure would range from approximately 18 square feet to 40 square feet, depending on the individual configurations and locations of the drainage structures. Therefore, the 240-square-foot habitat impact area is a conservative estimate that accounts for unanticipated disturbances from the operation of construction equipment and indirect effects such as ground vibration.

For drainage structures on or adjacent to slopes of 50% or greater, slightly different assumptions were used in calculating the disturbance area to account for geotechnical considerations associated with disturbing adjacent steep slopes. For these drainage structures, the disturbance boundary was defined as extending a maximum distance of 5 feet from the drainage structure towards the slope (away from the road) and 5 feet towards the road, and 12 feet in either direction parallel to the roadway. The drainage structures are located along the edge of the road shoulder, and therefore, approximately half of the disturbance area includes the paved roadway and shoulder where the majority of the work would occur. Therefore, of the 240 square feet disturbance area around each of these drainage structures, 120 square feet is currently undeveloped (i.e., does not consist of the roadway or shoulder). As the excavation area for each drainage structure is approximately 18 square feet to 40 square feet (as mentioned above), the 120-square-foot impact area is a conservative estimate that accounts for unanticipated disturbances from the operation of construction equipment and indirect effects such as ground vibration. No dewatering would be required for the proposed project.

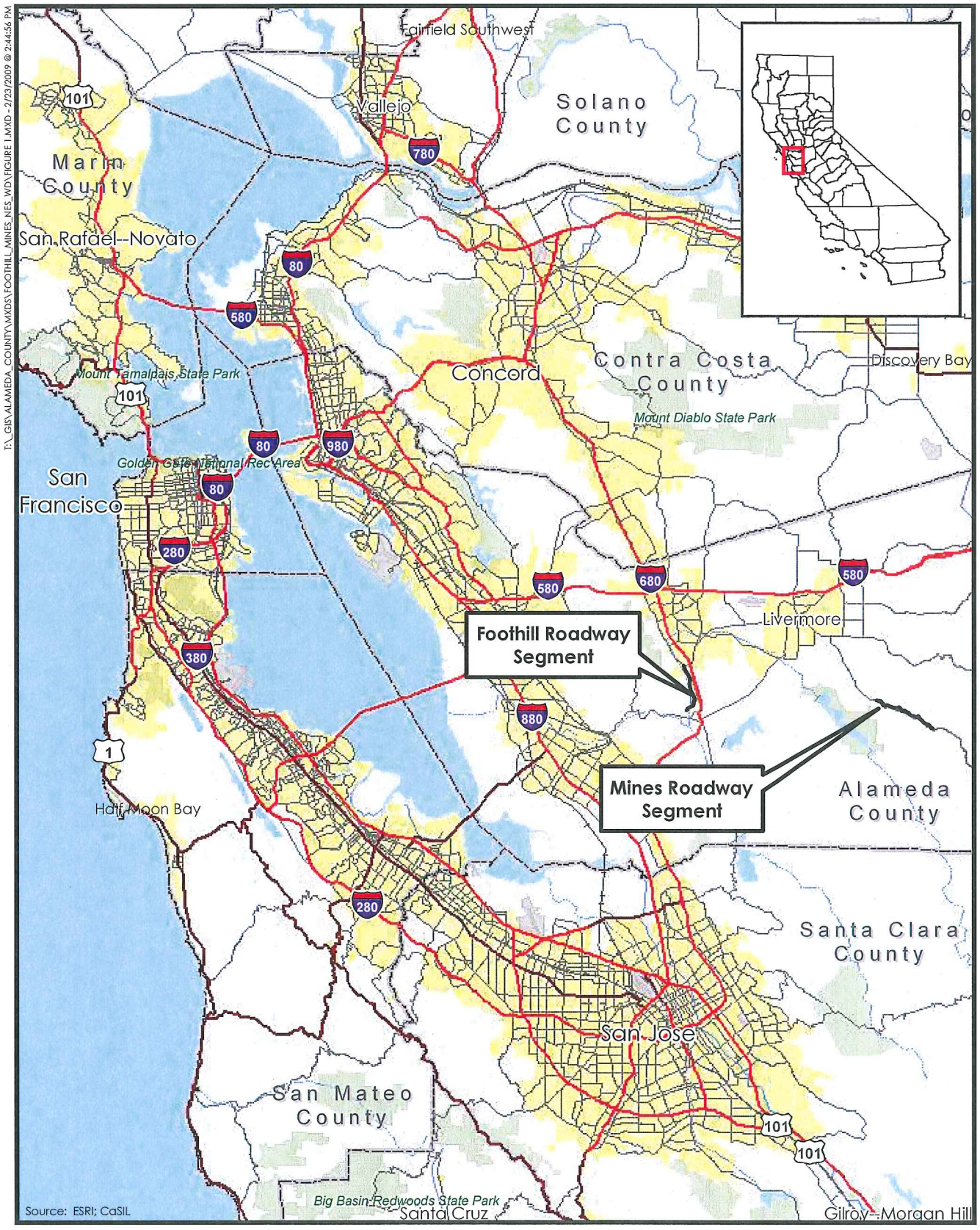

Figure 1
Regional Location Map

PMC®

Construction Activities and Staging

During construction activities a lane of traffic would be temporarily shut down and all staging would occur within the roadway. Similarly, large construction equipment (e.g., excavators) would be operated from the road and shoulder, while only handheld construction equipment (e.g., jack hammers) would be operated in undeveloped portions of the construction zone. As discussed above, the estimated disturbance area exceeds the actual excavation area and would capture incidental construction-related disturbances. Therefore, there would be no additional land or habitat disturbance associated with construction staging.

Potential construction equipment may include a small compactor, front loader, concrete truck, rubber-tired tractor with blade and small compactor, backhoe, dump truck, concrete saw, jackhammer, metal saw, and hand tools. Approximately two to four workers (including flaggers) would be on-site each day during the duration of construction.

Construction Schedule

All construction activities would occur during the dry season as defined by the East Alameda County Conservation Strategy (EACCS) (typically May-October) of 2013 or 2014. It is estimated that construction would take place over a total of 65 working days.

Construction Management Activities

Table 1 lists the construction-related BMPs that would be implemented to minimize the introduction of dirt, debris and other construction waste into storm drains in the project area. The table also includes BMPs to protect air quality and prevent fires during construction.

Table 1: Construction-Related Best Management Practices

BMP ID	Name	BMP
BMP - 1	Earthwork and Erosion Control	1. Excavated soils will be kept on site where they will not collect in the street. 2. Transfers to dump trucks will take place onsite and not in the street. 3. Fiber rolls, silt fences, or other erosion control measures will be used to minimize the flow of silt offsite. 4. Erosion of slopes disturbed during construction will be minimized by securing soil with erosion control fabric or seeding with fast-growing native grasses as soon as possible. Fiber rolls will be placed down-slope until the soil is secure. 5. Erosion control fabric will consist of natural fibers that will biodegrade over time. No plastic or other non-porous material will be used as part of a permanent erosion control approach. 6. Erosion control fabric will be anchored in place. Anchors can include U-shaped wire staples, metal geotextiles stake pins, or triangular wooden stakes. 7. Earth moving activities will only occur during dry weather, as approved by an Alameda County Inspector in the Field. 8. Disturbance to existing vegetation will be minimized where possible. 9. The construction site will be monitored for compliance with the County Stormwater Discharge Ordinance, State Cleanwater Act, and the Construction General Permit by District staff, including the Project Inspector, Project Engineer, and Clean Water Staff as well as others hire by the District for such monitoring.
BMP -	Staging and	1. All construction equipment will be staged in upland areas, away from sensitive

BMP ID	Name	BMP
2	Stockpiling of Materials	natural communities or habitats. 2. All construction-related items, including equipment, stockpiled material, temporary erosion control treatments, and trash will be removed within 72 hours of project completion. All residual soils and/or materials will be cleared from the project site. 3. Secondary containment will be provided for building materials and other construction-related materials, including chemicals, and they will not be stockpiled or stored where they could spill into water bodies or storm drains, or where they could cover aquatic or riparian vegetation.
BMP - 3	Dewatering Operations	1. Stormwater runoff from or onto the site will be effectively managed. All runoff will be directed away from disturbed areas.
BMP - 4	Non-Hazardous Materials Management	1. Sand, dirt, and similar materials will be stored at least 10 feet from catch basins. All construction material will be covered with a tarp and contained with a perimeter control during wet weather, when rain is forecast, or when they will not be actively used within 14 days. 2. Reclaimed water will be used for dust control, irrigation, or another on-site purpose as needed and to the extent possible. 3. Streets and paved areas will be swept or vacuumed daily. Water will not be used to wash streets or work areas. 4. Concrete, grout, and mortar will be stored under cover, on pallets, and away from drainage areas. Any water from washing exposed aggregate concrete will be collected and removed for disposal offsite. Secondary containment will be provided for concrete washouts and any other potential water contaminant. 5. Asphalt, concrete, and aggregate base material removed during construction will be recycled in compliance with Alameda County ordinances for recycling construction materials. 6. Dumpsters will be checked regularly for leaks and to make sure they are not overfilled. Leaking dumpsters will be repaired or replaced promptly. 7. All dumpsters will be covered with a tarp at the end of every work day or during wet weather.
BMP - 5	Hazardous Materials Management	1. All hazardous materials and hazardous wastes will be labeled in accordance with city, county, state, and federal regulations. 2. Hazardous materials and wastes will be stored in water tight containers within appropriate secondary containment structures and will be covered at the end of every work day or during wet weather when rain is forecast. 3. Hazardous materials will be applied in accordance with the manufacturer's application instructions. No more than what is necessary will be used. Chemicals will not be applied outdoors when rain is forecast within 24 hours. 4. All hazardous waste will be appropriately disposed of off-site. 5. For stationary equipment that must be fueled on-site, secondary containment such as a drain pan or drop cloth shall be provided in a manner to prevent accidental spill of fuels to underlying soil, surface water, or the storm drainage system. 6. Secondary containment will be provided for sanitation facilities (e.g., portable toilets), such as surrounding them with a berm, and a direct connection to the storm drainage system or receiving water will be avoided. 7. Sanitation facilities will be regularly cleaned and/or replaced, and inspected regularly for leaks and spills.
BMP - 6	Spill Prevention and Control	A Spill Prevention and Response Plan will be developed prior to commencement of construction activities, and will summarize the measures described below. The work site will be routinely inspected to verify that the Spill Prevention and Response Plan is properly implemented and maintained. Contractors will be notified immediately if there

BMP ID	Name	BMP
		is a noncompliance issue. 1. A stockpile of spill cleanup materials will be available at the construction site at all times. 2. Prior to entering the work site, all field personnel shall be trained in spill prevention, hazardous material control, and cleanup of accidental spills. 3. When spills or leaks occur, they will be contained immediately. The contractor will take particular precautions to prevent leaks and spills from reaching the gutter, street, or storm drain. Spilled materials will not be washed into a gutter, street, storm drain, or creek. 4. All containment and cleanup materials will be disposed of properly. 5. Hazardous material spills will be reported immediately to the Alameda County Public Works Agency at (510) 670-5500.
BMP - 7	Vehicle and Equipment Maintenance & Cleaning	1. Vehicles and equipment will be inspected for leaks frequently. Leaks will be repaired promptly, and drip pans will be used to catch leaks until repairs are made. 2. In general, vehicles and equipment will not be washed on-site. If washing must occur on site, it will occur in a bermed area that will not allow rinse water to run into gutters, streets, storm drains, or creeks. 3. Only water will be used to clean equipment onsite (i.e., no soaps, solvents, degreasers, etc. will be used). For stationary equipment that must be fueled on-site, secondary containment such as a drain pan or drop cloth shall be provided to prevent accidental spills of fuels to underlying soil, surface water, or the storm drainage system.
BMP - 8	Construction Entrances & Perimeter	1. Perimeter controls will be established and maintained during construction. All construction entrances and exits will be stabilized sufficiently to control erosion and sediment discharges from the construction site. 2. The construction contractor will sweep or vacuum any street tracking immediately and secure the sediment source to prevent further tracking.
BMP - 9	Fire Prevention	1. All earthmoving and portable equipment with internal combustion engines will be equipped with spark arrestors. 2. During the high fire danger period (April 1–December 1), work crews will have appropriate fire suppression equipment available at the work site. 3. On days when the fire danger is high, flammable materials will be kept at least 10 feet away from any equipment that could produce a spark, fire, or flame. 4. On days when the fire danger is high, portable tools powered by gasoline-fueled internal combustion engines will not be used within 25 feet of any flammable materials unless at least one round-point shovel or fire extinguisher is within immediate reach of the work crew (no more 25 feet away from the work area).
BMP – 10	Air Quality Protection	1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) will be watered at least two times per day. 2. All haul trucks transporting soil, sand, or other loose material off-site will be covered. 3. All visible mud or dirt track-out onto adjacent public roads will be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited. 4. All vehicle speeds on unpaved roads will be limited to 15 mph. 5. All roadways, driveways, and sidewalks to be paved will be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used. 6. Idling times will be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California

BMP ID	Name	BMP
		airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points. 7. All construction equipment will be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified visible emissions evaluator. 8. A publicly visible sign will be posted with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations.
BMP – 11	Cultural Resources Protection	1. If any significant cultural materials are exposed or discovered during subsurface construction, operations within 25 feet of the find shall stop and a qualified archaeologist shall be retained to evaluate the materials and develop further recommendations. 2. If any human skeletal remains are encountered during excavation, all activity in the immediate vicinity of the discovery shall be halted and appropriate measures, as required by the County of Alameda, shall be followed.
BMP-12	Air Quality	1. A dust control plan will be prepared that includes the following Basic Construction Mitigation Measures as recommended by the BAAQMD: a. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered daily (except weekends). b. All haul trucks transporting soil, sand, or other loose material off-site shall be covered. c. All visible mud or dirt track-out onto adjacent public roads shall be removed at least once per day. d. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points. e. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified visible emissions evaluator. f. A sign with the telephone number and person to contact at the lead agency regarding dust complaints shall be posted in a publically visible location. This person shall respond and take corrective action within 48 hours. The BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations.

Monitoring and Maintenance

The Public Works Agency would be responsible for long-term maintenance of the improved drainage facilities, including monitoring for erosion and vandalism. In general, maintenance activities would be performed as needed and always prior to the rainy season.

9. Surrounding land uses and setting:

The Mines Road segment of the project area is surrounded by open space and grazing land, interspersed with low-density rural residences on large lots, most of which are set back from the

road. Most of the Foothill Road segment of the project area also is surrounded by open space and grazing land, interspersed with low-density rural residences on large lots. Most of the residences are set back from the road, but at the northern and southern ends of the Foothill Road segment single-family residences are located along both sides of the road.

Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement).

1. U.S. Fish and Wildlife Service (FWS)
2. California Department of Fish and Wildlife (DFW)
3. California Department of Transportation

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project as indicated by the checklists and responses contained on the following pages:

☐ Aesthetics	☐ Agriculture & Forest Resources	☐ Air Quality
☒ Biological Resources	☐ Cultural Resources	☐ Geology & Soils
☐ Greenhouse Gas	☐ Hazards & Hazardous Materials	☐ Hydrology & Water Quality
☐ Land Use & Planning	☐ Mineral Resources	☐ Noise
☐ Population & Housing	☐ Public Services	☐ Recreation
☐ Transportation & Traffic	☐ Utilities & Services Systems	☒ Mandatory Findings of Significance

DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project; nothing further is required.

Signature	July 15, 2013
	Date
Kwablah Attiogbe	Environmental Services Manager
Printed name	

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
I. AESTHETICS – Would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact

II. AGRICULTURE AND FOREST RESOURCES:

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection (CalFire) regarding the state's inventory of forest land, including the Forest Range Assessment Project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program on the California Resources Agency, to non-agricultural use?	☐	☐	☒	☐
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☒	☐
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zone Timberland Production (as defined by Government Code Section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact

III. AIR QUALITY:

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
IV. BIOLOGICAL RESOURCES – Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☒	☐
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☒	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☒	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☒	☐
g) Results in a conversation of Oak Woodlands that will have a significant effect on the environment	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
V. CULTURAL RESOURCES – Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	☒	☐
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
VI. GEOLOGY AND SOILS – Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☐	☒
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
VII. GREENHOUSE GAS EMISSIONS – Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

VIII. HAZARDS AND HAZARDOUS MATERIALS – would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan or where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☒	☐

IX. HYDROLOGY AND WATER QUALITY – Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☐	☒
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☐	☐	☒
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☒	☐
e) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐
f) Otherwise substantially degrade water quality?	☐	☐	☒	☐
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	☒
i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☒	☐
j) Inundation by seiche, tsunami, or mudflow?	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
X. LAND USE AND PLANNING – Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒
XI. MINERAL RESOURCES – Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XII. NOISE -- Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b) Exposure of persons to or generation of excessive ground-born vibration or ground-born noise levels?	☐	☐	☐	☒
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XIII. POPULATION AND HOUSING – Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

XIV. PUBLIC SERVICES:

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities? The construction of which could cause significant environmental impacts in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:

i) Fire protection?	☐	☐	☐	☒
ii) Police protection?	☐	☐	☐	☒
iii) Schools?	☐	☐	☐	☒
iv) Parks?	☐	☐	☐	☒
v) Other public facilities?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XV. RECREATION:				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	☐	☐	☐	☒
XVI. TRANSPORTATION AND TRAFFIC – Would the project:				
a) Cause an increase in traffic, which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	☐	☐	☒	☐
b) Exceed, either individually or cumulatively, a level of service standard established by the County Congestion Management Agency for designated roads or highways?	☐	☐	☒	☐
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
e) Result in inadequate emergency access?	☐	☐	☒	☐
f) Result in inadequate parking capacity?	☐	☐	☒	☐
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XVII. UTILITIES AND SERVICE SYSTEMS – Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities; the construction of which could cause significant environmental effects?	☐	☐	☐	☒
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities; the construction of which could cause significant environmental effects?	☐	☐	☐	☒
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	☒
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XVIII. MANDATORY FINDINGS OF SIGNIFICANCE:				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☐	☒
c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

ENVIRONMENTAL EVALUATION

An explanation of the basis for the response to each item in Sections I through XVII and of ways to mitigate any identified significant impacts are provided below unless the item has been checked "NO" Impact and one or more of the references in Section 18 has been cited in the parenthesis following the item.

I. AESTHETICS

a) **Less Than Significant Impact.** The project would not adversely affect a scenic vista. The project consists of replacing existing drainage inlet structures with lower-profile inlet structures that would be less apparent than the existing structures. No view-affecting structures would be erected, and there would be no permanent impact on views. The effect on views during construction would be limited in duration, and would not constitute a significant impact.

b) **No Impact.** The nearest state designated scenic highway is Interstate 680 (I-680), which runs parallel to Foothill Road approximately one-quarter mile to the east. There are no state scenic highways near the Mines Road segment of the project. (California Department of Transportation 2007). Both Mines Road and Foothill Road are designated as Scenic Routes in the Alameda County General Plan. (Alameda County 1966). The project consists of replacing 50 existing drainage inlet structures with lower-profile inlet structures that would not protrude above the pavement level and would be less apparent than the existing structures. This would not be visible from I-680, and there would be no effect on scenic resources, including trees, rock outcroppings, and historic buildings within a state scenic highway. The project also would have a negligible effect on scenic resources along the county-designated Scenic Routes of Mines and Foothill Roads. There would be no impact.

c) **Less Than Significant Impact.** No large structures would be erected that would permanently change the visual character of the project site. The project consists of replacing existing drainage inlet structures with lower-profile inlet structures that would be less apparent than the existing structures. There would be no substantial permanent impact on the visual character of the site and its surroundings. The effect on visual character during construction would be limited in duration, and would not constitute a significant impact.

d) **No Impact.** No new permanent structures or sources of lighting are proposed as part of this project. Construction would occur during daylight hours and would not introduce a new source of light. Construction equipment would not create any discernible glare.

II. AGRICULTURAL AND FOREST RESOURCES

a) **Less Than Significant Impact.** The project could potentially disturb up to 240 square feet of currently undisturbed area at each of 50 inlet sites, or up to a total of 12,000 square feet (0.28 acre), however the actual disturbance area will be much less, since the impacts would be primarily indirect impacts. The land along both Foothill and Mines Roads is designated as Grazing Land by the California Department of Conservation. No farmland designated Prime, Unique, or of Statewide Importance occurs within or immediately adjacent to the project site nor would be considered part of the project impact area. (California Department of Conservation 2013a). Some of the area is along Mines Road in an area designated as Large Parcel Agriculture. (Alameda County 1993). However, because the total area converted would

be small, and adjacent to existing roadways, the impact on agricultural land would be less than significant.

b) **Less Than Significant Impact.** The proposed project would not change the zoning or current land use of the project area, including agricultural lands. The Foothill Road segment of the project site is not within Williamson Act land. Most of the Mines Road segment of the project site is within Williamson Act land that is non-prime agricultural land. (Alameda County Assessor 2013). However, reconstruction of drainage inlets along the Mines Road segment of the project would affect only limited areas adjacent to the existing road, which would have a negligible impact on agricultural land and agricultural productivity. All project construction activity would take place within the existing road right-of-way. The conflict with existing agricultural zoning and with Williamson Act contracts would be less than significant.

c) **No Impact.** The project site is not zoned as forest land, timberland, or timberland zone Timberland Production. The proposed project would not change the zoning or current land use of the project area. The project does not propose any activity that directly or indirectly would change the existing environment nor conflict with existing zoning for, or cause rezoning of, forest land, or timberland.

d) **No Impact.** There is no forest land at or near the project site. The project would neither result in the loss of forest land nor convert forest land to non-forest use.

e) **Less Than Significant Impact.** As discussed in Item II.a. above, the project has the potential to convert a small portion of the potential impact area (0.28 acre or less) of grazing land that is zoned Large Parcel Agriculture; however, the project would not involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use.

III. AIR QUALITY

Background Information

Area Air Quality Overview

The project area air quality is typical of the western and southern portions of the Livermore Valley. The Livermore Valley is a sheltered inland valley near the eastern border of San Francisco Bay Area Air Basin (SFBAAB). The western side of the valley is bordered by 1,000- to 1,500-foot hills with two gaps connecting the valley to the central SFBAAB, the Hayward Pass and Niles Canyon. The eastern side of the valley also is bordered by 1,000- to 1,500-foot hills with one major passage to the San Joaquin Valley, the Altamont Pass, and several secondary passages. To the north lie the Black Hills and Mount Diablo. A northwest to southeast channel connects the Diablo Valley to the Livermore Valley. The south side of the Livermore Valley is bordered by mountains approximately 3,000 to 3,500 feet high.

Air pollution potential is high in the Livermore Valley, especially for photochemical pollutants in the summer and fall. High temperatures increase the potential for ozone to build up. The valley not only traps locally generated pollutants but can be the receptor of ozone and ozone precursors from San Francisco, Alameda, Contra Costa and Santa Clara counties. On northeasterly wind flow days, most common in the early fall, ozone may be carried west from the San Joaquin Valley to the Livermore Valley.

During the winter, the sheltering effect of the valley, its distance from moderating water bodies, and the presence of a strong high-pressure system contribute to the development of strong, surface-based temperature inversions. Pollutants such as carbon monoxide and particulate matter, generated by motor vehicles, fireplaces and agricultural burning, can become concentrated. Air pollution problems could intensify because of population growth and increased commuting to and through the subregion. (BAAQMD 1999, 2012).

Criteria Pollutants

Criteria pollutants are air pollutants regulated by the Federal Clean Air Act and the California Clean Air Act. Below are descriptions of criteria pollutants of concern in the Air Basin.

Ozone (O3)

Ozone, the main component of photochemical smog, is primarily a summer and fall pollution problem. Ozone is not emitted directly into the air, but is formed through a complex series of chemical reactions involving other compounds that are directly emitted. These directly emitted pollutants (also known as ozone precursors) include reactive organic gases (ROG) and nitrogen oxides (NOX). The principal sources of ROG and NOX are the combustion of fuels and the evaporation of solvents, paints, and fuels. Motor vehicles are often the major generator of ozone precursors. The time required for ozone formation allows the reacting compounds to spread over a large area, producing a regional pollution problem. Ozone problems are the cumulative result of regional development patterns rather than the result of a few significant emission sources. Depending on meteorological conditions, ozone precursors can be transported well away from the source area before ozone concentrations peak.

While ozone in the upper atmosphere protects the earth from harmful ultraviolet radiation, high concentrations of ground-level ozone can adversely affect the human respiratory system. Many respiratory ailments, as well as cardiovascular disease, are aggravated by exposure to high ozone levels. Ozone also damages natural ecosystems such as forests and foothill communities, and damages agricultural crops and some man-made materials, such as rubber, paint, and plastics. Short-term exposure to ozone can irritate the eyes and cause constriction of the airways. In addition to causing shortness of breath, ozone can aggravate existing respiratory diseases such as asthma, bronchitis, and emphysema. The Air Basin currently does not meet federal and state ozone standards and is therefore a "nonattainment" area (requiring on-going planning and reporting requirements to describe how the Air Basin will meet the federal and state standards in the future).

Suspended Particulate Matter (PM_{10} and $PM_{2.5}$)

PM_{10} and $PM_{2.5}$ consist of particulate matter that is 10 microns or less in diameter and 2.5 microns or less in diameter, respectively. (A micron is one-millionth of a meter.) $PM_{2.5}$ is a subset of PM_{10} and, therefore, is incorporated by reference in any mention of PM_{10}. One common source of PM_{10} is diesel emissions. Traffic generates PM_{10} and $PM_{2.5}$ emissions through entrainment of dust and dirt particles that settle onto roadways and parking lots. PM_{10} also is emitted by burning wood in residential wood stoves and fireplaces, and from open agricultural burning. PM_{10} can remain in the atmosphere for up to seven days before gravitational settling, rainout, and washout remove it.

Acute and chronic health effects associated with high particulate levels include the aggravation of chronic respiratory diseases; heart and lung disease; and coughing, bronchitis, and respiratory illnesses in children. Recent mortality studies have shown a statistically significant, direct association between

mortality and daily concentrations of particulate matter in the air. Additional effects include reduced visibility and soiling of buildings. State standards for PM_{10} and $PM_{2.5}$ are periodically exceeded in the Air Basin.

Air Quality Monitoring Data

The Bay Area Air Quality Management District (BAAQMD) operates a regional monitoring network for ambient concentrations of criteria air pollutants. Criteria air pollutants are regulated by developing human health-based and/or environmentally based criteria (science-based guidelines) for setting permissible levels (National Ambient Air Quality Standards). The criteria pollutants are particle pollution (often referred to as particulate matter), ground-level ozone, carbon monoxide, sulfur oxides, nitrogen oxides, and lead. These pollutants can harm human health and the environment, and cause property damage. California also regulates criteria air pollutants with California Ambient Air Quality Standards, which are generally equal to, but in some cases are more restrictive than, the national standards.

The Bay Area is currently designated "nonattainment" for the State and federal 8-hour ozone standards, the federal 24-hour $PM_{2.5}$ standard, and the state standards for PM_{10}, annual $PM_{2.5}$, and 1-hour ozone. The Bay Area is designated "attainment" or "unclassified" with respect to the other ambient air quality standards because the Bay Area meets standards for other pollutants.

Sensitive Receptors

People who are more susceptible to the effects of air pollution than the general population at large include children, elderly, and those that suffer from certain illnesses or disabilities. Therefore, schools, convalescent homes, and hospitals are considered to be sensitive receptors to air pollution. Residential areas are considered sensitive to poor air quality because people usually stay home for extended periods of time, which results in greater exposure to localized air pollutants.

There are residences in the general area of the project construction sites, but no residences are within 50 feet of any construction site.

Regulatory Framework

Criteria Pollutants

The BAAQMD monitors and regulates air quality pursuant to the Federal Clean Air Act, as amended, and the 1988 California Clean Air Act. The BAAQMD adopts and enforces controls on stationary sources of air pollutants through its permit and inspection programs. Other District responsibilities include monitoring air quality, preparation of clean air plans, and responding to citizen air quality complaints.

Air Quality Significance Criteria

In 1999, the BAAQMD adopted the BAAQMD CEQA Guidelines to assist lead agencies with CEQA impact analyses (BAAQMD, 1999). The guidelines were revised in 2010, and included new impact significance thresholds; however, the BAAQMD's 2010 significance thresholds were challenged in a lawsuit, and on March 5, 2012, the Alameda County Superior Court issued a judgment finding that BAAQMD had failed to comply with CEQA when it adopted the thresholds. The court issued a writ of

mandate ordering the BAAQMD to set aside the thresholds and cease dissemination of them until the BAAQMD complies with CEQA.

In May 2012, to comply with the court's order, the BAAQMD updated its CEQA Air Quality Guidelines to include no reference of its 2010 thresholds (BAAQMD, 2012). The revised 2012 guidelines indicate that lead agencies should examine substantial evidence in determining appropriate air quality thresholds, and identify the BAAQMD's 1999 Thresholds of Significance (BAAQMD, 1999) as a source of information for thresholds of significance.

The 1999 BAAQMD CEQA Guidelines do not require quantification of construction emissions and comparison to thresholds, but instead rely upon inclusion of feasible control measures for PM_{10} (fugitive dust). The analysis of operational impacts is not necessary because the 1999 Guidelines indicate that the District (BAAQMD) does not recommend a detailed air quality analysis for projects generating less than 2,000 vehicles per day, unless warranted by the specific nature of the project or project setting. The project would not generate 2,000 vehicles per day and the project therefore does not warrant a detailed air quality analysis.

a) **Less Than Significant Impact.** The Bay Area is currently designated as a nonattainment area for State and federal ozone standards, for the State particulate matter (PM_{10} and $PM_{2.5}$) standards, and the national 24-hour $PM_{2.5}$ standard. As required by federal and State air quality laws, the Bay Area 2010 Clean Air Plan (2010 CAP) has been prepared to address ozone and particulate matter (mainly $PM_{2.5}$) nonattainment issues, air toxics, and greenhouse gases (GHG). The 2010 CAP includes stationary and mobile source control strategies, transportation control measures, land use and local impact measures, and energy and climate measures to be implemented through BAAQMD regulations incentive programs, and programs in cooperation with the Metropolitan Transportation Commission (MTC), local governments, transit agencies, and others. The BAAQMD implements a number of regulations and programs to reduce PM_{10} emissions; however, no PM_{10} plan has been prepared nor is one currently required under State air quality planning law.

   A project would be judged to conflict with or obstruct implementation of the regional air quality plan if it would be inconsistent with the growth assumptions, in terms of population, employment, or regional growth in vehicle miles traveled. Potential air quality impacts from the project would be primarily related to construction. During project operation, there may be some trips to the site associated with monitoring the functioning of the drainage inlet structures, but the increase in vehicle miles travelled from operations would not be substantial. Thus, the project would not be a conflict with the growth assumptions made in the preparation of these air quality plans nor obstruct implementation of any of the proposed control measures contained in these air quality plans. Therefore this impact would be less than significant.

b) **Less Than Significant Impact.** Air quality impacts are generally associated with both construction and operation of a project. The proposed project would have air quality construction impacts but would not have any operational impacts. BAAQMD rules and regulations govern certain aspects of the construction phase of projects. BAAQMD regulations applicable to the construction of the project relate to portable equipment (e.g., gasoline- or diesel-powered engines used for power generation, pumps, compressors, and cranes), architectural coatings, fugitive dust, and paving materials.

The emissions generated from construction activities would include dust (including PM_{10} and $PM_{2.5}$), primarily from "fugitive" sources. Fugitive dust could cause or contribute to exceedances of the State PM_{10} standard during project construction.

Project construction would generate short-term emissions of criteria pollutants, including particulate matter and equipment exhaust emissions. The 1999 BAAQMD CEQA Guidelines do not call for quantification of construction emissions, but considers any project's construction-related impacts to be less than significant with appropriate implementation of BAAQMD recommended dust control measures. The 2012 BAAQMD CEQA air quality guidelines identify basic construction mitigation measures that take the place of the basic mitigation measures identified in 1999 BAAQMD CEQA guidelines. The District has incorporated applicable construction mitigation measures into its Best Management Practices (See Table 1, Construction Best Management Practices, BMP-12) therefore this impact would be less than significant.

c) **Less Than Significant Impact.** The 1999 BAAQMD CEQA Guidelines state that for any project that does not individually have significant air quality impacts, the determination of a significant cumulative impact can be determined based on consistency of the project with the local general plan and of the general plan with the regional air quality plan. As discussed in Items III.a and III.b, above, the project, with mitigation, would not result in individual significant air quality impacts and the project would not conflict with the local general plan or regional air quality plan. Therefore, the project would not generate cumulatively considerable air emissions and the cumulative impact would be less than significant.

d) **Less Than Significant Impact**. Toxic air contaminants (TACs) would be generated by the use of diesel fueled construction equipment. Diesel particulate matter emissions can be carcinogenic over long exposure durations (i.e., most analyses consider exposure time frames of 10 to 70 years). However, for this construction, nearby receptors would be exposed to construction emissions at an individual site for only days; thus limiting exposure of any individual residential receptors. Also, as noted in III.b, above, the District has incorporated applicable construction mitigation measures into its Best Management Practices (See Table 1, Construction Best Management Practices, BMP-10) therefore this impact would be less than significant.

e) **Less Than Significant Impact.** The BAAQMD defines public exposure to offensive odors as a potentially significant impact. In general, the types of land uses that pose potential odor problems include refineries, chemical plants, wastewater treatment plants, landfills, composting facilities, and transfer stations. No such uses are proposed.

Diesel engines would be used for some construction equipment. Odors generated by construction equipment would be variable, depending on the location and duration of use. Diesel odors are unlikely to be noticeable to any individuals outside of the construction area. Operation of the project would not be anticipated to result in odor emissions. Offensive odors are typically associated with industrial land uses, not minor construction projects. The impact of the project with regard to odors would be less than significant.

IV. BIOLOGICAL RESOURCES

Background Information

The biological resources occurring on and near the project site have been described in detail in the following documents: (1) Replacement of Drainage Inlet Structures on Foothill and Mines Roads Natural Environmental Study (Caltrans 2010); (2) Preliminary Wetland Delineation Report for the Replacement of Drainage Inlet Structures on Foothill and Mines Roads Project (PMC 2010); (3) Replacement of Drainage Inlet Structures on Foothill and Mines Roads Biological Assessment (Caltrans, revised 2011); and (4) Addendum to the Replacement of Drainage Inlet Structures on Foothill and Mines Roads Biological Assessment (Pacific Biology 2011). The relevant discussions from these reports are summarized and incorporated into the below analysis.

Both project segments are located in roadside areas. The area within and adjacent to the Foothill Road segment includes low- and medium-density residential, agricultural, and public open space/recreation land uses. Habitat types occurring within the Foothill Road segment include annual grassland, oak woodland, riparian, sage scrub, and ruderal roadside areas.

The area within and adjacent to the Mines Road segment includes low-density residential and agricultural land uses. Habitat types occurring within the Mines Road segment include annual grassland, oak woodland, sage scrub, and ruderal roadside areas. **Tables BIO-1** and **BIO-2**, below, address each of the drainage inlet structures on the project site, including the habitat type present, an assessment of the potential use of the habitat by state-listed species, and the amount of habitat loss requiring compensation.

Table BIO-1: Special Status Species Habitats - Foothill Road Drainage Structure Sites

Drainage Structure ID	Mapped Habitat	Slope	Assessment of Habitat Use	Rational for Assessment of Habitat Use (Refer to Appendix A Figures)	Habitat Loss Requiring Mitigation (sq. feet)
(SB)	Residential	5-10%	Potential habitat for: No state-listed species	Located in residential area and separated from river and open space by homes and road.	0
5.28 (SB)	Residential	5-10%	Potential habitat for: No state-listed species	Same as above.	0
5.83 (SB)	Residential	5-10%	Potential habitat for: No state-listed species	Located in residential area, separated from river by road, adjacent to a home.	0
5.83 (NB)	Riparian/ Residential	5-10%	Potential habitat for: No state-listed species	Located in residential area but within riparian habitat; separated from suitable CTS breeding habitat and core AWS habitat by homes and roads.	0
5.99 (SB)	Annual grassland	20-30%	Potential habitat for: CTS AWS	Located adjacent to Pleasanton Ridge Regional Park. No barriers between nearby stock ponds and creek. Within AWS Critical Habitat and core habitat for the species is present in nearby locations. Based on the East Alameda County Conservation Strategy, the project site and surrounding area (Conservation Zone 8) do not provide suitable habitat for SJKF and mitigation for SJKF habitat loss is not required[1]	240
6.07 (SB)	Oak woodland	10-20%	Potential habitat for: CTS	Same as above.	240

Drainage Structure ID	Mapped Habitat	Slope	Assessment of Habitat Use	Rational for Assessment of Habitat Use (Refer to Appendix A Figures)	Habitat Loss Requiring Mitigation (sq. feet)
			AWS		
6.11 (SB)	Oak woodland	10-20%	Potential habitat for: CTS AWS	Same as above.	240
6.11 (NB)	Oak woodland	5-10%	Potential habitat for: CTS AWS	Same as above.	240
6.17 (SB)	Oak woodland	5-10%	Potential habitat for: CTS AWS	Same as above.	240
6.17 (NB)	Oak woodland	0-5%	Potential habitat for: CTS AWS	Same as above.	240
6.21 (SB)	Oak woodland	30-50%	Potential habitat for: CTS AWS	Same as above.	240
6.35 (SB)	Oak woodland	10-20%	Potential habitat for: CTS AWS	Same as above.	240
6.41 (SB)	Oak woodland	5-10%	Potential habitat for: CTS AWS	Same as above.	240
6.58 (SB)	Annual grassland	5-10%	Potential habitat for: CTS AWS	Same as above.	240
6.58 (NB)	Oak woodland	5-10%	Potential habitat for: CTS AWS	Same as above.	240
6.64 (SB)	Annual grassland	10-20%	Potential habitat for: CTS AWS	Same as above.	240
6.79 (SB)	Annual grassland	5-10%	Potential habitat for: CTS AWS	Same as above.	240
6.79 (NB)	Oak woodland	5-10%	Potential habitat for: CTS AWS	Same as above.	240
6.87 (SB)	Oak woodland	30-50%	Potential habitat for: CTS AWS	Same as above.	240
6.87 (NB)	Oak woodland	10-20%	Potential habitat for:	Same as above.	240

Drainage Structure ID	Mapped Habitat	Slope	Assessment of Habitat Use	Rational for Assessment of Habitat Use (Refer to Appendix A Figures)	Habitat Loss Requiring Mitigation (sq. feet)
			CTS AWS		
7.50 (SB)	Oak woodland	50-80%	Potential habitat for: CTS AWS	Same as above.	120
7.80 (SB)	Sage scrub, Annual grassland	>100%	Potential habitat for: CTS AWS	Same as above.	120
7.86 (SB)	Oak woodland	30-50%	Potential habitat for: CTS AWS	Same as above.	240
7.86 (NB)	Oak woodland	10-20%	Potential habitat for: CTS AWS	Same as above.	240
7.92 (SB)	Oak woodland	30-50%	Potential habitat for: CTS AWS	Same as above.	240
8.03 (SB)	Sage scrub, Oak woodland	>100%	Potential habitat for: CTS AWS	Same as above.	120

AWS = Alameda whipsnake, CTS = California tiger salamander, SJKF = San Joaquin kit fox

NOTE: The EACCS does not require habitat compensation for projects within Conservation Zone 8, which includes the entire Foothill Road portion of the project site.[1]

[1] Lim, Mary (East Alameda County Conservation Strategy Coordinator). October 7, 2011. Personal Communication. Ms. Lim contacted Troy Rahmig of ICF (the preparer of the East Alameda County Conservation Strategy) to confirm that Figure 3-13 is accurate and that the Conservation Strategy does not require habitat mitigation for San Joaquin kit fox for projects in Conservation Zone 8 (CZ8). The Conservation Strategy concludes that the polygon bounded by Highways 580, 680, and 84 (which includes the project site and CZ8) is unsuitable habitat for San Joaquin kit fox.

Table BIO- 2: Special Status Species Habitats - Mines Road Drainage Structure Sites[1]

Drainage Structure ID	Mapped Habitat	Slope	Assessment of Habitat Use	Rational for Assessment of Habitat Use (Refer Appendix A Figures)	Habitat Loss Requiring Mitigation (sq. feet)
5.24	Annual grassland, exposed rock	80-100%	Potential habitat for: AWS SJKF CTS	CTS are known from locations to the north and south of Mines Road and potential breeding stock ponds occur within 1.24 miles of the site. No suitable burrows for CTS were observed in disturbance area. AWS and SJKF documented in the area. While steep slopes are present at some of the sites, it is still possible that animals could attempt to traverse down the slope and cross the site.	120
5.28	Annual grassland, exposed rock	>100%	Potential habitat for: AWS SJKF CTS	Same as above.	120
5.36	Annual grassland	30-50%	Potential habitat for: AWS SJKF CTS	Same as above.	240
5.65	Annual grassland, exposed rock	80-100%	Potential habitat for: AWS SJKF CTS	Same as above.	120
5.91	Sage scrub	30-50%	Potential habitat for: AWS SJKF CTS	Same as above.	240
5.99	Annual grassland, exposed rock	50-80%	Potential habitat for: AWS SJKF CTS	Same as above.	120
6.26	Annual grassland, exposed rock	30-50%	Potential habitat for: AWS SJKF CTS	Same as above.	240
6.49	Annual grassland	30-50%	Potential habitat for: AWS SJKF CTS	Same as above.	240
6.63	Annual grassland	50-80%	Potential habitat for: AWS SJKF CTS	Same as above.	120
6.74	Annual grassland	50-80%	Potential habitat for: AWS SJKF CTS	Same as above.	120
6.81	Annual grassland	30-50%	Potential habitat for: AWS SJKF CTS	Same as above.	240

Drainage Structure ID	Mapped Habitat	Slope	Assessment of Habitat Use	Rational for Assessment of Habitat Use (Refer Appendix A Figures)	Habitat Loss Requiring Mitigation (sq. feet)
7.16	Annual grassland, oak woodland, exposed rock	30-50%	Potential habitat for: AWS SJKF CTS	Same as above.	240
7.21	Annual grassland	30-50%	Potential habitat for: AWS SJKF CTS	Same as above. In addition small mammal burrows suitable as CTS estivation habitat are present within or near the disturbance area.	240
7.38	Annual grassland, rocky	>100%	Potential habitat for: AWS SJKF CTS	Same as for Drainage Structure 7.21.	120
7.50	Annual grassland, rocky	30-50%	Potential habitat for: AWS SJKF CTS	Same as above.	240
7.59	Annual grassland, oak woodland	30-50%	Potential habitat for: AWS SJKF CTS	Same as above, but small burrows potentially suitable as CTS estivation habitat are present within or near the disturbance area.	240
8.14	Oak woodland	30-50%	Potential habitat for: AWS SJKF CTS	Same as for Drainage Structure 5.24.	240
8.57	Sage scrub, annual grassland	20-30%	Potential habitat for: AWS SJKF CTS	Same as above.	240
8.70	Annual grassland	30-50%	Potential habitat for: AWS SJKF CTS	Same as above.	240
8.79	Annual grassland	30-50%	Potential habitat for: AWS SJKF CTS	Same as above, but small mammal burrows suitable as CTS estivation habitat are present within or near the disturbance area.	240
9.05	Annual grassland	30-50%	Potential habitat for: AWS SJKF CTS	Same as for Drainage Structure 5.24, but ground squirrels occur in the surrounding grassland area and burrows suitable for CTS could be present (squirrels were heard but no burrows were observed).	240
9.56	Annual grassland	80-100%	Potential habitat for: AWS SJKF CTS	Same as for Drainage Structure 5.24.	120
9.66	Annual grassland	80-100%	Potential habitat for: AWS SJKF CTS	Same as above.	120

Drainage Structure ID	Mapped Habitat	Slope	Assessment of Habitat Use	Rational for Assessment of Habitat Use (Refer Appendix A Figures)	Habitat Loss Requiring Mitigation (sq. feet)
9.70	Sage scrub, exposed rock	50-80%	Potential habitat for: AWS SJKF CTS	Same as above.	120

AWS = Alameda whipsnake, CTS = California tiger salamander, SJKF = San Joaquin kit fox

a) **Less Than Significant With Mitigation.**

Federally and State Listed Wildlife Species

California tiger salamander (*Abystoma californiense*) is state and federally listed as threatened. The construction zones of the drainage structures at the Foothill and Mines Road project areas identified above in **Tables 1** and **2** provide potential upland habitat for California tiger salamander. None of the construction zones contain aquatic habitat and all of the drainage structures are located adjacent to a busy road. Additionally, many of the sites border steep slopes, which could pose a barrier to movement at least in the uphill direction. The occurrence of small mammal burrows (providing potential aestivation habitat) is limited to several sites at each of the project areas, and the potential for use of these burrows by California tiger salamander is reduced by their distance from potential breeding ponds. More specifically, these burrows are within the maximum dispersal distance of 1.24 miles of potential breeding habitat (USFWS 2003), but the dispersal distance of California tiger salamanders is normally less when there are large numbers of refuge sites in closer proximity to breeding sites (as expected to occur in areas closer to stock ponds in the vicinity). Nonetheless, given that the identified sites are within 1.24 miles of potential breeding habitat (see Appendix A, Foothill Road and Mines Road Figures), and that several sites do contain potential aestivation habitat (i.e., small mammal burrows), the construction zones identified in **Tables BIO-1** and **BIO-2** provide potential movement and/or aestivation habitat.

Impacts to California tiger salamander

The proposed project would result in the loss or disturbance of 0.215 acre of habitat potentially used by California tiger salamanders as movement and/or aestivation habitat, including 0.110 acre along Foothill Road and 0.105 acre along Mines Road. The proposed project would be constructed during the dry season as defined by the East Alameda County Conservation Strategy (EACCS) (generally May-October); post-breeding migrations may still occur during May and early June. Therefore, the potential construction-related loss of California tiger salamanders would be limited to harming individuals potentially migrating across the site (i.e., juveniles dispersing from breeding habitat to upland habitat) and individuals occupying onsite burrows. Therefore, impacts to California tiger salamander are potentially significant.

Alameda whipsnake (*Masticophis lateralis euryxanthus*) is a state and federally threatened species. Alameda whipsnake has potential to occur in the construction zones of the drainage structures identified above in **Tables BIO-1** and **BIO-2** given the presence of suitable core or movement habitat on or near the site. Portions of the Foothill Road project site (drainage structures 5.99 to 6.64) are located within designated critical habitat for Alameda whipsnake.

The entire Mines Road portion of the project site is located within designated critical habitat Alameda whipsnake.

Direct Impacts to Alameda whipsnake

The proposed project would result in the loss or disturbance of 0.215 acre of habitat potentially used by Alameda whipsnake, including 0.110 acre along Foothill Road and 0.105 acre along Mines Road. In the event that the species is present during construction, construction-related activities could result in the take of individual whipsnakes. Therefore, impacts to this species would be potentially significant.

San Joaquin kit fox (*Vulpes macrotis mutica*) is a state threatened and a federally endangered species. No potential den sites were observed within or bordering any of the construction zones of the drainage structures to be replaced; at the few sites that contained small mammal burrows, the burrows were small (approximately 5 inches or less). However, it is possible that a den could occur in a nearby area and be subject to construction-related noise. It is also possible that a den could be established prior to construction. Additionally, there is a potential that the species could attempt to move across the construction zone or seek refuge in construction related supplies (e.g., open pipes, culverts).

Impacts to San Joaquin kit fox

The EACCS does not require habitat compensation for projects within Conservation Zone 8, which includes the entire Foothill Road portion of the project site.[2] However, the 0.105-acre of habitat within the disturbance boundaries of the Mines Road segment does provide potential kit fox habitat and therefore would require habitat compensation. If San Joaquin kit fox are present in the project area, in the absence of avoidance measures, the proposed project could result in the "take" of the species. Additionally, construction-related noise could adversely affect active dens potentially occurring in the surrounding project area. Therefore, impacts to San Joaquin kit fox are potentially significant.

California red-legged frog (*Rana draytoni*) is a federally threatened species and a state Species of Special Concern. The potential of California red-legged frogs to occur in the construction zones of the drainage structures at both the Foothill and Mines Road project areas identified above in **Tables 1** and **2** is considered to be low, but not impossible. None of the construction zones contain aquatic habitat and all of drainage structures are located adjacent to a busy road. Additionally, many of the sites border steep slopes, which could pose a barrier to movement at least in the uphill direction. The occurrence of small mammal burrows (providing potential refuge habitat) is limited to several sites, and the potential for use of these burrows as refuge habitat by California red-legged frogs is low given their distance from aquatic habitat. Nonetheless, given that the sites are located near creeks (i.e., Arroyo Mocho near Mines Road and Arroyo de la Laguna River near Foothill Road) and stock ponds that provide suitable

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2 Lim, Mary (East Alameda County Conservation Strategy Coordinator). October 7, 2011. Personal Communication. Ms. Lim contacted Troy Rahmig of ICF (the preparer of the East Alameda County Conservation Strategy) to confirm that Figure 3-13 is accurate and that the Conservation Strategy does not require habitat mitigation for San Joaquin kit fox for projects in Conservation Zone 8 (CZ8). The Conservation Strategy concludes that the polygon bounded by Highways 580, 680, and 84 (which includes the project site and CZ8) is unsuitable habitat for San Joaquin kit fox.

aquatic habitat, the identified construction zones are considered to provide potential movement and/or refuge habitat.

Impacts to California red-legged frog

The proposed project would result in the loss or disturbance of 0.225 acre of habitat potentially used by California red-legged frogs as movement and/or refuge habitat, including 0.12 acre along Foothill Road and 0.105 acre along Mines Road. If individual California red-legged frogs are present in the onsite burrows or dispersing across the site, in the absence of avoidance measures, the proposed action could result in the "take" of California red-legged frog. Therefore, impacts to California red-legged frog are potentially significant.

Mitigation Measures for State and Federally Listed Species

Mitigation Measure IV.1: The relevant avoidance, minimization, and compensation measures contained in the East Alameda County Conservation Strategy (EACCS) and associated Biological Opinion have been incorporated into the proposed project and would be implemented to reduce impacts to California tiger salamander, California red-legged frog, Alameda whipsnake, and San Joaquin kit fox to a less-than-significant level.

(i) Avoidance and Minimization Measures

East Alameda County Conservation Strategy: General Avoidance and Minimization Measures to Reduce Effects on Focal Species (Table 3-2 of Conservation Plan)

GEN-01 Employees and contractors performing construction activities will receive environmental sensitivity training. Training will include review of environmental laws and Avoidance and Minimization Measures (AMMs) that must be followed by all personnel to reduce or avoid effects on covered species during construction activities.

GEN-02 Environmental tailboard trainings will take place on an as-needed basis in the field. The environmental tailboard trainings will include a brief review of the biology of the covered species and guidelines that must be followed by all personnel to reduce or avoid negative effects to these species during construction activities. Directors, Managers, Superintendents, and the crew foremen and forewomen will be responsible for ensuring that crewmembers comply with the guidelines.

GEN-03 Contracts with contractors, construction management firms, and subcontractors will obligate all contractors to comply with these requirements, AMMs.

GEN-04 The following will not be allowed at or near work sites for covered activities: trash dumping, firearms, open fires (such as barbecues) not required by the activity, hunting, and pets (except for safety in remote locations).

GEN-05 Vehicles and equipment will be parked on pavement, existing roads, and previously disturbed areas to the extent practicable.

GEN-06 Off-road vehicle travel will be minimized.

GEN-07 Vehicles will not exceed a speed limit of 15 mph on unpaved roads within natural land-cover types, or during off-road travel.

GEN-08 Vehicles or equipment will not be refueled within 100 feet of a wetland, stream, or other waterway unless a bermed and lined refueling area is constructed.

GEN-09 Vehicles shall be washed only at approved areas. No washing of vehicles shall occur at job sites.

GEN-10 To discourage the introduction and establishment of invasive plant species, seed mixtures/straw used within natural vegetation will be either rice straw or weed□free straw.

GEN-11 Pipes, culverts and similar materials greater than four inches in diameter, will be stored so as to prevent covered wildlife species from using these as temporary refuges, and these materials will be inspected each morning for the presence of animals prior to being moved.

GEN-12 Erosion control measures will be implemented to reduce sedimentation in wetland habitat occupied by covered animal and plant species when activities are the source of potential erosion problems. Plastic mono□filament netting (erosion control matting) or similar material containing netting shall not be used at the project. Acceptable substitutes include coconut coir matting or tackified hydroseeding compounds.

GEN-13 Stockpiling of material will occur such that direct effects to covered species are avoided. Stockpiling of material in riparian areas will occur outside of the top of bank, and preferably outside of the outer riparian dripline and will not exceed 30 days.

GEN-14 Grading will be restricted to the minimum area necessary.

GEN-15 Prior to ground disturbing activities in sensitive habitats, project construction boundaries and access areas will be flagged and temporarily fenced during construction to reduce the potential for vehicles and equipment to stray into adjacent habitats.

GEN-16 Significant earth moving□activities will not be conducted in riparian areas within 24 hours of predicted storms or after major storms (defined as 1□inch of rain or more).

GEN-17 Trenches will be backfilled as soon as possible. Open trenches will be searched each day prior to construction to ensure no covered species are trapped. Earthen escape routes will be installed at intervals prescribed by the qualified biologist.

East Alameda County Conservation Strategy: Species Specific Measures for California red-legged frog and California Tiger Salamander (Table 3-3 of Conservation Strategy)

- If aquatic habitat is present, a qualified biologist will stake and flag an exclusion zone prior to activities. The exclusion zone will be fenced with orange construction zone and erosion fencing (to be installed by construction crew). The exclusion zone will encompass the maximum practical distance from the work site and at least 500 feet from the aquatic feature and work site. [NOTE suitable CTS breeding habitat does not occur within 0.14 mile of the project site]
- A qualified biologist will conduct preconstruction surveys prior to activities before ground breaking. If individuals are found, work will not begin until they are moved out of the construction zone to a USFWS/CDFG approved location site.
- A Service-approved biologist should be present for initial ground disturbing activities.

- If the work site is within the typical dispersal distance of potential breeding habitat, barrier fencing will be constructed around the worksite to prevent amphibians from entering the work area. Barrier fencing will be removed within 72 hours of completion of work.
- No monofilament plastic will be used for erosion control.
- Construction personnel will inspect open trenches in the morning and evening for trapped amphibians.
- A qualified biologist possessing a valid ESA Section 10(a)(1)(A) permit or Service approved under an existing biological opinion, will be contracted to trap and move amphibians to nearby suitable habitat if amphibians are found inside fenced area.
- Work will be avoided within suitable habitat from October 15 (or the first measureable fall of rain 1" or greater) to May 1. [NOTE: the proposed project is scheduled for the period between June 15 – October 15]

East Alameda County Conservation Strategy: Species Specific Measures for Alameda Whipsnake (Table 3-3 of Conservation Strategy)

- No monofilament plastic will be used for erosion control.
- Barrier fencing may be used to exclude focal reptiles. Barrier fencing will be removed within 72 hours of completion of work.
- Construction crews or on-site biological monitor will inspect open trenches in the morning and evening for trapped reptiles.
- Ground disturbance in suitable habitat will be minimized.
- A USFWS and CDFG-approved biological monitor will be present for all ground disturbing activities in suitable habitat.
- A qualified biologist possessing a valid ESA Section 10(a)(1)(A) permit or Service approved under an existing biological opinion, will be contracted to trap and move reptiles to nearby suitable habitat if listed reptiles are found inside fenced area.

East Alameda County Conservation Strategy: Species Specific Measures for San Joaquin Kit Fox (Table 3-3 of Conservation Strategy)

- If potential dens are present, their disturbance and destruction will be avoided.
- If potential dens are located within the proposed work area and cannot be avoided during construction, a qualified biologist will determine the dense are occupied or were recently occupied using methodology coordinated with the USFWS and CDFG. If unoccupied, the qualified biologist will collapse these dens by hand in accordance with USFWS procedures (U.S. Fish and Wildlife Service 1999).
- Exclusion zones will be implemented following USFWS procedures (U.S. Fish and Wildlife Service 1999) or the latest USFWS procedures available at the time. The radius of these zones will follow current standards or will be as follows: Potential Den – 50 feet; Known Den – 100 feet; Natal or Pupping Den – to be determined on a case-by-case basis in coordination with USFWS and CDFG.
- Pipes will be capped and trenches will contain exit ramps to avoid direct mortality while construction area is active.

Additional Measures Included in Programmatic Biological Opinion for the East Alameda

County Conservation Strategy

1. At least 15 days prior to any ground disturbing activities, the applicant will submit to the Service (and CDFW) for review and approval the qualifications of the proposed biological monitor(s). A qualified biological monitor means any person who has completed at least four years of university training in wildlife biology or a related science and/or has demonstrated field experience in the identification and life history of the listed species.
2. A Service (and CDFW) approved biological monitor will be present on-site during all initial ground disturbing activities in or adjacent to habitat for listed species. The approved biological monitor(s) will be given the authority to stop any work that may result in the take of listed species. If the approved monitor(s) exercises this authority, the Service (and CDFW) will be notified by telephone and electronic mail within one working day. The approved biological monitor will be the contact for any employee or contractor who might inadvertently kill or injure a listed species or anyone who finds a dead, injured or entrapped individual. The approved biological monitor will possess a working wireless/mobile phone whose number will be provided to the Service (and CDFW).
3. Prior to construction, a construction employee education program will be conducted in reference to potential listed species on site. At minimum, the program will consist of a brief presentation by persons knowledgeable in endangered species biology and legislative protection to explain concerns to contractors, their employees, and agency personnel involved in the project. The program will include: a description of the species and their habitat needs; any reports of occurrences in the project area; an explanation of the status of each listed species and their protection under the Act; and a list of measures being taken to reduce effects to the species during construction and implementation. Fact sheets conveying this information and an educational brochure containing color photographs of all listed species in the work area(s) will be prepared for distribution to the above-mentioned people and anyone else who may enter the project area. A list of employees who attend the training sessions will be maintained by the applicant to be made available for review by the Service (and CDFW) upon request. Contractor training will be incorporated into construction contracts and will be a component of weekly project meetings.
4. Preconstruction surveys for listed species will be conducted immediately prior to ground breaking activities. Surveys will be conducted by Service (and CDFW) approved biologists. If at any point, construction activities cease for more than five consecutive days, additional preconstruction surveys will be conducted prior to the resumption of these actions.
5. To prevent the accidental entrapment of listed species during construction, all excavated holes or trenches deeper than 6 inches will be covered at the end of each work day with plywood or similar materials. Foundation trenches or larger excavations that cannot easily be covered will be ramped at the end of the work day to allow trapped animals an escape method. Prior to the filling of such holes, these areas will be thoroughly inspected for listed species by the approved biologists. In the event a trapped animal is observed, construction will cease until the individual has been relocated to an appropriate location.
6. Only Service (and CDFW) approved biologists will conduct surveys and move listed species.
7. All trash and debris within the work area will be placed in containers with secure lids before the end of each work day in order to reduce the likelihood of predators being attracted to the site by discarded food rappers and other rubbish that may be left on-site. Containers will be emptied as necessary to prevent trash overflow onto the site and all

rubbish will be disposed of at an appropriate off-site location.

8. All vegetation which obscures the observation of wildlife movement within the affected areas containing or immediately adjacent aquatic habitats will be completely removed by hand just prior to the initiation of grading to remove cover that might be used by listed species. The approved biologist will survey these areas immediately prior to vegetation removal to find, capture and relocate any observed listed species, as approved by the Service.
9. All construction activities must cease one half hour before sunset and should not begin prior to one half hour after sunrise. There will be no nighttime construction.
10. Grading and construction will be limited to the dry season, typically May-October.
11. If a rainfall event (0.25 inch or more) occurs during operations, all work will stop and will be postponed for three days following the rain event. If work is stopped due to a rain event or if a two-week or more gap occurs in construction activity, the project site will be resurveyed for listed species within 24 hours of recommencement of construction.
12. Best Management Practices (BMPs) will be used to minimize erosion and impacts to water quality and effects to aquatic habitat. If necessary, a Storm Water Pollution Prevention Plan (SWPPP) will be prepared.
13. The applicant will ensure a readily available copy of the biological opinion is maintained by the construction foreman/manager on the project site whenever earthmoving and/or construction is taking place. The name and telephone number of the construction foreman/manager will be provided to the Service prior to groundbreaking.
14. The construction area shall be delineated with high visibility temporary fencing at least 4 feet in height, flagging, or other barrier to prevent encroachment of construction personnel and equipment outside of the construction area. Such fencing shall be inspected and maintained daily until completion of the project. The fencing will be removed only when all construction equipment is removed from the site.
15. Silt fencing or wildlife exclusion fencing will be used to prevent listed species from entering the project area. Exclusion fencing will be at least 3 feet high and the lower 6 inches of the fence will be buried in the ground to prevent animals from crawling under. The remaining 2.5 feet will be left above ground to serve as a barrier for animals moving on the ground surface. The fence will be pulled taut at each support to prevent folds or snags. Fencing shall be installed and maintained in good condition during all construction activities. Such fencing shall be inspected and maintained daily until completion of the project. The fencing will be removed only when all construction equipment is removed from the site.
16. A Service-approved biologist shall ensure that the spread or introduction of invasive exotic plant species shall be avoided to the maximum extent possible. When practicable, invasive exotic plants in the project areas shall be removed. Project sites shall be revegetated with an appropriate assemblage of native riparian wetland and upland vegetation suitable for the area. A species list and restoration and monitoring plan shall be included with the project proposal for review and approval by the Service and the Corps. Such a plan must include, but not be limited to, location of the restoration, species to be used, restoration techniques, time of year the work will be done, identifiable success criteria for completion, and remedial actions if the success criteria are not achieved.
17. If California tiger salamander, Alameda whipsnake, or San Joaquin kit fox, or any species

that the approved biologist or construction personnel believe may be these species, is encountered during construction, or if ay contractor, employee, or agency personnel inadvertently kills or injures one of these species, the following protocols will be followed:

- All work that could result in direct injury, disturbance, or harassment for the animal will immediately cease.
- The Service (and CDFW) approved biologist will be immediately notified.
- Based on the judgment of the approved biologist, if project activities can be conducted without harming or injuring the species, the individual(s) will be left at the location of discovery and monitored by the approved biologist. If possible, these species will not be handled and will be allowed to exit the work area on their own. If necessary, the animal will be captured and relocated using the approved biologist's best judgment if safe avoidance is not possible. All project personnel will be notified of the finding, and at no time will work occur within the vicinity of the individual(s) without the approved biologist present. The approved biologist will advice the applicant and the contractor on how to proceed.
- The Service (and CDFW) will be contacted no later than the next working day upon any discovery and/or relocation of a listed species.

18. A qualified biologist will conduct a preconstruction survey for San Joaquin kit fox no more than 30 days before the beginning of ground disturbance or any activity likely to affect San Joaquin kit fox. This measure will be implemented in all off-road construction areas. The biologist will survey the proposed construction area and a 200-foot buffer around the construction area to identify suitable dens. The biologist will conduct den searches by systematically walking transects spaced 30-100 feet apart through the survey area. Transect distance should be determined on the basis of the height of vegetation such that 100 percent visual coverage of the survey area is achieved. If dens are found during the survey, the biologist will map the location of each den as well as record the size and shape of the den entrance; the presence of tracks, scat, and prey remains; and if the den was recently excavated. The biologist will also record information on prey availability (e.g., ground squirrel colonies). The status of the den as defined by the Service should also be determined and recorded. Dens will be classified in one of the following four den status categories:

A. Potential den: Any subterranean hole within the species' range that has entrances of appropriate dimensions for which available evidence is sufficient to conclude that it is being used or has been used by a San Joaquin kit fox. Potential dens comprise: (1) any suitable subterranean hole; or (2) any den or burrow of another species (e.g., coyote, badger, red fox, or ground squirrel) that otherwise has appropriate characteristics for San Joaquin kit fox use.

B. Known den: Any existing natural den or artificial structure that is used or has been used at any time in the past by a San Joaquin kit fox. Evidence of use may include historical records; past or current radio telemetry or spotlighting data; San Joaquin kit fox signs such as tracks, scat, and/or prey remains; or other reasonable proof that a given den is being or has been used by a San Joaquin kit fox.

C. Natal or pupping den: Any den used by San Joaquin kit fox to whelp and/or rear their pups. Natal/pupping dens may be larger with more numerous entrances than dens occupied exclusively by adults. These dens typically have more San Joaquin kit fox tracks, scat, and prey remains in the vicinity of the den, and may have a broader apron

of matted dirt and/or vegetation at one or more entrances. A natal den, defined as a den in which San Joaquin kit fox pups are actually whelped but not necessarily reared, is a more restrictive version of the pupping den. In practice, however, it is difficult to distinguish between the two; therefore, for purposes of this definition either term applies.

D. Atypical den: Any artificial structure that has been or is being occupied by a San Joaquin kit fox. Atypical dens may include pipes, culverts, and diggings beneath concrete slabs and buildings.

Written results of the surveys will be submitted to the Service and CDFW within one week of the completion of surveys and prior to the beginning of ground disturbance and/or construction activities likely to affect San Joaquin kit fox.

19. After preconstruction den searches and before the commencement of construction activities, a qualified Service (and CDFW) approved biologist will establish and maintain the following exclusion zones measured in a radius outward from the entrance or cluster of entrances of each den.

    A. Potential and atypical dens: A total of 4-5 flagged stakes will be placed 50 feet from the den entrance to identify the den location.

    B. Known den: Orange construction barrier fencing will be installed between the construction work area and the known den site at a minimum distance of 100 feet from the den. The fencing will be maintained until all construction-related disturbances have been terminated. At that time, all fencing will be removed to avoid attracting subsequent attention to the den.

    C. Natal/pupping den: The Service will be contacted immediately if a natal or pupping den is discovered at or within 200 feet from the boundary of the construction area.

    D. Construction and other project activities will be prohibited or greatly restricted within these exclusion zones. Only essential vehicular operation on existing roads and foot traffic should be permitted and articulated to the Service. All other construction activities, vehicle operation, material and equipment storage, and other surface-disturbing activities will be prohibited in the exclusion zones.

    E. In cases where avoidance is not a reasonable alternative, limited destruction of potential San Joaquin kit fox dens will be allowed. Potential dens can be removed by careful hand excavation by a Service-approved biologist or under the supervision of a Service-approved biologist, after the dens have been monitored for three days with tracking medium or a remote sensor camera and determined to be vacant of San Joaquin kit foxes. If, during excavation or monitoring, a potential den is determined to be currently or previously used (e.g., San Joaquin kit fox sign found inside) by San Joaquin kit fox, then destruction of the den or construction in that area will cease and the Service will be notified immediately.

20. Vehicle traffic will be restricted to established roads, construction areas, and other designated areas.

21. Grading activities shall be designed to minimize or eliminate effects to rodent burrows. Areas with high concentrations of burrows and large burrows suitable for San Joaquin kit ox dens shall be avoided by grading activities to the maximum extent possible. In addition, when concentrations of burrows or large burrows are observed within the site these areas shall be staked and flagged to ensure construction personnel are aware of their location and

to facilitate avoidance of these areas.

(ii) Habitat Compensation Measures

The project related disturbance of habitat potentially used by federally and state listed species would be compensated for according to the requirements of the EACCS as follows:

Foothill Road Portion of Project:

Species	Habitat Loss	Mitigation Ratio	Required Acreage
California red-legged frog	0.12 Acre	1.6:1	0.19
Central California tiger salamander	0.11 Acre	2:1	0.22
Alameda whipsnake	0.11 Acre	3.8:1	0.42
San Joaquin kit fox	0	None Required	None Required

Mines Road Portion of Project:

Species	Habitat Loss	Mitigation Ratio	Required Acreage
California red-legged frog	0.105 Acre	1.9:1	0.20
Central California tiger salamander	0.105 Acre	2:1	0.21
Alameda whipsnake	0.105 Acre	3.8:1	0.40
San Joaquin kit fox	0.105 Acre	1.6:1	0.17

The total Habitat Compensation to be provided is shown below. The amount of habitat compensation meets the requirements of the EACCS and has been approved by the USFWS.

CRLF: **0.39 acre** (to be purchased at Ohlone Preserve)
CTS: **0.43 acre** (to be purchased at Mountain House Preserve)
AWS: **0.82 acre** (to be purchased at Ohlone Preserve)
SJKF: **0.17 acre** (to be purchased at Mountain House Preserve)

Other Special-Status Wildlife Species

The NES prepared for the project (Caltrans 2010) found that the following special-status wildlife species (which are not state or federally listed as threatened or endangered) could also occur on the project site:

Burrowing owl (*Athene cunicularia*) is a federal Bird of Conservation Concern and a state Species of Special Concern. The NES (Caltrans 2010) found that there is potential for burrowing owl to occur within the annual grassland, chaparral and to a lesser extent oak woodland within and surrounding all of the study sites except sites 5.20, 5.28, and 5.83 along Foothill Road. The NES also concluded that as the proposed construction activities will occur within 10 feet of an existing roadway that is subject to ongoing human disturbance, is unlikely that burrowing owl would occur within the study sites. However, construction of the proposed project may interfere with nesting activities, if nests are present within 250 feet of construction. Therefore, impacts to burrowing owl are potentially significant.

Mitigation Measure IV.2: Prior to the commencement of construction, protocol surveys for nesting burrowing owls shall be conducted according to the requirements of the *Burrowing Owl Survey Protocol and Mitigation Guidelines* recommended by The California Burrowing Owl Consortium (April 1993). The survey area shall include any work sites that provide suitable burrow habitat or areas where suitable burrow habitat occurs within 250 feet of a work site. If nesting is occurring, construction work within 250 feet of the nest site would be delayed until fledglings have left the nest; this distance may be less if authorized by the CDFW. Limits of construction to avoid an active nest should be established in the field with flagging, fencing, or other appropriate barrier, and construction personnel should be instructed on the sensitivity of nest areas. A biological monitor should serve as a construction monitor during those periods when construction activities would occur near active nest areas to ensure that no inadvertent impacts on these nests occur.

If non-nesting owls are observed, construction work can proceed after any owls have been excluded from the construction footprint using CDFG-approved burrow closure procedures and after alternative burrow sites have been provided in accordance with the CDFG Staff Report on Burrowing Owl Mitigation (October 1995). The exclusion of owls from burrows would be subject to approval of the CDFG.

Foothill yellow-legged frog, Silvery legless lizard, California horned lizard, San **Joaquin whipsnake.** While the NES (Caltrans 2010) found that these species have some potential to occur on the project site, onsite habitat is considered very marginal for these species and it is unlikely that they would occur. In the unlikely event that individuals of these species are present, the measures described above to address state and federally listed species would also serve to prevent harm to these non-listed species and would reduce potential impacts to a less than significant level.

Nesting Birds

The active nests of most native bird species are protected by the Migratory Bird Treaty Act (16 U.S.C. 704) and the California Fish and Game Code (Section 3503). Numerous bird species, including raptors, likely nest on the site. Depending on the timing of the construction activities, it is possible that a protected bird nest could be directly removed or adversely affected by construction-related noise.

Mitigation Measure IV.3: If construction activities would commence anytime during the nesting/breeding season of native bird species potentially nesting on the site (typically February through August in the project region), a pre-construction survey for nesting birds would be conducted by a qualified biologist within two weeks of the commencement of construction activities.

If active nests are found in areas that could be directly affected or are within 250 feet of construction and would be subject to prolonged construction-related noise, a no-disturbance buffer zone should be created around active nests during the breeding season or until a qualified biologist determines that all young have fledged. The size of the buffer zones and types of construction activities restricted within them should be determined by taking into account factors such as the following:

- Noise and human disturbance levels at the construction site at the time of the survey and the noise and disturbance expected during the construction activity;

- Distance and amount of vegetation or other screening between the construction site and the nest; and
- Sensitivity of individual nesting species and behaviors of the nesting birds.

Special-Status Plant Species

The NES (Caltrans 2010) concluded that no special-status plant species are expected to occur on the project site given the roadside location and disturbed condition of onsite habitats. Therefore, related impacts would be less than significant.

b) **Less Than Significant Impact.** The project site includes roadside areas and does not include the direct disturbance of riparian or sensitive plant communities. Therefore, related impacts would be less than significant.

c) **Less than Significant Impact.** Based on the wetland delineation conducted for the project (PMC 2010), there are no potential jurisdictional wetlands within the project's disturbance boundary. On the Foothill Road site, 0.010 acre of jurisdictional roadside ditches/creeks was identified, and on the Mines Road site, 0.012 acre of jurisdictional roadside ditches/depressions was identified. While up to 0.022 acre of jurisdictional roadside ditches/creeks/depressions could be disturbed, the related impact is not considered substantial because of the small area to be affected, the roadside location and degraded habitat conditions, and because no wetlands are present. Therefore, the proposed project would not have a substantial adverse affect on a federally protected wetland and related impacts would be less than significant.

d) **Less Than Significant Impact.** Wildlife corridors are described as pathways or habitat linkages that connect discrete areas of natural open space otherwise separated or fragmented by topography, changes in vegetation, and other natural or manmade obstacles such as urbanization. The proposed project includes the replacement of drainage inlet structures and would not create a barrier to wildlife movement. Therefore, related impacts would be less than significant.

e) **Less Than Significant Impact.** The proposed project does not include the removal of trees, and therefore, would not conflict with a local tree preservation ordinance. Similarly, the project would not conflict with any other local policy or ordinance protecting biological resources. Therefore, related impacts would be less than significant.

f) **Less Than Significant Impact.** The project site is within the geographic area covered by the East Alameda Count Conservation Strategy (EACCS). As discussed above, the mitigation and avoidance measures required by the EACCS to protect sensitive biological resources have been adopted and would be implemented as part of the proposed project. Therefore, the project would not conflict with the EACCS and related impacts would be less than significant.

g) **No Impact.** The proposed project does not include the removal or conversion of oak woodlands. Therefore, no related impacts would occur.

V. CULTURAL RESOURCES

a) **No Impact.** No listed California Register of Historical Resources or any other significant local, state or federal historic properties, landmarks, or other resources would be affected by the project's replacement of existing drainage inlet structures with lower-profile inlet structures.

b) **Less Than Significant Impact.** The project consists of replacing existing drainage inlet structures with lower-profile inlet structures. Because construction would occur partially in previously disturbed areas, and the additional area that would be disturbed is small and adjacent to previously disturbed areas, the potential for disturbing undiscovered subsurface archaeological resources is low. Therefore, no subsurface testing for potential subsurface archaeological resources or construction monitoring is recommended. However, archaeological materials may be uncovered during excavation. With implementation of construction-related best management practices (see BMP-11), as listed in Table 1 in the project description, the impact on archaeological resources would be less than significant.

c) **No Impact.** There are no known paleontological resources or unique geological features on the proposed project site. See also response to Item V.b, above.

d) **Less Than Significant Impact.** The proposed project site is not located near a cemetery and the areas of the inlet structures that would be reconstructed have been previously disturbed or are small and adjacent to previously disturbed areas; therefore, it is unlikely that the site would have any buried human remains. However, human remains may be uncovered during construction. With implementation of construction-related best management practices (see BMP-11), as listed in Table 1 in the project description, the impact on buried human remains would be less than significant.

VI. GEOLOGY AND SOILS

ai) **Less Than Significant Impact.** The Alquist-Priolo Earthquake Fault Zoning Act was passed in 1972 to prevent development of buildings intended for human occupation in active fault zones where there is a potential for fault rupture. The southern portion of the Foothill Road segment is located within an Alquist-Priolo fault zone shown on the fault zone map of the area. The same Alquist-Priolo fault zone is located approximately one-half mile to the west of the remainder of the Foothill Road segment of the project site (California Department of Conservation 1980, 1982). The Mines Road segment of the project site is not located within or near an Alquist-Priolo fault zone. (California Department of Conservation 1982). Thus, there is a potential for rupture of an earthquake fault at the southern portion of the Foothill Road segment of the project site. However, the proposed project would consist of reconstruction of existing drainage inlets and would not include inhabitable structures. Therefore, the project would not substantially increase the existing level of risk of damage or injury due to fault rupture, and this impact would be less than significant.

aii-aiii) **Less Than Significant Impact.** The project site is within the seismically active San Francisco Bay Area and is potentially subject to strong seismic ground shaking during an earthquake on one of the major active earthquake faults in the area. Most of the Foothill Road segment of the project site is an area identified by the Seismic Hazards Zone map where liquefaction has occurred or there is potential ground displacement. (California Department of Conservation 2004, 2008). The Mines Road segment of the project site is located in a steeply sloped area that is not subject to liquefaction. However, the proposed project would not result in any change that would increase the exposure of people or structures to ground shaking or liquefaction, and this impact would be less than significant.

aiv) **Less Than Significant Impact.** There are no landslides identified within the Foothill Road segment of the project area. (California Department of Conservation 2004, 2008). Although California Department of Conservation maps of Seismic Hazard identifying landslides are not available for the Mines Road segment of the project area, most of this segment of Mines Road is located in a steeply sloped area and may be subject to landslides. (California Department of Conservation 2013b). However, the proposed project would consist of reconstruction of existing drainage inlets and would not include inhabitable structures. Therefore, the project would not substantially increase the existing level of risk of damage or injury due to landslide, and this impact would be less than significant.

b) **Less Than Significant Impact.** Soil erosion could occur during excavation and grading for the reconstructed drainage structures, much of which would occur in sloped areas. In addition, vegetation would be removed from up to a total of 12,000 square feet (0.28 acre) of undisturbed areas adjacent to the drainage structures, as discussed in Item II.a, above. This would increase the potential for erosion. Erosion occurs when soil exposed by grading or excavation activities is exposed to heavy winds or rain. While wind can move soils, surface water runoff causes most of the erosion. The site would be most susceptible to erosion during construction, from the initial excavation, through placement and compaction of fill. With implementation of construction-related best management practices (see BMP-1, BMP-2, and BMP-3), as listed in Table 1 in the project description, no substantial soil erosion would take occur.

c) **Less Than Significant Impact.** As discussed in Items VI.a.ii, VI.a.iii, and VI.a.iv, above, portions of the project site are located on a geologic unit or soil that is unstable, and subject to landslide and liquefaction. No portion of the project area would become unstable as a result of the project, and the project would not substantially increase the existing level of risk of damage or injury due to landslide. Therefore, this impact would be less than significant.

d) **No Impact.** No buildings would be constructed as a part of this project. The proposed project would not involve any structures that would create a substantial risk to life or property associated with expansive soils.

e) **No Impact.** The project would not involve increased development in the area or a need for septic tanks or alternative water disposal systems.

VII. GREENHOUSE GAS EMISSIONS

Greenhouse Gas Setting

Gases that trap heat in the atmosphere are referred to as greenhouse gas (GHG) emissions because they capture heat radiated from the sun as it is reflected back into the atmosphere, similar to a greenhouse. The accumulation of GHG emissions has been implicated as a driving force for Global Climate Change. Definitions of climate change vary between and across regulatory authorities and the scientific community, but in general can be described as the changing of the earth's climate caused by natural fluctuations and the impact of human activities that alter the composition of the global atmosphere. Both natural processes and human activities result in the generation of GHG emissions.

The major concern is that increases in GHG emissions are causing Global Climate Change. Global Climate Change is a change in the average weather on earth that can be measured by wind patterns, storms, precipitation, and temperature. Although there is disagreement as to the speed of global warming and the extent of the impacts attributable to human activities, the vast majority of the scientific community now agrees that there is a direct link between increased GHG emissions and long term global temperature increases. Potential global warming impacts in California may include, but are not limited to, loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, more drought years, impacts to agriculture, changes in disease vectors, and changes in habitat and biodiversity.

In California, GHGs are defined to include carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), sulfur hexafluoride (SF6), perfluorocarbons (PFCs), nitrogen trifluoride (NF3), and hydrofluorocarbons. To account for the warming potential of GHGs, GHG emissions are quantified and reported as CO2 equivalents (CO2e). The effects of GHG emission sources (i.e., individual projects) are reported in metric tons per year of CO2e.

Regulatory Framework

In 2006, California passed the California Global Warming Solutions Act of 2006 (Assembly Bill No. 32; California Health and Safety Code Division 25.5, Sections 38500, et seq., also known as AB 32), which requires the California Air Resources Board (CARB) to design and implement emission limits, regulations, and other measures, such that statewide GHG emissions will be reduced to 1990 levels by 2020.

In June 2008, CARB published its Climate Change Draft Scoping Plan (CARB, 2008a). The Climate Change Draft Scoping Plan reported that CARB met the first milestones set by AB 32 in 2007: developing a list of early actions to begin sharply reducing GHG emissions; assembling an inventory of historic emissions; and establishing the 2020 emissions limit. After consideration of public comment and further analysis, CARB adopted the plan in December 2008 (CARB, 2008b).

The Climate Change Proposed Scoping Plan includes recommended actions that were developed to reduce GHG emissions from key sources and activities while improving public health, promoting a cleaner environment, preserving our natural resources, and ensuring that the impacts of the reductions are equitable and do not disproportionately impact low-income and minority communities. These measures, shown below in Table 2 by sector, also put the State on a path to meet the long-term 2050 goal of reducing California's GHG emissions to 80 percent below 1990 levels. These measures were presented to and approved by CARB on December 11, 2008.

TABLE GHG-1
LIST OF RECOMMENDED ACTIONS BY SECTOR

Measure No.	Measure Description	GHG Reductions (Annual Million Metric Tons CO_2e)
Transportation		
T-1	Pavley I and II – Light Duty Vehicle Greenhouse Gas Standards	31.7
T-2	Low Carbon Fuel Standard (Discrete Early Action)	15
T-3[1]	Regional Transportation-Related Greenhouse Gas Targets	5
T-4	Vehicle Efficiency Measures	4.5
T-5	Ship Electrification at Ports (Discrete Early Action)	0.2
T-6	Goods Movement Efficiency Measures. • Ship Electrification at Ports • System-Wide Efficiency Improvements	3.5
T-7	Heavy-Duty Vehicle Greenhouse Gas Emission Reduction Measure – Aerodynamic Efficiency (Discrete Early Action)	0.93
T-8	Medium- and Heavy-Duty Vehicle Hybridization	0.5
T-9	High Speed Rail	1
Electricity and Natural Gas		
E-1	Energy Efficiency (32,000 GWh of Reduced Demand) • Increased Utility Energy Efficiency Programs • More Stringent Building & Appliance Standards Additional Efficiency and Conservation Programs	15.2
E-2	Increase Combined Heat and Power Use by 30,000 GWh (Net reductions include avoided transmission line loss)	6.7
E-3	Renewables Portfolio Standard (33% by 2020)	21.3
E-4	Million Solar Roofs (including California Solar Initiative, New Solar Homes Partnership and solar programs of publicly owned utilities) • Target of 3000 MW Total Installation by 2020	2.1
CR-1	Energy Efficiency (800 Million Therms Reduced Consumptions) • Utility Energy Efficiency Programs • Building and Appliance Standards • Additional Efficiency and Conservation Programs	4.3
CR-2	Solar Water Heating (AB 1470 goal)	0.1
Green Buildings		
GB-1	Green Buildings	26
Water		
W-1	Water Use Efficiency	1.4†
W-2	Water Recycling	0.3†

Measure No.	Measure Description	GHG Reductions (Annual Million Metric Tons CO_2e)
W-3	Water System Energy Efficiency	2.0†
W-4	Reuse Urban Runoff	0.2†
W-5	Increase Renewable Energy Production	0.9†
W-6	Public Goods Charge (Water)	TBD†
Industry		
I-1	Energy Efficiency and Co-Benefits Audits for Large Industrial Sources	TBD
I-2	Oil and Gas Extraction GHG Emission Reduction	0.2
I-3	GHG Leak Reduction from Oil and Gas Transmission	0.9
I-4	Refinery Flare Recovery Process Improvements	0.3
I-5	Removal of Methane Exemption from Existing Refinery Regulations	0.01
Recycling and Water Management		
RW-1	Landfill Methane Control (Discrete Early Action)	1
RW-2	Additional Reductions in Landfill Methane • Increase the Efficiency of Landfill Methane Capture	TBD†
RW-3	High Recycling/Zero Water • Commercial Recycling • Increase Production and Markets for Compost • Anaerobic Digestion • Extended Producer Responsibility • Environmentally Preferable Purchasing	9†
Forests		
F-1	Sustainable Forest Target	5
High Global Warming Potential (GWP) Gases		
H-1	Motor Vehicle Air Conditioning Systems: Reduction of Refrigerant Emissions from Non-Professional Services (Discrete Early Action)	0.26
H-2	SF_6 Limits in Non-Utility and Non-Semiconductor Applications (Discrete Early Action)	0.3
H-3	Reduction of Perfluorocarbons in Semiconductor Manufacturing (Discrete Early Action)	0.15
H-4	Limit High GWP Use in Consumer Products Discrete Early Action (Adopted June 2008)	0.25
H-5	High GWP Reductions from Mobile Sources • Low GWP Refrigerants for New Motor Vehicle Air Conditioning Systems • Air Conditioner Refrigerant Leak Test During Vehicle Smog Check • Refrigerant Recovery from Decommissioned Refrigerated	3.3

Measure No.	Measure Description	GHG Reductions (Annual Million Metric Tons CO_2e)
	Shipping Containers • Enforcement of Federal Ban on Refrigerant Release during Servicing or Dismantling of Motor Vehicle Air Conditioning Systems	
H-6	High GWP Reductions from Stationary Sources • High GWP Stationary Equipment Refrigerant Management Program: o Refrigerant Tracking/Reporting/Repair Deposit Program o Specifications for Commercial and Industrial Refrigeration Systems • Foam Recovery and Destruction Program • SF Leak Reduction and Recycling in Electrical Applications • Alternative Suppressants in Fire Protection Systems • Residential Refrigeration Early Retirement Program	10.9
H-7	Mitigation Fee on High GWP Gases	5
Agriculture		
A-1	Methane Capture at Large Dairies	1.0†

[1] This is not the SB 375 regional target. CARB will establish regional targets for each Metropolitan Planning Organization (MPO) region following the input of the regional targets advisory committee and a consultation process with MPO's and other stakeholders per SB 375.

† GHG emission reduction estimates are not included in calculating the total reductions needed to meet the 2020 target.

It is important to evaluate the air quality and public health benefits of the Scoping Plan in the context of the State's on-going air quality improvement efforts. California's long-standing air pollution control programs have substantially improved air quality in the state and will continue to do so in the future.

The Alameda County Community Climate Action Plan (unincorporated areas of the County) covers a variety of topics, but none of them directly affect the drainage inlet structure replacement project.

a-b) **Less Than Significant Impact.**

Significance Criteria

The 1999 BAAQMD CEQA Guidelines do not address GHG emissions and the BAAQMD 2010 thresholds that have been set aside by the writ of mandate do not require quantification of GHG emissions from construction. This analysis identifies project construction and/or project operational emissions as significant if the project emissions would conflict with the AB 32 State goals for reducing GHG emissions. The potential for the project to conflict with AB 32 goals is assessed by determining if the project would: conflict with any of CARB's 39 recommended actions (Table 2); result in emissions that would be equivalent to the size of major facilities that are required to report GHG emissions (25,000 metric tons/year of CO2e) to the State and Federal governments; be inherently energy in-efficient; or conflict with an applicable plan, policy, or regulation of an agency adopted for the purpose of reducing GHG emissions.

As described above, four types of analyses are used to determine whether the project could conflict with the State goals for reducing GHG emissions. The analyses are as follows:

A. Any potential conflicts with the CARB's thirty-nine (39) recommended actions (Table 2).

B. The relative size of the project. The project's GHG emissions are compared to the size of major facilities that are required to report GHG emissions (25,000 metric tons/year of CO2e)[3] to the State; and the project size is compared to the estimated GHG reduction state goal of 174 million metric tons per year of CO2e emissions by 2020. As noted above, the 25,000 metric ton annual limit identifies the large stationary point sources in California that make up approximately 94 percent of the stationary emissions. If the project's total emissions are below this limit, its total emissions are equivalent in size to the smaller projects in California that as a group only make up six percent of all stationary source emissions. It is assumed that the activities of these smaller projects generally would not conflict with the State's ability to reach AB 32 overall goals. In reaching its goals, CARB will focus upon the largest emitters of GHG emissions.

C. The basic energy efficiency parameters of a project; to determine whether the project design is inherently energy efficient.

D. Potential conflicts with an applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.

Impact Analysis

Primarily because of the small size of the project, the project would not conflict with implementation of State goals for reducing GHG emissions and would thereby not have a negative effect on Global Climate Change.

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[3] The State of California has not provided guidance as to quantitative significance thresholds for assessing the impact of GHG emissions on climate change and global warming concerns. Nothing in the CEQA Guidelines directly addresses the significance thresholds.

The project would result in a relatively small construction crew working for a limited time at 50 locations in Alameda County. As with other individual and relatively small projects (i.e., projects that are not cement plants, oil refineries, electric generating facilities/providers, co-generation facilities, hydrogen plants, or other stationary combustion sources that emit more than 25,000 metric tons/year of CO2e), the specific emissions from this project would not be expected to individually have an impact on Global Climate Change (AEP, 2007). Furthermore, GHG impacts are considered to be exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective (CAPCOA, 2008). With regard to GHG significance threshold Item A, the project does not pose any apparent conflict with the CARB recommended actions (see Table 2).

With regard to GHG significance threshold Item B, potential GHG emission impacts from the project are mainly related to construction excavation and worker vehicle trips. Project construction GHG emissions have been estimated using the Road Construction Emissions Model, Version 7.1.2. Project construction GHG emissions would be approximately 210 tons of CO2e (191 metric tons of CO2e) for the overall project. The project would not be classified as a major source of GHG emissions (construction emissions from the construction would be less than one percent of the lower reporting limit, which is 25,000 metric tons/year of CO2e). When compared to the overall State reduction goal of approximately 174 million metric tons/year of CO2e, the construction plan GHG emissions for the project (191 metric tons/year of CO2e or less than 0.0001 percent of the State reduction goal) are quite small and would not conflict with the State's ability to meet the AB 32 goals.

With regard to GHG significance threshold Item C, the project would be inherently energy efficient; operations would result in no increase in energy use.

With regard to GHG significance threshold Item D, the replacement of drainage inlet structures would not conflict with any local or state GHG plans, policies, or regulations.

The review of GHG significance threshold Items A, B, C, D indicates that the project would not conflict with the State goals in AB 32 or any applicable plans, and therefore, these impacts would be less than significant.

VIII. HAZARDS AND HAZARDOUS MATERIALS

A hazardous material is a substance with certain physical properties that could pose a substantial present or future hazard to human health or the environment when improperly transported, handled, disposed, or otherwise managed. State agencies most involved in enforcing public health and safety laws and regulations concerning designated hazardous waste or identified contaminated sites include the Department of Toxic Substance Control, the California Occupational Safety and Health Administration, the Office of Emergency Services, State Water Resources Control Board and the Regional Water Quality Control Board, the Air Resources Board, and the Department of Resources Recycling and Recovery (CalRecycle). A hazardous material is defined and regulated by the Resource Conservation and Recovery Act (RCRA) and through the California Code of Regulations Title 22. If improperly handled, hazardous materials and waste can result in public health hazards including a release into the soil or groundwater, or through an airborne release in vapors, fumes, or dust.

a-b) **Less Than Significant Impact.** Construction materials that could be considered hazardous may include fuels, motor oil, grease, various lubricants, and solvents. Hazardous materials from construction equipment would be transported, used, and disposed of in accordance with

existing State and Federal regulations and requirements. These regulations stipulate appropriate vehicles and containers for transport, necessary transport procedures, worker training, and disposal requirements. By complying with regulations designed to protect human health and safety and the environment, normal construction and operations activities requiring routine transport, use, or disposal of hazardous materials would not pose a significant hazard to the public. With implementation of construction-related best management practices (see BMP-5), as listed in Table 1 of the project description, the proposed project would have a less than significant impact on the transport, use, and disposal of hazardous materials. There would be no transport, use, storage or potential for an accidental release of hazardous materials after completion of construction.

c) **Less Than Significant Impact.** Sunol Elementary School is located less than one-quarter mile from the southern end of the Foothill Road segment, at 11601 Main Street in Sunol. There are no other schools within one-quarter mile of the Foothill Road or Mines Road segments of the project site. Hazardous substances would be used and transported during construction, as described above in Items VIII.a and VIII.b. Implementation of construction-related best management practices (see BMP-5), as listed in Table 1 of the project description, would protect the students, faculty, and visitors at the school from hazardous materials. Once the proposed drainage inlet reconstruction project is completed, there would be no use, storage, or emission of hazardous materials, substances, or waste.

d) **No Impact.** Neither the Foothill Road nor the Mines Road segments of the project site are identified by the State of California as a Hazardous Waste and Substances Site, and no substantial safety hazard to the public or the environment related to project implementation would occur at this site (California Environmental Protection Agency 2011).

e) **No Impact.** There are no airports or an airport land use plan area within two miles of the project site. The nearest airport is Livermore Municipal Airport in Livermore, located approximately five miles northeast of the Foothill Road segment of the project and approximately eight miles northwest of the Mines Road segment of the project site (Google Maps 2013).

f) **No Impact.** The project site is not located within the vicinity of a private airstrip (Google Maps 2013).

g) **No Impact.** The project would not conflict with the Alameda County or City of Pleasanton emergency response and evacuation plans. Emergency access would be maintained at all times. During construction activities one lane of traffic would be temporarily shut down and all staging would occur within the roadway, but one lane would remain open for emergency vehicles.

h) **Less Than Significant Impact.** Portions of the project site are located within an urban-wildland interface zone. BMP-9, listed in Table 1, addresses fire prevention during the construction period. Implementation of these procedures would reduce the risk of fire during construction to a less-than-significant level. After completion of construction, there would be no substantial change from the existing level of risk due to wildland fires. Therefore, the impact of risk from wildland fires would be less than significant.

IX. HYDROLOGY AND WATER QUALITY

a) **Less Than Significant Impact.** The proposed project is not anticipated to violate any water quality standards or waste discharge requirements. As part of Section 402 of the Clean Water Act, the U.S. EPA has established regulations under the National Pollution Discharge Elimination System (NPDES) stormwater program to control stormwater discharges, including those associated with construction activities. The State Water Resource Control Board (SWRCB) implements the NPDES program in California.

The State NPDES stormwater permitting program regulates stormwater quality from construction sites. The State Construction General Permit requires the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP) and the use of appropriate best management practices (BMPs) for erosion control and spill prevention during construction and permanent post-construction stormwater management measures following construction. Dischargers whose projects disturb one or more acres of soil or whose projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the Construction General Permit (CGP) for Discharges of Stormwater Associated with Construction Activity (CGP Order 2009-0009-DWQ). This permit went into effect July 1, 2010 and replaces Order No. 99-08-DWQ.

In February 2003, the Regional Water Quality Control Board (RWQCB) for the San Francisco Bay Region added Provision "C.3" to the NPDES permit governing municipal storm drain systems. Requirements for new development and re-development are defined in Section C.3 of the Municipal Regional Permit (MRP). The City of Pleasanton and County of Alameda are part of the Alameda Countywide Clean Water Program under the (December 2009) Municipal Regional Stormwater NPDES Permit (Order R2-2009-0074, NPDES Permit No. CAS612008). This permit requires post-construction controls to protect water quality for projects creating or replacing 10,000 square feet of impervious surface. (San Francisco Bay Regional Water Quality Control Board. 2009).

Demolition and construction activities of the proposed project include excavating around, and reconstructing, 50 existing drainage inlets along Foothill and Mines roads. Development of the project would require an excavation area for each drainage structure ranging from approximately 18 square feet to 40 square feet, depending on the individual configurations and locations of the drainage structures. Chemicals such as gasoline, diesel fuel, lubricating oil, hydraulic oil, lubricating grease, automatic transmission fluid, solvents, glues, and other substances could be utilized during construction. An accidental release of any of these substances could degrade the water quality of surface water runoff from the site and add pollution into local waterways. On-site portable toilets could leak or tip over and spill, releasing sanitary waste, bacteria, solids, nutrients, and pathogens.

Contaminants released at the project site could travel downstream through local watercourses to the San Francisco Bay, approximately ten miles from the nearest portion of the project site. The Bay is on the list of impaired water bodies compiled by the San Francisco Bay Regional Water Quality Control Board (RWQCB) pursuant to the federal Clean Water Act. Because the State is required to develop action plans and establish Total Maximum Daily Loads (TMDLs) to improve water quality within these water bodies, uncontrolled discharge of pollutants into them would be particularly detrimental.

Construction activity would not be subject to the State CGP because the proposed project area of disturbance is less than one acre. Implementation of stormwater management (BMP-3), non-hazardous materials management (BMP-4), hazardous materials management (BMP-5), spill prevention and control (BMP-6), and vehicle maintenance and cleaning (BMP-7), as described in the best management practices in Table 1, would reduce the potential water quality impacts during construction to below a level of significance.

The proposed project would, by the estimate discussed above, create or replace about 2,000 square feet of impervious surface and therefore would not be subject to the post-construction controls to protect water quality of Section C.3 discussed above. The project would not result in an increase pollutants or sediments after the construction period. Any additional runoff would be negligible. There are no uses proposed at the project site that would require source control. Therefore, after construction the project would have no adverse impact on water quality.

b) **No Impact.** No groundwater supplies would be required for construction of the project, and the project would not affect groundwater supplies after completion of construction.

c) **No Impact.** The proposed project would reconstruct 50 existing drainage inlets along Foothill and Mines Roads, but would not alter the locations or capacity of the inlets, or otherwise alter the drainage system, or streams and rivers, in the project area. The project would not result in any post-construction erosion or siltation.

d) **Less Than Significant Impact.** The proposed project would reconstruct 50 existing drainage inlets along Foothill and Mines Roads, but would not alter the locations or capacity of the inlets, or otherwise alter the drainage system, or streams and rivers, in the project area. Development of the project would not increase the amount of impervious surfaces at the sites. Therefore, the proposed project would not substantially affect the rate or amount of surface runoff, or flooding. The project would have a less-than-significant impact on flooding on-or off-site.

e-f) **Less Than Significant Impact.** The project would not alter the capacity of the drainage system, or create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems, provide substantial additional sources of polluted runoff, or otherwise degrade water quality.

g) **No Impact.** The project does not include nor facilitate construction of housing. There would be no impact associated with placing housing within a 100-year flood hazard area.

h) **No Impact.** The proposed project would reconstruct 50 existing drainage inlets along Foothill and Mines Roads, but would not alter the locations or capacity of the inlets, or otherwise alter the drainage system. Therefore, the project does not include structures that would impede or redirect flood flows. There would be no impact associated with structures that would impede or redirect flood flows within a 100-year flood hazard area.

i) **Less Than Significant Impact.** Much of the Foothill Road segment of the project area is within the inundation area for the Del Valle Dam. The Mines Road segment of the project area is not within the inundation area of any dam. (Association of Bay Area Governments 2003). Neither road segment is within the inundation area of a levee. The proposed project would reconstruct 50 existing drainage inlets along Foothill and Mines Roads, but would not alter the

existing level of risk of loss, injury, or death involving flooding, including flooding as a result of the failure of Del Valle Dam. Therefore, the proposed project would have a less-than-significant impact on risk of flooding due to dam or levee failure.

j) **Less Than Significant Impact.** A seiche is a standing-wave oscillation of the surface of water in an enclosed or semi-enclosed basin (such as a lake, bay, or harbor) that is initiated by landslides, earthquakes, or other geologic phenomena, and continues after cessation of the originating force. The Foothill Road segment of the project site is located downstream from Del Valle Dam, approximately six miles from the dam. Therefore, it is unlikely that a seiche in Lake Del Valle would result in significant amounts of water from Lake Del Valle entering the project area during a seiche. The Mines Road segment of the project site is located approximately two miles from Lake Del Valle, but is separated from the lake by a ridge and is not within the inundation area of Del Valle Dam. In any case, the proposed project does not include structures that would expose people to risk of inundation by seiche, and would not substantially alter the existing low risk of seiche at the project site.

A tsunami is a sea wave produced by any large scale, short duration disruption of the ocean floor, principally by a shallow submarine earthquake, but also by submarine earth movement, subsidence, or volcanic eruption. Tsunamis do not pose an appreciable risk at this inland site, located ten or more miles from San Francisco Bay. The project would not result in structures that would expose people to risk of inundation by tsunami, and would not substantially alter the existing low risk of tsunami at the project site.

The terrain immediately around the Foothill Road segment of the project area is generally flat. Thus, there is low risk of landslide or mudflow at the Foothill Road segment of the project site. Much of the terrain immediately around the Mines Road segment of the project site is steeply sloped, with a risk of mudslide. However, the proposed project, which would reconstruct 24 existing drainage inlets along Mines Road, would not substantially alter the existing level of risk of landslide at the Mines Road segment of the project site.

In summary, risks associated with inundation by seiche, tsunami, or mudflow would not occur beyond existing conditions, and this impact would be less than significant.

X. LAND USE AND PLANNING

a) **No Impact.** The proposed project involves reconstruction of 50 existing drainage inlets along Foothill and Mines Roads. The proposed project does not include new facilities that could divide an existing community.

b) **No Impact.** The proposed project, which involves reconstruction of 50 existing drainage inlets along Foothill and Mines Roads, would not construct any substantial structures, change any land uses or activities, or conflict with any applicable land use plans, policies, or regulations of the City of Pleasanton or Alameda County adopted for the purpose of avoiding or mitigating an environmental effect.

c) **No Impact.** The project site is not located within an area subject an HCP or NCCP, but the project site is covered by the East Alameda County Conservation Strategy (EACCS). The project would comply with the requirements of that plan in regards to mitigation for federally and state listed species. There would be no impact.

XI. MINERAL RESOURCES

a) **No Impact.** The proposed project, which involves reconstruction of 50 existing drainage inlets along Foothill and Mines Roads, would not affect availability of known or undiscovered mineral resources.

b) **No Impact.** The proposed project, which involves reconstruction of 50 existing drainage inlets along Foothill and Mines Roads, would not result in the loss of availability of any mineral resource recovery sites.

XII. NOISE

Introduction to Noise Concepts, Terms, and Descriptors

Table NOISE-1 identifies decibel levels for common sounds heard in the environment.

Noise levels that are generally considered acceptable or unacceptable can characterize various environments. In rural or suburban areas, lower levels are expected compared to what would be expected in commercial or industrial zones.

Table NOISE-1 Typical Noise Levels

Noise Level decibels (dBA)	Outdoor Activity	Indoor Activity
90+	Gas lawn mower at 3 feet, jet flyover at 1,000 feet	Rock Band
80–90	Diesel truck at 50 feet	Loud television at 3 feet
70–80	Gas lawn mower at 100 feet, noisy urban area	Garbage disposal at 3 feet, vacuum cleaner at 10 feet
60–70	Commercial area	Normal speech at 3 feet
40–60	Quiet urban daytime, traffic at 300 feet	Large business office, dishwasher next room
20–40	Quiet rural, suburban nighttime	Concert hall (background), library, bedroom at night
10–20		Broadcast / recording studio
0	Lowest threshold of human hearing	Lowest threshold of human hearing

Source: (modified from Caltrans Technical Noise Supplement, 1998)

The A-weighted decibel scale (dBA)[4] is cited in most noise criteria. The most commonly used noise descriptors are the equivalent sound level over a given time period (Leq)[5]; average day-night 24-hour average sound level (Ldn)6; and community noise equivalent level (CNEL)[7].

Alameda County Noise Ordinance

The Alameda County Noise Ordinance is Chapter 6.60 of the County Code. Because the only noise impacts of the project would be related to construction noise, the relevant portion of the noise ordinance for this project would be County Code section 6.60.070. Subsection E of section 6.60.070 of the County Code exempts construction from noise limits, provided that constructions does not take place between 7 p.m. and 7 a.m. on weekdays or between 5 p.m. and 8 a.m. on Saturday and Sunday. That is, construction is allowed between 7 a.m. and 7 p.m. on weekdays and between 8 a.m. and 5 p.m. on weekend days. The East County Area Plan does not include any goals or policies that specifically address construction noise.

Existing Conditions

Noise sensitive receptors (land uses associated with indoor and/or outdoor activities that may be subject to stress and/or significant interference from noise) typically include residential dwellings, hotels, motels, hospitals, nursing homes, educational facilities, and libraries. Sensitive receptors near project construction areas are now subjected to periodic traffic noise from the roadways.

a) **Less Than Significant Impact.**

Impact of Construction of Proposed Project

Construction activity noise levels at and near the construction areas would fluctuate depending on the particular type, number, and duration of uses of various pieces of construction equipment. Construction-related material haul trips would raise ambient noise levels along haul routes, depending on the number of haul trips made and types of vehicles used. Table NOISE-2 shows typical noise levels during different construction stages. Table NOISE-3 shows typical noise levels produced by various types of construction equipment. Noise from construction activities generally attenuates at a rate of 6 to 7.5 dBA per doubling distance.

Table 4 shows that excavation and finishing are the loudest phases of typical construction; the noise from these phases of construction would be up to 89 dBA at a reference distance of 50 feet. The proposed project would have noise levels typical of excavation. However, the construction activity would be minor at each location, thereby limiting the time of construction noise at each construction site. The construction would occur within the allowed hours specified by Subsection E of section 6.60.070 of the County Code. Subsection E of section 6.60.070 of the County Code exempts construction from the noise limits, provided that constructions takes place between 7 a.m. and 7 p.m. on weekdays or between 8 a.m. and 5 p.m.

[4] A decibel (dB) is a unit of sound energy intensity. Sound waves, traveling outward from a source, exert a sound pressure level (commonly called "sound level") measured in dB. An A-weighted decibel (dBA) is a decibel corrected for the variation in frequency response to the typical human ear at commonly encountered noise levels.

[5] The Equivalent Sound Level (L_{eq}) is a single value of a constant sound level for the same measurement period duration, which has sound energy equal to the time–varying sound energy in the measurement period.

[6] L_{dn} is the day–night average sound level that is equal to the 24–hour A–weighted equivalent sound level with a ten–decibel penalty applied to night between 10:00 p.m. and 7:00 a.m.

[7] CNEL is the average A–weighted noise level during a 24–hour day, obtained by addition of five decibels in the evening from 7:00 to 10:00 p.m., and an addition of a ten–decibel penalty in the night between 10:00 p.m. and 7:00 a.m.

on Saturday and Sunday. Construction noise impacts would thus be considered less than significant.

TABLE NOISE-2
TYPICAL CONSTRUCTION NOISE LEVELS

Construction Phase	Noise Level[a] (dBA, Leq)
Ground clearing	84
Excavation	89
Foundations	78
Erection	85
Finishing	89

a Average noise levels correspond to a distance of 50 feet from the noisiest piece of equipment associated with a given phase of construction and 200 feet from the rest of the equipment associated with that phase.

SOURCE: Bolt, Baranek, and Newman, 1971; Cunniff, 1977.

TABLE NOISE-3
TYPICAL NOISE LEVELS FROM CONSTRUCTION EQUIPMENT

Construction Equipment	Noise Level[a] (dBA, Leq at 50 Feet)
Dump truck	88
Portable air compressor	81
Concrete mixer (truck)	85
Scraper	88
Jackhammer	88
Dozer	87
Paver	89
Generator	76
Backhoe	85
Rock Drilling	98

a Average noise levels correspond to a distance of 50 feet from

the noisiest piece of equipment associated with a given phase of construction and 200 feet from the rest of the equipment associated with that phase.

SOURCE: Bolt, Baranek, and Newman, 1971; Cunniff, 1977.

Impact of Operations of Proposed Project

After construction, there may be some trips to the site associated with monitoring the functioning of the drainage inlet structures, but these would be minimal and there would not be any noticeable increase in noise from operations of the proposed project. Thus, there would be a less-than-significant impact from operations.

b) **No Impact.** Depending on the construction equipment used, groundborne vibrations can be perceptible within 30 to 100 feet of a source. Structural damage from pile driving typically does not occur in buildings more than 50 feet from the location of the activity (Caltrans, 2004). All excavations would be more than 50 feet from any buildings. Therefore, there would be no excessive groundborne vibration impacts or groundborne noise impacts.

c) **Less Than Significant Impact**. See discussion under Item XII.a, above. The project would have a less-than-significant impact from operations.

d) **Less Than Significant Impact.** As discussed above, this project would have noise levels typical of excavation. However, the construction activity would be minor at each location, thereby limiting the duration of construction noise at each construction site. The construction would be within the allowed hours specified by Subsection E of section 6.60.070 of the County Code. During these hours, construction noise would be exempt from the noise limits in the County Code.

e) **No Impact.** The project would not be within an airport land use plan or within two miles of a public airport. Additionally, the project involves no changes that would result in exposure to new airport noise. No impact would occur.

f) **No Impact.** The proposed project is not located in the vicinity of a private airstrip. Construction workers and others at the site would not be affected by excessive noise from private airstrips. No impact would occur.

XIII. POPULATION AND HOUSING

a-c) **No Impact.** The proposed project involves reconstruction of 50 existing drainage inlets along Foothill and Mines Roads, which would not alter the capacity of any infrastructure. The project would not displace any residents or dwelling units. The project would not include the development of people-attracting elements, nor would it eliminate any current barriers to the development of people-attracting elements by others. Therefore, the project would neither directly nor indirectly induce population growth. Ground disturbing activities of the project would occur adjacent to existing roads. Displacement of people, homes, or other structures would not occur.

XIV. PUBLIC SERVICES

ai-av) **No Impact.** The proposed project involves upgrading existing drainage inlets. The project does not include provision of new or physically altered government facilities. The project would not induce population growth nor does it include population-attracting elements that could contribute to a need for new or altered government services necessary to maintain acceptable service ratios, response times, or other performance objectives for fire protection, police protection, schools, parks and recreational facilities, or other government facilities.

XV. RECREATION

a) **No Impact.** The proposed project is located along segments of two existing roads. The proposed improvements to existing drainage inlets would neither directly nor indirectly induce population growth and the project does not propose activities or have facilities that could increase the use of existing recreational facilities. The project would have no impact on recreation.

b) **No Impact.** The project does not include nor require expansion or construction of new recreational facilities. Therefore, no impact would occur.

XVI. TRANSPORTATION AND TRAFFIC

The rate at which traffic moves through intersections (quickly or slowly) indicates how well the circulation network is functioning for vehicular traffic. It is standard practice to measure the performance of an intersection in terms of Level of Service (LOS), a system in which the level of congestion is given a letter grade based on vehicle delay. LOS "A" indicates a facility with little congestion and LOS "F" indicates a highly congested facility. The Alameda County Congestion Management Agency (CMA) has a Congestion Management Program (CMP). The CMP includes operating standards for key roads and freeways. Most cities seek to maintain a level of service of "D" or better at peak times. Intersections approaching their capacity are at LOS "E".

Existing traffic volumes on the project segments of Mines and Foothill Roads are relatively low, and the roads operate at an acceptable Level of Service.

During construction activities a lane of traffic would be temporarily shut down and all staging and operation of large construction equipment (e.g., excavators) would occur within the roadway. It is estimated that construction would take place over 65 working days during the dry season (typically May-October) of 2013 or 2014.

a) **Less Than Significant Impact.** During construction, traffic from construction vehicles would be minimal in relation to existing traffic. Approximately two to four workers (including flaggers) would commute to the site each day, and up to approximately six pieces of equipment would be transported from one inlet site to approximately once per week. Because existing traffic volumes are relatively low, the project would add a small number of vehicles during the construction period, and the construction period would be limited (65 working days), project construction would not result in a substantial increase in traffic relative to the existing traffic load and capacity of the local street system. After the completion of construction, there may be some trips to the site associated with monitoring the functioning of the drainage inlet structures, but these would be minimal and would not be a substantial change in relation to existing traffic and the capacity of the street system. The impact would be less than significant.

b) **Less Than Significant Impact.** The Alameda County CMA has adopted criteria for evaluating potentially significant impacts to regional roadways in the County (Alameda County CMA 2011). The Alameda County CMP states that any project that would generate 100 additional p.m. peak-hour trips could potentially impact the regional system; therefore, a LOS analysis for roadway segments within the project study area must be prepared. During construction, the proposed project would up to four peak period traffic trips due to workers commuting to and from the site. During operation, there may be some trips to the site associated with monitoring the functioning of the drainage inlet structures, but these would be well below the threshold of 100 additional p.m. peak-hour trips. The proposed project and would not exceed, either individually or cumulatively, an LOS standard established by CMA. The impact would be less than significant.

c) **No Impact.** The project has no air traffic component and no change in air traffic patterns would occur.

d) **Less Than Significant Impact.** The purpose of the proposed project is to improve roadway safety at 50 specific structures on Foothill and Mines Roads in unincorporated Alameda County, by eliminating the safety hazard posed by the existing inlet structures that protrude above the pavement level. There were 24 collisions documented along the project segment of Foothill Road for the years 2004 to 2006, with two fatalities. Out of 24 collisions, 17 involved vehicles hitting an object, including the fatal accidents. There were 21 collisions documented along the project segment of Mines Road for the years 2003 to 2005. Out of the 21 collisions, at least seven involved vehicles hitting an object. Objects adjacent to the travel lanes, such as the existing drainage inlets, that extend above the roadway surface constitute items that may be struck by motorists or that motorists may maneuver to avoid in emergency. After completion of construction, there would fewer transportation hazards at the project site.

During construction, standard traffic management control procedures would be used. (California Department of Transportation 2013). Implementation of these procedures would reduce transportation hazards during construction to a less-than-significant level.

e) **Less Than Significant Impact.** After completion of construction, the proposed project would not block or alter emergency access. During construction activities one lane of traffic would be temporarily shut down and all staging would occur within the roadway, but one lane would remain open for emergency vehicles. During construction, standard traffic management control procedures would be used. (California Department of Transportation 2013). Implementation of these procedures would reduce impacts on emergency access during construction to a less-than-significant level. The County is aware of the mandate of first responders, and would contact area first responders to notify them of project startup prior to initiation of construction activities. The impact would be less than significant.

f) **Less Than Significant Impact.** No parking would be removed under the proposed project, nor would additional parking demand be generated. Construction personnel would temporarily park within designated access and staging areas at the various drainage inlet construction sites along the project segments of Foothill and Mines Roads. Because the number of construction workers parking at the project site would be small (four or fewer vehicles), and the construction period at each inlet site would be limited (approximately five days per site), the impact on parking would be less than significant.

g) **Less than Significant Impact.** The project would not include physical elements or activities that could conflict with adopted policies, plans, or programs supporting alternative transportation. Accessibility to alternative transportation would not be substantially altered by project activities during construction. During construction, standard traffic management control procedures would be used. (California Department of Transportation 2013). Implementation of these procedures would reduce impacts on alternative transportation during construction to a less-than-significant level.

XVII. UTILITIES AND SERVICE SYSTEMS

a-b) **No Impact.** The project, which would reconstruct 50 existing drainage inlets along Foothill and Mines Road, would not induce population growth nor does it include people-attracting elements that could contribute to a need for new or altered utilities or service systems for wastewater transport and treatment, or potable water transport and treatment. The project would not generate wastewater, other than typical domestic wastewater from portable toilets used during construction. This wastewater would not exceed the treatment requirements of the Regional Water Quality Control Board.

c) **No Impact.** The project, which would reconstruct 50 existing drainage inlets along Foothill and Mines Roads, would not alter the capacity, or impair the performance, of the existing storm drainage system. No new or expanded storm water facilities would be required.

d) **No Impact.** The project, which would reconstruct 50 existing drainage inlets along Foothill and Mines Road, would not induce population growth nor does it include people-attracting elements that could contribute to additional demand for potable water. There would be no impact.

e) **Less Than Significant Impact.** The project, which would reconstruct 50 existing drainage inlets along Foothill and Mines Road, would not induce population growth nor does it include people-attracting elements that could generate additional wastewater. Portable toilets used during construction would generate a negligible volume of wastewater relative to existing wastewater treatment capacity. This impact would be less than significant.

f-g) **Less Than Significant Impact.** During construction, the project would generate a small amount of construction debris that would have a negligible impact on existing permitted landfill capacity. After completion of construction, the project would not generate solid waste. The proposed project would comply with federal, state, and local statutes and regulations related to solid waste. Construction debris and waste would be disposed of in compliance with applicable regulations.

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE

a) **Less than Significant with Mitigation.** The proposed road improvement project does not have the potential to cause fish or wildlife populations to drop below self-sustaining levels or threaten to eliminate a plant or animal community. As discussed in Section IV, the proposed project does have the potential to have a substantial adverse affect on special-status wildlife species, but that impact is reduced to a less-than-significant level with incorporation of the mitigation measures identified in the Biological Resources discussion, above. The project would not eliminate important examples of the major periods of California history or prehistory.

b) **No Impact.** Impacts from the project would be temporary and would occur only during construction. There are no proposed or recently approved projects in the vicinity of the proposed project that could generate cumulative considerable impacts in combination with the proposed project. The proposed project would not result in impacts that are individually limited, but cumulatively considerable.

c) **Less than Significant with Mitigation Incorporation.** The proposed project would not result in environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly. The proposed project has the potential to result in short-term adverse impacts to humans relative to air quality, biological resources, and cultural resources. Mitigation measures would reduce these impacts to a level that is less than significant. The project would have a positive effect on life and property by reducing transportation hazards at the project site.

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XIX. These references provide adequate support for the "No Impact" response. References cited are available for review at the Alameda County Public Works Agency, 399 Elmhurst Street, Hayward, CA, unless otherwise noted.

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FIGURE 1
CNDDB Special-status Species

Foothill Road
Drainage Structure Replacement Project
Alameda County, California

Legend

- Drainage Structure (with mile marker ID)*
- Wetland Mapped by NWI
- Map Extents of Figures 2-5
- California Red-legged Frog Critical Habitat
- Alameda Whipsnake Critical Habitat

CNDDB Special-status Species Occurrences*

- Alameda Whipsnake (no occurrences on map)
- California Red-legged Frog
- California Tiger Salamander
- San Joaquin Kit Fox
- Steelhead

* Includes only federally listed species

Figure 2
Figure 3
Figure 4
Figure 5

N
W E
S

1:63,360
(1 inch = 1 mile at tabloid layout)

0 1 2 Kilometers

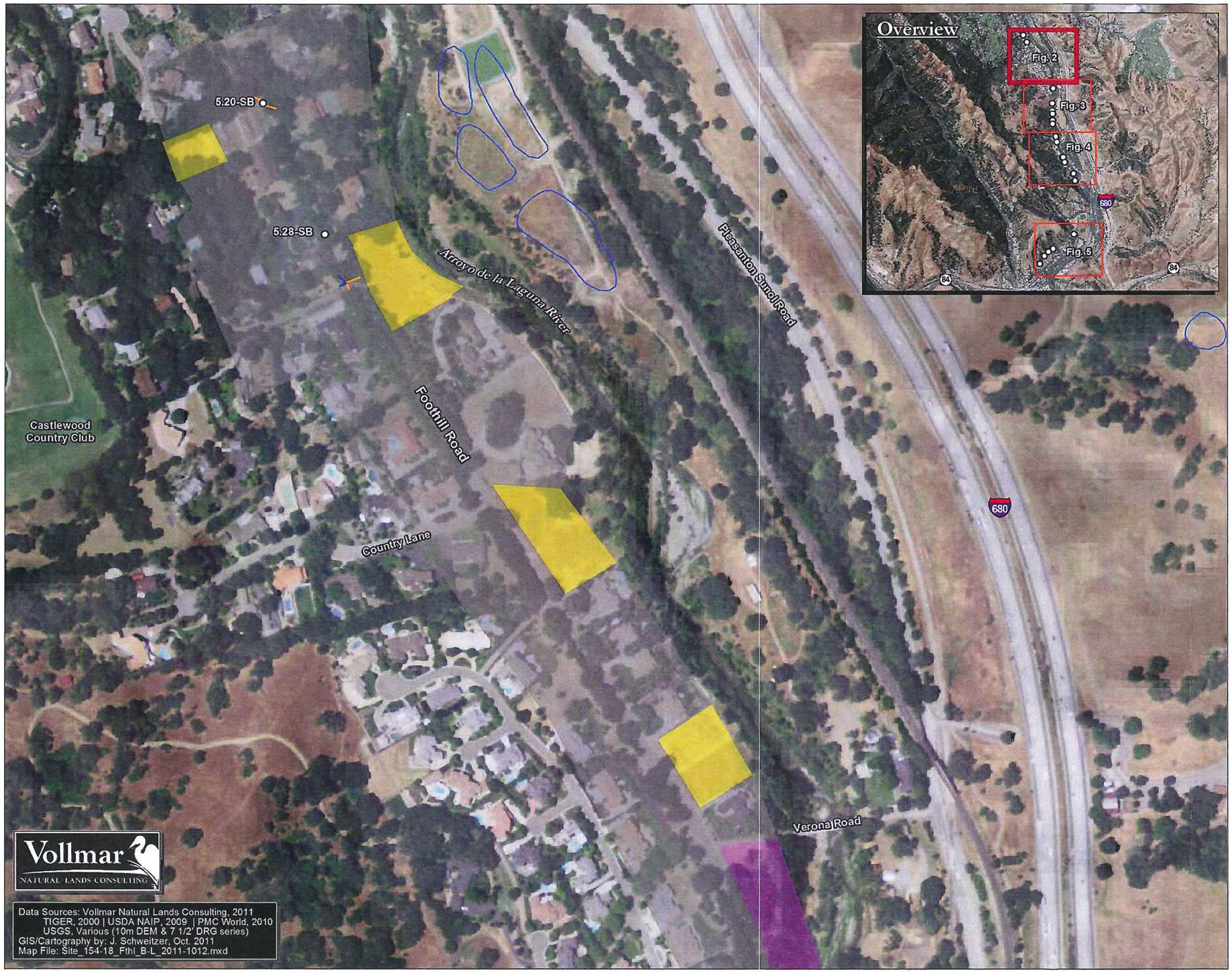
0 0.5 1 2 Miles

Vollmar
NATURAL LANDS CONSULTING

Data Sources: VNLC, 2011 | CDFG CNDDB, 6/2011
TIGER, 2000 | USDA NAIP, 2009 | PMC World, 2010
USGS, Various (10m DEM & 7 1/2' DRG series)
GIS/Cartography by: J. Schweitzer, Oct. 2011
Map File: CNDDB_154-18_Fthl_B-L_2011-1012.mxd

FIGURE 2
Project Site Features and Aerial Photography (2009)

Foothill Road
Drainage Structure Replacement Project
Alameda County, California



Legend

- Drainage Structure (with mile marker ID)*
- Jurisdictional Waters
- Non-Jurisdictional Drainage
- Wetland Mapped by NWI

Vegetation/Land Cover

- Annual Grassland
- Oak Woodland
- Riparian
- Sage Scrub
- Urban/Ruderal
- Vineyards

* SB = Southbound, NB = Northbound

Drainages, waters, and land cover data produced by PMC World, 2010. Land cover data modified by VNLC, 2011.

N
W E
S

1:3,600
(1 inch = 300 feet at tabloid layout)

0 75 150 Meters

0 150 300 600 Feet

FIGURE 3
Project Site Features and Aerial Photography (2009)

Foothill Road
Drainage Structure Replacement Project
Alameda County, California

5.83-SB
5.83-NB
5.99-SB
6.07-SB
6.11-NB
6.11-SB
6.17-SB
6.17-NB
6.21-SB
Foothill Road
Arroyo de la Laguna River
Pleasanton Sunol Road
680
Pleasanton Ridge Regional Park
Oaks interspersed with poison oak and coyote brush scrub

Overview
Fig. 2
Fig. 3
Fig. 4
Fig. 5
680
84
84

Legend

- Drainage Structure (with mile marker ID)*
- Jurisdictional Waters
- Non-Jurisdictional Drainage
- Wetland Mapped by NWI

Vegetation/Land Cover

- Annual Grassland
- Oak Woodland
- Riparian
- Sage Scrub
- Urban/Ruderal
- Vineyards

* SB = Southbound, NB = Northbound

Drainages, waters, and land cover data produced by PMC World, 2010. Land cover data modified by VNLC, 2011.

Solano County
Contra Costa County
Alameda County
Extent of Overview Inset
Santa Clara County
80
580
680
101

N
W
E
S

1:3,600
(1 inch = 300 feet at tabloid layout)

0 75 150 Meters

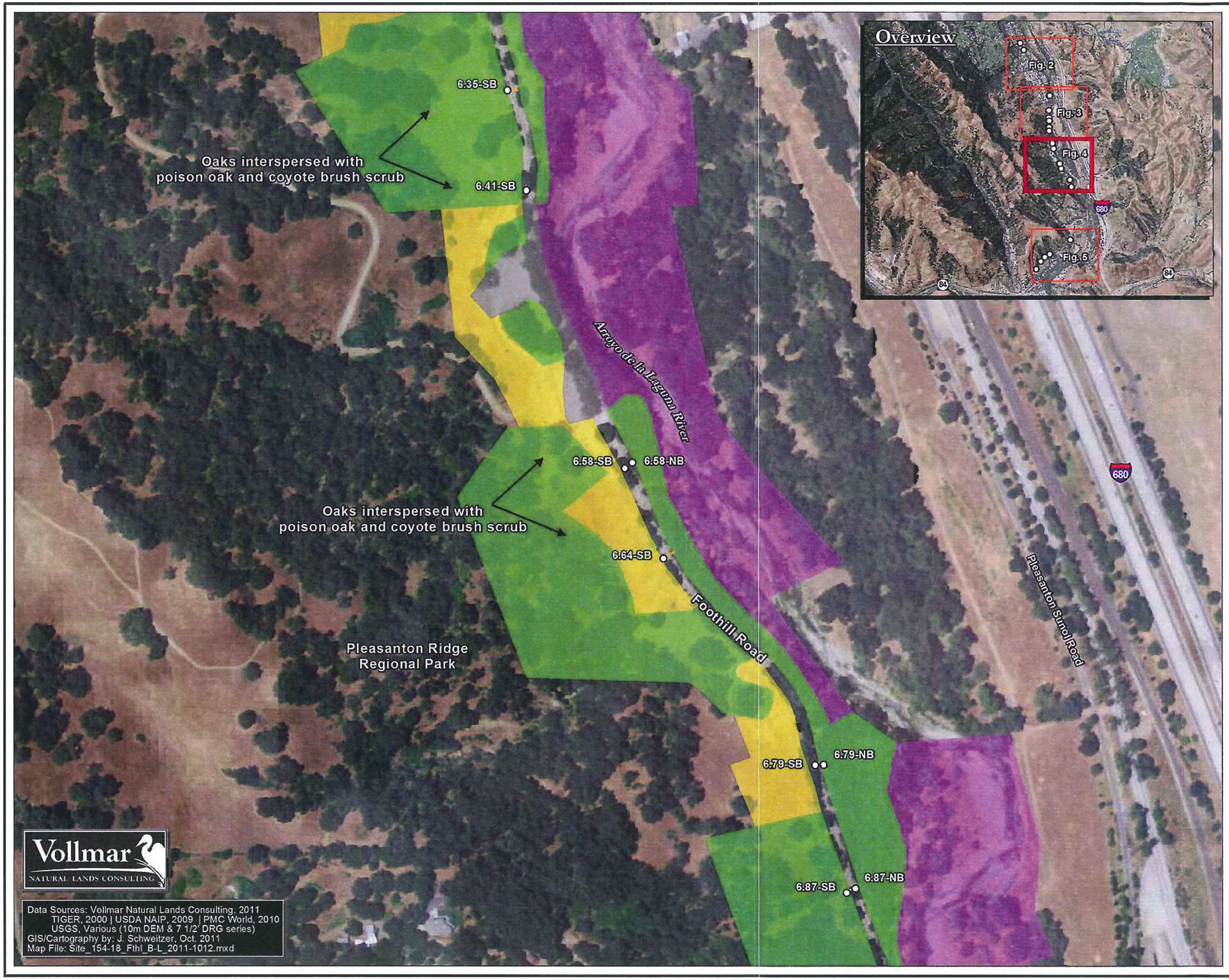
0 150 300 600 Feet

Vollmar
NATURAL LANDS CONSULTING

Data Sources: Vollmar Natural Lands Consulting, 2011
TIGER, 2000 | USDA NAIP, 2009 | PMC World, 2010
USGS, Various (10m DEM & 7 1/2' DRG series)
GIS/Cartography by: J. Schweitzer, Oct. 2011
Map File: Site_154-18_Fthl_B-L_2011-1012.mxd

FIGURE 4
Project Site Features and Aerial Photography (2009)

Foothill Road
Drainage Structure Replacement Project
Alameda County, California



Legend

- Drainage Structure (with mile marker ID)*
- Jurisdictional Waters
- Non-Jurisdictional Drainage
- Wetland Mapped by NWI

Vegetation/Land Cover

- Annual Grassland
- Oak Woodland
- Riparian
- Sage Scrub
- Urban/Ruderal
- Vineyards

* SB = Southbound, NB = Northbound

Drainages, waters, and land cover data produced by PMC World, 2010. Land cover data modified by VNLC, 2011.

N
W E
S

1:3,600
(1 inch = 300 feet at tabloid layout)

0 75 150 Meters

0 150 300 600 Feet

Vollmar
NATURAL LANDS CONSULTING

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USGS, Various (10m DEM & 7 1/2' DRG series)
GIS/Cartography by: J. Schweitzer, Oct. 2011
Map File: Site_154-18_Fthl_B-L_2011-1012.mxd

FIGURE 5
Project Site Features and Aerial Photography (2009)

Foothill Road
Drainage Structure Replacement Project
Alameda County, California

Legend

- Drainage Structure (with mile marker ID)*
- Jurisdictional Waters
- Non-Jurisdictional Drainage
- Wetland Mapped by NWI

Vegetation/Land Cover

- Annual Grassland
- Oak Woodland
- Riparian
- Sage Scrub
- Urban/Ruderal
- Vineyards

* SB = Southbound, NB = Northbound

Drainages, waters, and land cover data produced by PMC World, 2010. Land cover data modified by VNLC, 2011.

N
W E
S

1:3,600
(1 inch = 300 feet at tabloid layout)

0 75 150 Meters

0 150 300 600 Feet

Vollmar
NATURAL LANDS CONSULTING

Data Sources: Vollmar Natural Lands Consulting, 2011
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USGS, Various (10m DEM & 7 1/2' DRG series)
GIS/Cartography by: J. Schweitzer, Oct. 2011
Map File: Site_154-18_Fthl_B-L_2011-1012.mxd

FIGURE 1
CNDDB Special-status Species

Mines Road
Drainage Structure Replacement Project
Alameda County, California

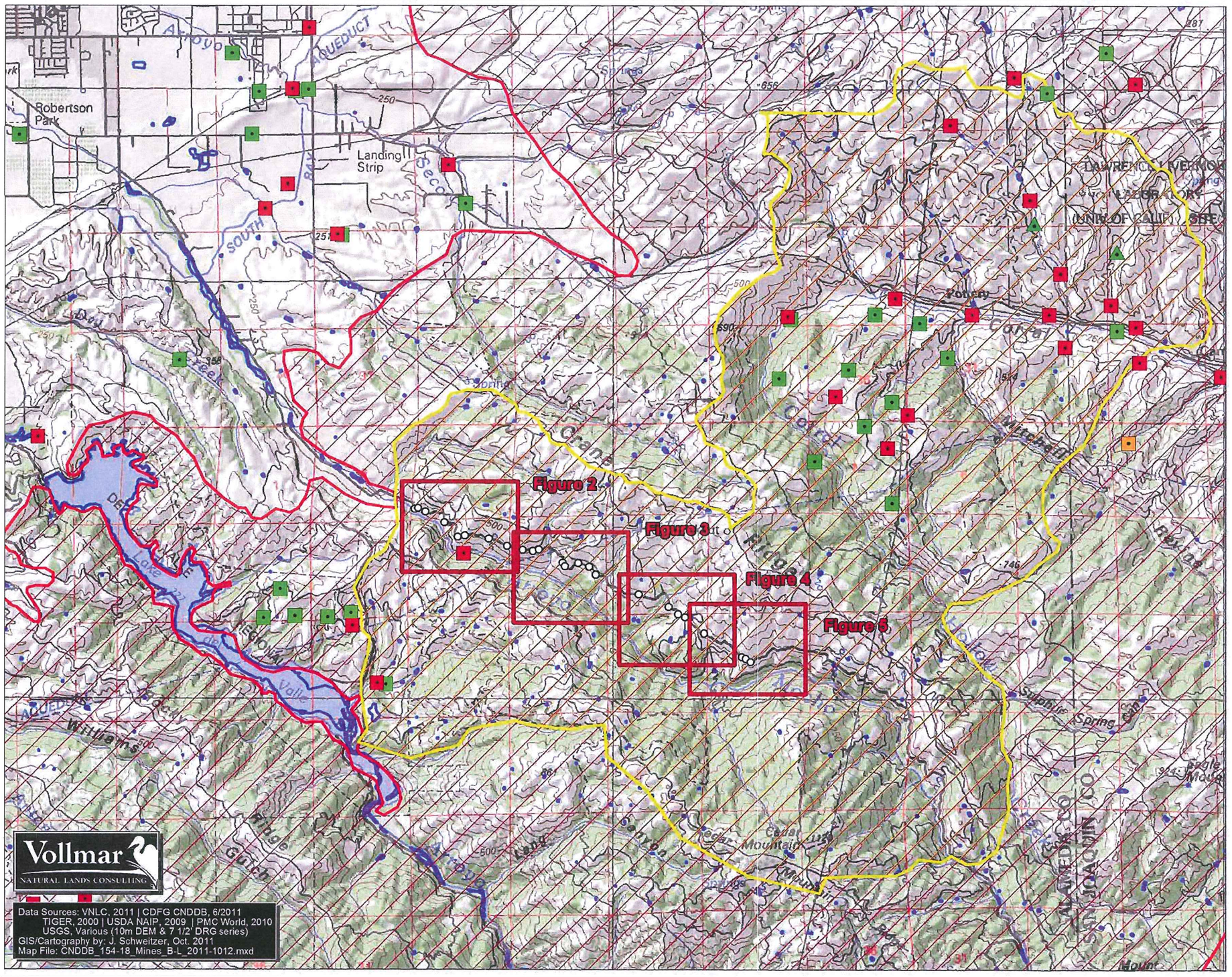
Legend

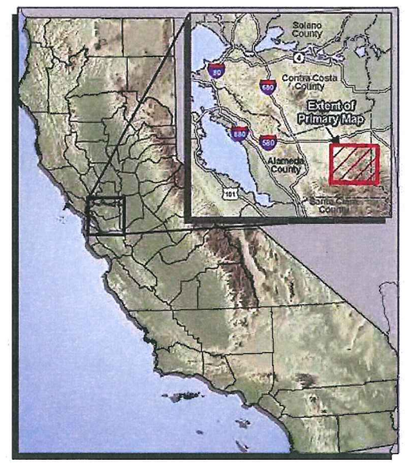
- Drainage Structure (with mile marker ID)*
- Wetland Mapped by NWI
- Map Extents of Figures 2-5
- California Red-legged Frog Critical Habitat
- Alameda Whipsnake Critical Habitat

CNDDB Special-status Species Occurrences*

- Alameda Whipsnake (no occurrences on map)
- California Red-legged Frog
- California Tiger Salamander
- San Joaquin Kit Fox
- Large-flowered Fiddleneck

* Includes only federally listed species





N
W E
S

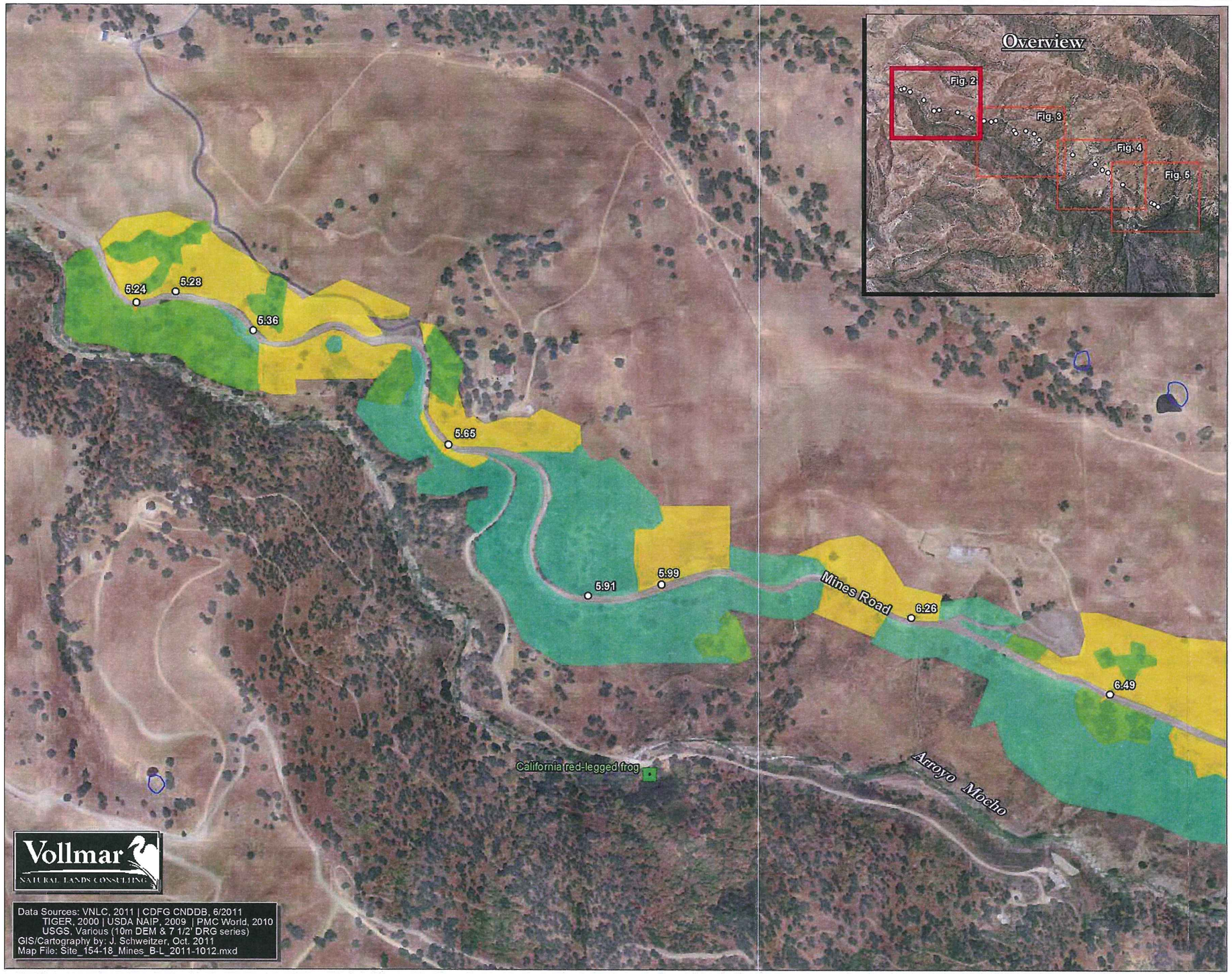
1:63,360
(1 inch = 1 mile at tabloid layout)

0 1 2 Kilometers

0 0.5 1 2 Miles

FIGURE 2
Project Site Features and Aerial Photography (2009)

Mines Road
Drainage Structure Replacement Project
Alameda County, California



Legend

- Drainage Structure (with mile marker ID)*
- CNDDB Occurrence of Listed Wildlife Species
- Drainage
- Swale
- Half-pipe
- Underground Culvert
- Wetland Mapped by PMC World
- Wetland Mapped by NWI

Vegetation/Land Cover

- Annual Grassland
- Oak Woodland
- Sage Scrub
- Urban/Ruderal

* All locations are on south/east bound side of road

Drainages, waters, and land cover data produced by PMC World, 2010. Land cover data modified by VNLC, 2011.

N
W E
S

1:6,000
(1 inch = 500 feet at tabloid layout)

0 125 250 Meters

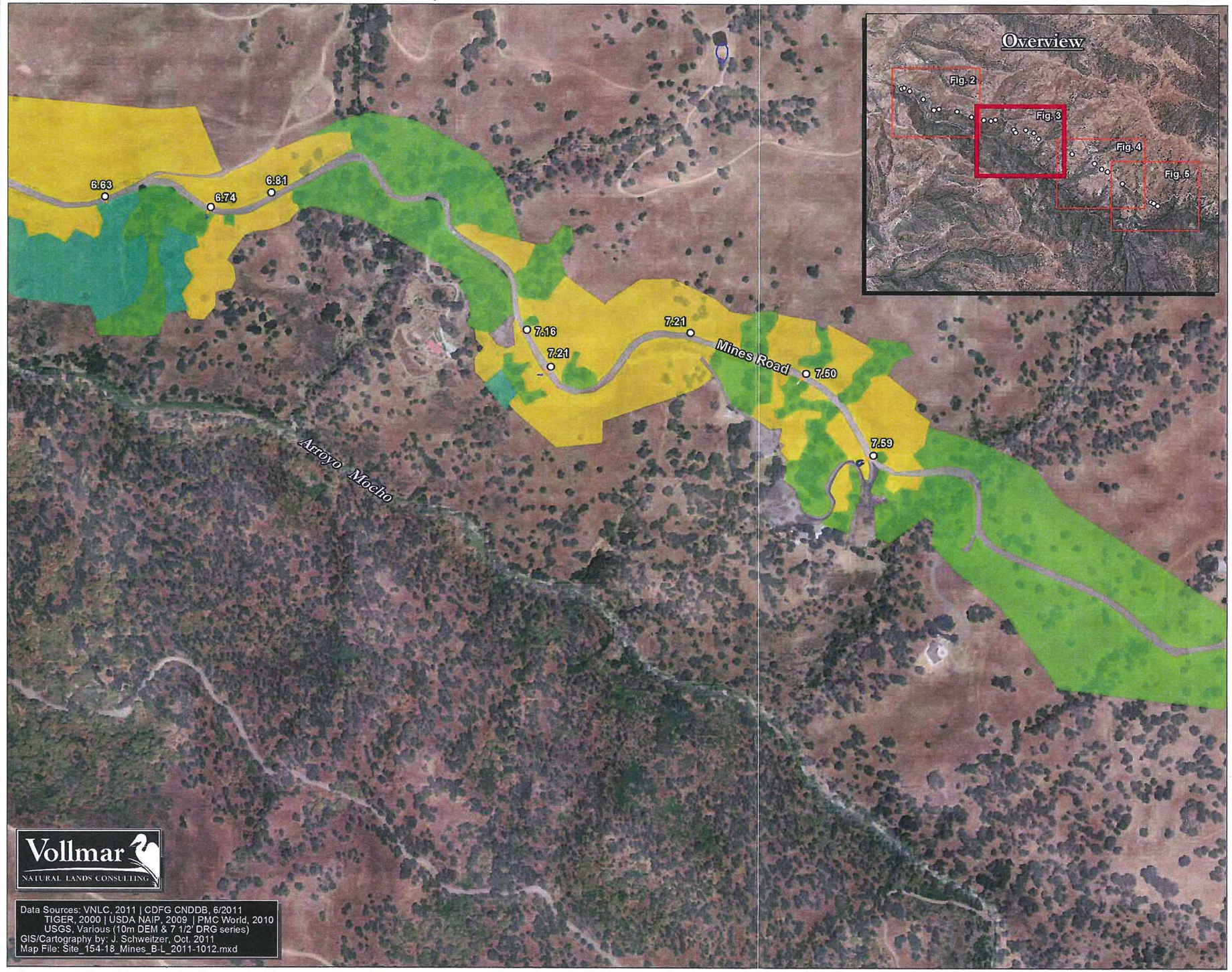
0 250 500 1,000 Feet

Vollmar
NATURAL LANDS CONSULTING

Data Sources: VNLC, 2011 | CDFG CNDDB, 6/2011
TIGER, 2000 | USDA NAIP, 2009 | PMC World, 2010
USGS, Various (10m DEM & 7 1/2' DRG series)
GIS/Cartography by: J. Schweitzer, Oct. 2011
Map File: Site_154-18_Mines_B-L_2011-1012.mxd

FIGURE 3
Project Site Features and Aerial Photography (2009)

Mines Road
Drainage Structure Replacement Project
Alameda County, California



Legend

- Drainage Structure (with mile marker ID)*
- CNDDB Occurrence of Listed Wildlife Species
- Drainage
- Swale
- Half-pipe
- Underground Culvert
- Wetland Mapped by PMC World
- Wetland Mapped by NWI

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- Urban/Ruderal

* All locations are on south/east bound side of road

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N
W E
S

1:6,000
(1 inch = 500 feet at tabloid layout)

0 125 250 Meters

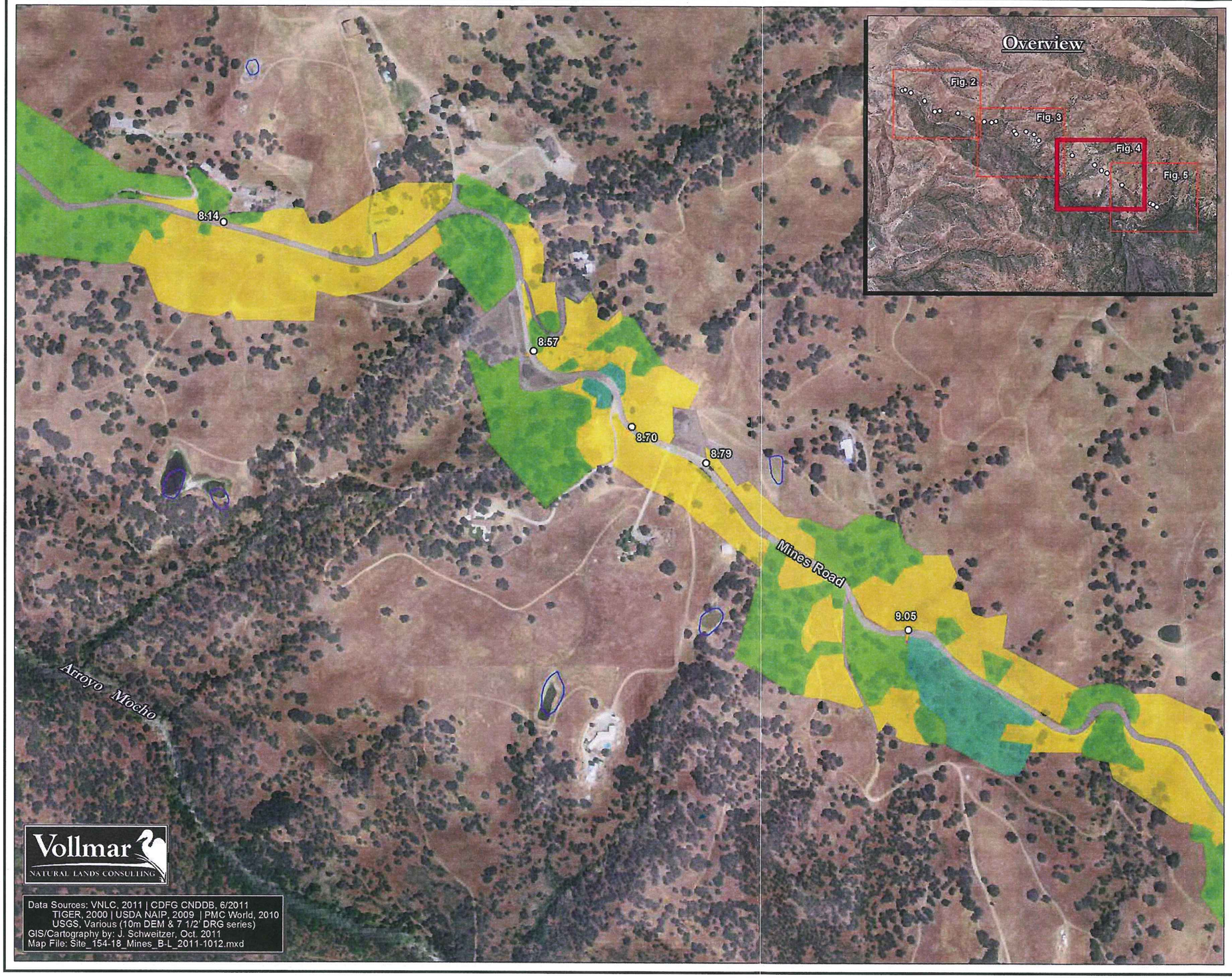
0 250 500 1,000 Feet

Vollmar
NATURAL LANDS CONSULTING

Data Sources: VNLC, 2011 | CDFG CNDDB, 6/2011
TIGER, 2000 | USDA NAIP, 2009 | PMC World, 2010
USGS, Various (10m DEM & 7 1/2' DRG series)
GIS/Cartography by: J. Schweitzer, Oct. 2011
Map File: Site_154-18_Mines_B-L_2011-1012.mxd

FIGURE 4
Project Site Features and Aerial Photography (2009)

Mines Road
Drainage Structure Replacement Project
Alameda County, California



Legend

- Drainage Structure (with mile marker ID)*
- CNDDB Occurrence of Listed Wildlife Species
- Drainage
- Swale
- Half-pipe
- Underground Culvert
- Wetland Mapped by PMC World
- Wetland Mapped by NWI

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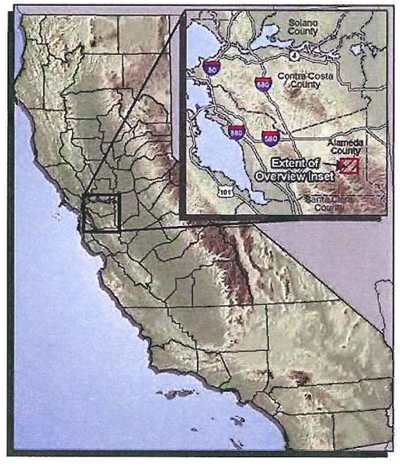
- Urban/Ruderal

* All locations are on south/east bound side of road

Drainages, waters, and land cover data produced by PMC World, 2010. Land cover data modified by VNLC, 2011.



N
W E
S

1:6,000
(1 inch = 500 feet at tabloid layout)

0 125 250 Meters

0 250 500 1,000 Feet

Vollmar
NATURAL LANDS CONSULTING

Data Sources: VNLC, 2011 | CDFG CNDDB, 6/2011
TIGER, 2000 | USDA NAIP, 2009 | PMC World, 2010
USGS, Various (10m DEM & 7 1/2' DRG series)
GIS/Cartography by: J. Schweitzer, Oct. 2011
Map File: Site_154-18_Mines_B-L_2011-1012.mxd

FIGURE 5
Project Site Features and Aerial Photography (2009)

Mines Road
Drainage Structure Replacement Project
Alameda County, California

Mines Road
9.05
9.56
9.66
9.70
Arroyo Mocho
Mines Road

Overview
Fig. 2
Fig. 3
Fig. 4
Fig. 5

Legend

- Drainage Structure (with mile marker ID)*
- CNDDB Occurrence of Listed Wildlife Species
- Drainage
- Swale
- Half-pipe
- Underground Culvert
- Wetland Mapped by PMC World
- Wetland Mapped by NWI

Vegetation/Land Cover

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- Sage Scrub
- Urban/Ruderal

* All locations are on south/east bound side of road

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N
W E
S

1:6,000
(1 inch = 500 feet at tabloid layout)

0 125 250 Meters

0 250 500 1,000 Feet

Vollmar
NATURAL LANDS CONSULTING

Data Sources: VNLC, 2011 | CDFG CNDDB, 6/2011
TIGER, 2000 | USDA NAIP, 2009 | PMC World, 2010
USGS, Various (10m DEM & 7 1/2' DRG series)
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