

**INITIAL STUDY AND MITIGATED NEGATIVE DECLARATION
Line A Storm Drain and Bledsoe Gulch Outfall Reconstruction**



Prepared for:

**City of Highland
27215 Base Line
Highland, CA 92346**

Prepared by:

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January 2022

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TABLE OF CONTENTS

1	INTRODUCTION	1
2	PROJECT DESCRIPTION.....	5
2.1	INTRODUCTION.....	5
2.2	PROJECT LOCATION AND SETTING	5
2.3	EXISTING CONDITION	5
2.4	PROJECT DESCRIPTION	6
3	ENVIRONMENTAL ANALYSIS AND DETERMINATION.....	16
3.1	ORGANIZATION OF ENVIRONMENTAL ANALYSIS	16
3.2	TERMINOLOGY USED IN THIS ANALYSIS	16
3.3	EVALUATION OF ENVIRONMENTAL IMPACTS	16
3.4	ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED	18
3.5	DETERMINATION	19
4	ENVIRONMENTAL IMPACTS	20
4.1	AESTHETICS.....	20
4.2	AGRICULTURE & FORESTRY RESOURCES	22
4.3	AIR QUALITY.....	24
4.4	BIOLOGICAL RESOURCES	33
4.5	CULTURAL RESOURCES	42
4.6	ENERGY	46
4.7	GEOLOGY AND SOILS	49
4.8	GREENHOUSE GAS EMISSIONS	56
4.9	HAZARDS AND HAZARDOUS MATERIALS	60
4.10	HYDROLOGY AND WATER QUALITY.....	66
4.11	LAND USE PLANNING.....	73
4.12	MINERAL RESOURCES	74
4.13	NOISE	76
4.14	POPULATION AND HOUSING	81
4.15	PUBLIC SERVICES.....	82
4.16	RECREATION	83
4.17	TRANSPORTATION	85
4.18	TRIBAL CULTURAL RESOURCES.....	87
4.19	UTILITIES AND SERVICE SYSTEMS	91
4.20	WILDFIRE	94
4.21	MANDATORY FINDINGS OF SIGNIFICANCE.....	97
5	SUMMARY OF MITIGATION MEASURES	99
6	REFERENCES	103

TABLE OF CONTENTS (continued)

LIST OF TABLES

Table 2.1-1: Surrounding Land Use.....	3
Table 2.4-1: Equipment Assumptions.....	8
Table 4.3-1: South Coast Air Basin Attainment Status.....	25
Table 4.3-2: Equipment Assumptions.....	30
Table 4.3-3: Construction Emissions.....	30
Table 4.3-4: Localized Significance Thresholds.....	32
Table 4.8-1: Greenhouse Gas Construction Emissions.....	59
Table 4.13-1: Land Use Compatibility Guidelines.....	77
Table 4.13-2: Vibration Source Levels for Construction Equipment.....	78

LIST OF EXHIBITS

Exhibit 2.3-1: Regional Vicinity.....	12
Exhibit 2.3-2: Project Site.....	13
Exhibit 2.3-3: Site Plan.....	14
Exhibit 2.4-4: Demolition and Grading Plan.....	15

LIST OF APPENDICES

Appendix A Project Construction Plans	
Appendix B Biological Resources	
Appendix C Cultural Resources Report	
Appendix D Geotechnical and Subsurface Reports	
Appendix E Hydrology Analysis	

1 INTRODUCTION

The California Environmental Quality Act (“CEQA”), codified in the Public Resources Code (PRC), Section 21000 et seq., and the CEQA Guidelines, Title 14, Section 15000 et seq. of the California Code of Regulations (CCR), was established to require public agencies to consider and disclose the environmental implications of their actions (projects). CEQA was enacted in 1970 by the California Legislature to disclose to decision makers and the public the significant environmental effects of a proposed project and identify possible ways to avoid or minimize significant environmental effects of a project by requiring implementation of mitigation measures or recommending feasible alternatives. CEQA applies to all California governmental agencies at all levels, including local, regional, and State, as well as boards, commissions, and special districts.

As provided by PRC Section 21067, the public agency with the principal responsibility for approving a project that may have a significant effect upon the environment is considered the Lead Agency. The City of Highland (“City”), as Lead Agency for the approval of the Applicant’s proposed project (“Project”), is responsible for preparing environmental documentation in accordance with CEQA as amended to determine if approval of the discretionary actions requested and subsequent implementation of the Proposed Project could have a significant impact on the environment. As defined by Section 10563 of the CEQA Guidelines, an Initial Study (“IS”) is prepared primarily to provide the Lead Agency with information to use as the basis for determining whether an Environmental Impact Report (“EIR”), Negative Declaration (“ND”), or Mitigated Negative Declaration (“MND”) would be appropriate for providing the necessary environmental documentation and clearance for the Proposed Project.

City of Highland
Initial Study and Environmental Evaluation

- 1. Project Title:** Line A Stormdrain and Bledsoe Gulch Outfall Reconstruction
- 2. Lead Agency Name:
Address** City of Highland - Public Works Department
27215 Base Line St, Highland, CA 92346
- 3. Contact Person:** Kim Stater, Assistant Community Development Director
(909) 864-8732, Ext. 204
kstater@cityofhighland.org
- 5. Project Location:** East Highlands Ranch Community Center and
Bledsoe Gulch
6892 Cloverhill Drive, Highland, CA 92346
Assessor Parcel No 0288-251-83
Harrison Mtn USGS Quad; T1N, R3W, Sect. SW ¼ 35
- 4. Project Sponsor's Name:
Address** City of Highland Public Works Dept.
Attn: Carlos Zamano, Public Works Director/City Engineer
City of Highland - Public Works Department
27215 Base Line St, Highland, CA 92346
- 6. General Plan Designation:** Planned Development (PD)
- 7. Zoning Designation:** Planned Development (PD)
- 8. Description of Project:** The City of Highland (City), in coordination with East Highlands Ranch - Master Homeowners Association (EHR-MHOA), is proposing to: replace the underground Line A storm drain facilities situated between the EHR clubhouse and the nearby Bledsoe Gulch, to which Line A outlets; replace the storm drain outfall facilities in Bledsoe Gulch; regrade Bledsoe Gulch sideslopes in the vicinity of the Line A new outfall which is severely eroded and threatening homes; construct new maintenance access road over the reconstructed stormdrain. The approximately 300 feet of the existing 48-inch RCP will be replaced with new 48-inch RCP within the same alignment but at approximately 10 feet deeper than the existing line to promote positive flow given the severely eroded creek head, base, and sideslopes and to reduce creek erosion. The total work area is approximately 0.48 acre.
- 9. Surrounding Land Uses:**

Surrounding land uses are identified in *Table 1-1: Surrounding Land Use*.

Table 2.1-1: Surrounding Land Use

Direction	Land Use Description
North	East Highlands Ranch Community Center
East	Cloverhill Drive and East Highlands Ranch Reservoir
South	Bledsoe Creek (downstream area not a part of the Project); Baseline Road is approximately 0.5 mile downstream of Project site
West	Rockspring Lane

10. Other Public Agencies Whose Approval is Required:

The following discretionary approvals are required for the Project:

Federal Agencies

- US Army Corps of Engineers – Section 404 Clean Water Act Permit.

State Agencies:

- Regional Water Quality Control Board (RWQCB) – Section 401 Clean Water Act Permit
- Regional Water Quality Control Board (RWQCB) – Construction dewatering permit

11. California Native American Consultation:

In March 2020, CRM Tech requested that the Native American Heritage Commission (NAHC) conduct a search of its Sacred Lands File to determine if cultural resources significant to Native Americans have been recorded in the Project footprint and/or buffer area. The response from NAHC indicated that the results were negative and provided their list of Native American tribal governments to contact, which included representatives from 10 tribes.

On July 27, 2021, the City of Highland notified the following tribal entity representatives of the Project and that the 30-day timeframe in which to request consultation would end on August 27, 2021, in accordance with AB52:

- Mr. Joseph Ontiveros, Director of Cultural Resources, Soboba Band of Luiseño Indians
- Mr. Ryan Nordess, Cultural Resource Analyst, San Manuel Band of Mission Indians
- Mr. Andrew Salas, Gabrieleno Band of Mission Indians

Of the tribes contacted, the following responses were received:

- Soboba Band of Luiseño Indians. No comments were received. Consultation concluded.

- San Manuel Band of Mission Indians. 8/4/2021 – no concerns with Project implementation but suggested that mitigation measures be made a part of the plan/permit conditions to address unanticipated finds. Consultation concluded.
- Gabrieleno Band of Mission Indians. No comments were received. Consultation concluded.

Mitigation measures that were submitted as part of the consultation request letters and have been reviewed incorporated as appropriate into the Initial Study.

2 PROJECT DESCRIPTION

2.1 INTRODUCTION

The City of Highland (City), in coordination with East Highlands Ranch - Master Homeowners Association (EHR-MHOA), is proposing to replace the Line A storm drain facilities situated between the EHR clubhouse and the nearby Bledsoe Gulch, to which Line A outlets (Project). The Project will replace approximately 300 feet of the existing 48-inch RCP with a new 48-inch RCP within the same alignment but at depths up to approximately 15 feet below ground surface (bgs) to promote positive flow and reduce creek erosion due to the severely eroded creek head, base and sideslopes. The Project also includes constructing a new storm drain segment within Bledsoe Gulch and regrading the head, base, and slopes of Bledsoe Gulch to mitigate the ongoing severe erosion that is threatening adjacent homes along the west creek bank.

2.2 PROJECT LOCATION AND SETTING

The Project is located behind the East Highlands Ranch Community Center, 6892 Cloverhill Drive, Highland, CA 92346. Specifically, the Project will occur approximately 200 feet south of the EHR community center building within the orange grove and within and around the upstream terminus of Bledsoe Gulch, at latitude 34° 7'41.53"N, longitude 117°10'13.99"W. All work will occur within the 8.25 acre parcel, APN 0288-251-83, owned by the East Highlands Ranch Master HOA, Inc. (Figure 1 and Figure 2). The site can be found on the U.S. Geological Survey (USGS) *Harrison Mtn. 7.5'* Topographic Map, within the southwest one-quarter of Section 35, Township 1 North, Range 3 West (Figures 1-3).

2.3 EXISTING CONDITION

The existing Line A is a 290-foot-long, 48-inch underground reinforced concrete pipe (RCP) that was installed 2002 between the community center and Bledsoe Gulch to convey the tributary drainage within the EHR subdivision, as part of the subdivision development from just north of Highland Avenue. The existing pipe outlets approximately 50 feet downstream of the Bledsoe Gulch head, near the top of the slope embankment. The depth of the RCP ranges from 4 feet below ground surface (bgs) to 5 feet bgs between the existing community center and the Bledsoe Gulch outlet. A 75-foot long by 20-foot wide grouted riprap pad (0.03-acre) was also constructed along the existing slope embankment down to the bottom of the slope on a very steep slope of approximately 2:1.

Over time, the slope embankment area surrounding the RCP outlet has been severely eroded by high flow velocity flows coming from the RCP outfall, resulting in significant erosion along the creek sideslopes and invert, to currently an approximately 1.5:1 slope, and which is threatening the backyards of the adjacent homes that are situated along the west embankment, which is along Rockspring Lane. The existing grouted riprap pad below the RCP has also sustained damaged from the high flow velocity and is no longer providing erosion protection for the slope embankment and the RCP.

In 2012, a remedial repair was performed by lining an approximate 0.02-acre area of the creek head near the RCP outlet with concrete and extending the existing RCP downstream using a 20-foot long 48-inch plastic pipe. However, this limited repair did not stop the erosion of the creek head or adjacent embankment slope, and continual lateral erosion of the slope embankment caused structural cracking at the pipe joint of the RCP near the existing inlet riser. Currently, the creek head invert is approximately 58

feet below the top of the slope over a distance of approximately 120 feet, yielding an approximate slope of approximately 1.5:1.

2.4 PROJECT DESCRIPTION

The Project will replace the existing 48-inch RCP with a new 48-inch RCP within the same alignment but at depths up to approximately 15 feet bgs which will promote positive flow given the severely eroded creek head, base, and sideslopes to and reduce creek erosion. The Project will add approximately 100 feet of new storm drain RCP along the existing invert of Bledsoe Gulch, and the head, toe and sideslopes will be regraded to mitigate the overly steep invert. Project plans are located in Appendix A.

The new 48-inch RCP is sized to convey the tributary 100-year storm flow of 257.7 cubic feet per second (cfs), which is the same flow of the original pipe.

In general work includes: replacing the existing underground storm drain lines between the EHR clubhouse and the upstream terminus of Bledsoe Gulch; relocating the Line A storm drain pipeline section between the Bledsoe Gulch head and base to approximately 10 feet below the invert so the newly relocated line will outlet at the same elevation as the current creek base elevation; replacing the concrete apron at the base of Bledsoe Gulch; re-grading Bledsoe Gulch from the head to the base and slopes which is severely eroded and threatening adjacent homes; and constructing a paved access road on top of the newly re-graded slope between the Bledsoe Gulch head and base.

The Project will occur within both land owned by the EHR and within Bledsoe Gulch as follows:

2.4.1 Work to Occur between EHR Community Center and Bledsoe Gulch head

This portion of the Project will occur within the existing concrete access road and adjacent orange grove. In this area, the Project will first remove approximately 94 feet of the existing 48-inch RCP that is installed approximately at depths ranging from 2 feet to 5 feet bgs, then excavating a trench approximately 60 feet wide to depths of 10 to 15 feet bgs. Approximately 94 feet of new RCP will be installed. All soils will either be re-used and recompacted or hauled for proper disposal.

A new 60-inch diameter drainage inlet or riser will be installed at the tie-in point between the proposed and creek head, installed at a depth of 5 feet bgs. Additionally, an 18-inch lateral and 36-inch inlet will be constructed approximately 10 feet bgs to tie into the new 48-inch RCP and will serve as an outlet for surface flows emanating from the citrus grove area of the community center. This lateral will also provide an outlet for a future underground subdrain to be constructed by EHR-MHOA.

A new 6-foot high chain link fence and a double gate with a lock are proposed near the creek head to prevent unwanted access or intrusion into the proposed storm drain system.

Work will impact approximately 21,116 square feet (or 0.48 acre) behind the community center in the vicinity of the existing concrete road. It is anticipated that between 1 and 10 orange trees may be removed during construction to facilitate equipment staging.

2.4.2 Work to Occur at Bledsoe Gulch head and within Bledsoe Gulch

The existing approximately 75-foot long by 20-foot wide grouted riprap pad (0.03-acre) headwall and rip rap will be removed.

To install the new 48-inch RCP in Bledsoe Gulch, the sideslopes and invert of Bledsoe Gulch will be first be re-graded to facilitate positive drainage at a 2:1 slope and reduce the west slope erosion. The area to be regraded is approximately 0.23-acre in size directly around the Bledsoe Gulch head, west bank, and toe, or approximately 55 feet wide by 180 feet long by 5 feet deep.

An approximately 178 linear feet of new 48-inch RCP will be placed from the tie in at the top of the slope, to the base of the slope where the RCP will outlet onto a new grouted rip rap apron. The new apron is approximately 870 sf or approximately 0.02 acre. A headwall will be constructed around the new RCP outlet.

Once the RCP is laid, approximately 4 feet of clean fill (approximately 386 cy) will be compacted on top of the new pipe from the creek tie-in at the top of the slope, and along the slopes near the head and toe, especially the west slope, to reduce the steep grade. A new 12-foot-wide approximately 178 foot long, asphalt paved access road will then be constructed on top of the new fill, from the tie in at the head to the apron, to allow proper access for maintenance. A 6-inch asphalt dike will also be constructed along the west side of the access road to collect and control surface flows and convey them onto the apron.

To mitigate the west slope failure near the head, an approximate 106-foot-long concrete swale, approximately 1 foot deep will be constructed along the newly graded slope, approximately 36 feet upslope of the finished access road grade, designed to drain flows back into the creek at the new rip rap pad at the creek base. This swale will act as the first line of defense for the sheet flow from the top of the slope that is currently causing the slope erosion. The new swale will outlet at the new rip rap pad at the creek base.

The 386 cy of clean raw fill will be imported from a local soil supplier. Approximately 690 cy of raw cut from the site is anticipated to be exported.

2.4.3 Construction Scenario

The total area of construction is approximately 0.45 acre – of which approximately 0.22 acre occurs within the area between the area of the community center and the Bledsoe Gulch head, and approximately 0.23 acre occurs within Bledsoe Gulch. The anticipated stages of construction will consist of the following:

1. Mobilization.
2. Removal and disposal of 94 feet of the existing 48-inch storm RCP and plastic pipe, drainage inlet, slope lining, grouted riprap, un-grouted riprap, trees, litters, and shrubs.
3. Grading of the existing slope consisting of excavation and compacted fill including pipe excavation. The total area of grading is approximately 0.23 acre.
4. Installation of the new 48-inch RCP, 18-inch RCP, drainage inlets, and appurtenances by trenching various areas between 2 and up to 15 feet deep.
5. Pipe backfill.
6. Construction of the concrete headwall and riprap apron, approximately 0.02 acre

7. Grading of a 12-foot wide by 178-foot long new access road and construction of AC pavement and AC dike along the access road.
8. Construction of the concrete swale, 106 feet long by 3 feet wide along the access road
9. Installation of the 6-foot chain link fence and double gate.
10. Installation of temporary erosion controls (gravel bags and fiber rolls).

2.4.4 Potential Construction Equipment

Project construction will require the use of heavy equipment. While the final types and numbers of construction equipment will be determined by the construction contractor, the types of equipment that will be utilized for this work may include the following:

Table 2.4-1: Equipment Assumptions

Equipment Type	Numbers of Equipment	Duration
Caterpillar 950 Wheel Front-End Loader	1	3 months
Caterpillar 349L Track Excavator – Long Reach	2	3 months
Caterpillar D-8 or D-9 sized bulldozer	2	3 months
Truck Crane	1	1 month
Dump Trucks	2	3 months
Water Truck	1	3 months
Dirt Haul Trucks (386 cy in 5 yard trucks)		2 weeks

2.4.5 Right-of-Way Acquisition

The area to be potentially affected by the Project includes approximately 0.45 acre of the EHR-MHOA property. The Project would require the acquisition of a permanent easement along APN 288-251-083 as well as a temporary construction easement from EHR-MHOA. Since the proposed construction is not located within an existing roadway, it would not require relocation of existing utilities (water, sewer, cable, telephone, gas, electric utilities, etc.).

The Project site has adequate clearances and access points for construction of the proposed storm drain. A temporary construction easement (TCE) would be required from EHR-MHOA for the duration of construction. In order to allow access to the outlet in Bledsoe Gulch for periodic maintenance by the City, a permanent easement will be required from EHR-MHOA.

2.4.6 Utility Relocation

Some utility coordination may be required. All relocation will be coordinated with the respective utilities.

2.4.7 Construction Staging and Access

The City will coordinate and identify the staging area within the EHR-MHOA Community Center, therefore, equipment staging will occur on previously disturbed areas. Between 1 and 10 orange trees in the area

between the community center and Bledsoe Gulch may be removed to facilitate staging of equipment and materials and/or construction of Project components.

2.4.8 Construction Timing

The Project is anticipated to be constructed as soon as permits are received and take approximately three months to complete. Tentatively, it is anticipated that work would begin in March 2022 and end in June 2022. No water is anticipated to be within the work area. The contractor and the EHR MOA will work with residents to curb unnecessary water usage that may result in urban stormwater runoff during construction. The contractor will make provisions to accept and dispose of the occasional urban stormwater runoff so that there will be no water in the facilities or the creek during construction.

2.4.9 Best Management Practices/Avoidance and Minimization Measures

The City and its contractor will follow conditions and guidelines for best management practices with respect to construction:

- Permits from the California Dept. of Fish and Wildlife (CDFW), the Santa Ana Regional Water Quality Control Board (SARWQCB) and the US Army Corps of Engineers (USACE) must be obtained prior to start of work within the Bledsoe Gulch head and slopes. The City will abide by the conditions of all the permits to protect biological and natural resources and water quality.
- Bird nesting season generally extends from February 1 through September 15 in southern California and specifically, April 15 through August 31 for migratory passerine birds. To avoid impacts to nesting birds (common and special status) during the nesting season, a qualified Avian Biologist will conduct pre-construction Nesting Bird Surveys (NBS) prior to Project-related disturbance to nestable vegetation to identify any active nests. If no active nests are found, no further action will be required. If an active nest is found, the biologist will set appropriate no-work buffers around the nest which will be based upon the nesting species, its sensitivity to disturbance, nesting stage and expected types, intensity and duration of disturbance. The nests and buffer zones shall be field checked weekly by a qualified biological monitor. The approved no-work buffer zone shall be clearly marked in the field, within which no disturbance activity shall commence until the qualified biologist has determined the young birds have successfully fledged and the nest is inactive.
- Because the Project is less than 1 acre, a formal Stormwater Pollution Prevention Plan is not required, but may be required at the discretion of the City. However, the contractor at minimum will prepare an Erosion Control Plan (ECP) that will identify the Best Management Practices (BMPs) for managing excavation and stockpile of materials and measures to prevent hazardous materials and soils from unnecessarily entering the creek during construction. The BMPs may include but not be limited to the following:
 - Prevent mud and debris from entering roadways, including the main entry road by providing trackout measures.
 - Installation of perimeter silt fences and perimeter sandbags and/or gravel bags

- Locate stockpiles away from drainage courses, drain inlets or concentrated flows of storm water.
- For wind erosion control, apply water or other dust palliative to stockpiles. Smaller stockpiles may be covered as an alternative.
- Place bagged materials on pallets under cover.
- During the rainy season, non-active soil stockpiles will be covered with heavy plastic and the stockpile contained within a temporary perimeter sediment barrier, such as berms, dikes, silt fences, or sandbag barriers. A soil stabilization measure may be used in lieu of cover.
- During the non-rainy season prior to the onset of rain, the stockpile should either be covered or protect them with temporary perimeter sediment barriers.
- Year-round, active soil stockpiles will be protected with temporary linear sediment barriers prior to the onset of rain.
- The main haul road will be graded and watered at least once per day, or as often as necessary to control dust as required by the South Coast Air Quality Management District (SCAQMD).
- Any equipment that enters Bledsoe Gulch temporarily will be monitored for spills using standard Best Management Practices in accordance with State Water Resources Control Board requirements. Standard measures including placement of matts under the equipment and using wheeled, not track, equipment. No equipment will remain in the creekbed overnight or for an extended period.
- The tracks and under carriage of any equipment that enters Bledsoe Gulch will be checked for invasive weed species; if found, the weed species will be removed and properly disposed of off-site.

2.4.10 Operations Scenario

Once constructed, it is anticipated that the Bledsoe Gulch/Line A storm drain will be included in the City's routine maintenance of its storm drain facilities. This includes inspections after major rain events, or annually at a minimum.

Maintenance activities may include but not be limited to the following for the replaced facility:

Access Road: Maintenance activities include clearing encroaching vegetation, filling ruts and potholes, grading, resurfacing (with similar materials), and repairing washouts. Vegetation control usually occurs annually and other activities usually occur every 2 to 3 years. Total approximate acreage of City maintenance: 0.07 acre.

Drain Outlet and Apron: General maintenance includes cleaning at the drain outfall. This would generally occur with hand tools such as shovels and/or chain saws if required. If the outfall is blocked with vegetation and debris, and/or, the apron contains significant sediment and debris, one to two maintenance personnel would drive down to the outfall and apron and shovel/place the material into the back of a pickup truck, and remove the material off site. Total approximate acreage of City maintenance: 0.25 acre.

Fuel Modification Maintenance. Fuel modification can be in the form of manual, mechanical, or chemical vegetation control of dry or invasive vegetation that is within 50 feet of the boundaries of the apron, and along the new sideslopes. Total approximate acreage of City maintenance: 0.03 acre.

Vector Control. Vector Control primarily involves mosquito control to reduce the spread of disease, including West Nile Virus. Vector control is conducted by the County Environmental Health Department-Mosquito/Vector Control office and includes driving down the new access road to the apron and applying biopesticides by spraying and/or introduction of mosquito-larvae eating fish into the waters of Bledsoe Gulch.

Initial Study and Draft Mitigated Negative Declaration
 Line A Storm Drain and Bledsoe Gulch Outfall Reconstruction

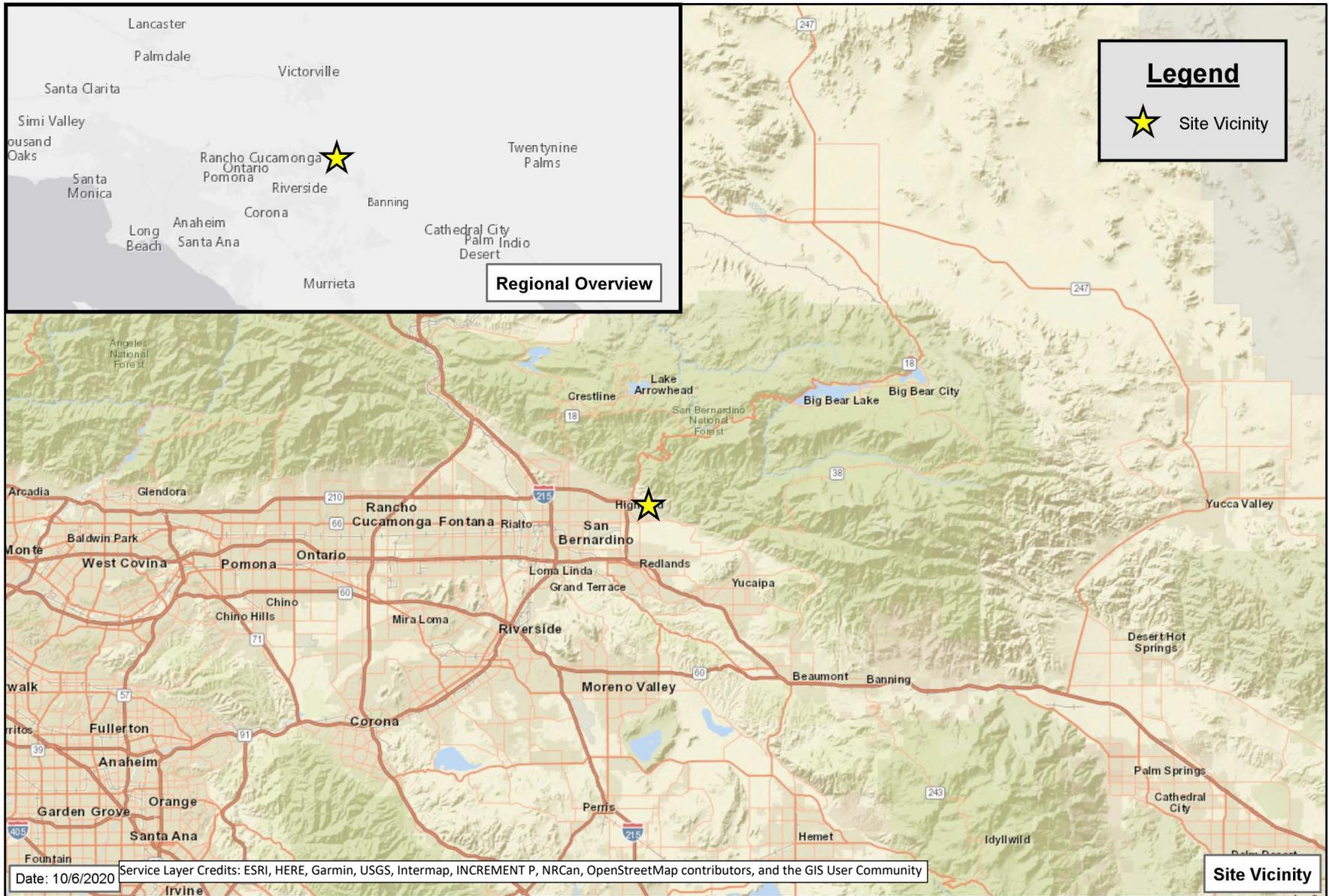


Exhibit 2.3-1 - Regional Vicinity

Line A Storm Drain and Bledsoe Gulch Outfall Reconstruction
 Initial Study



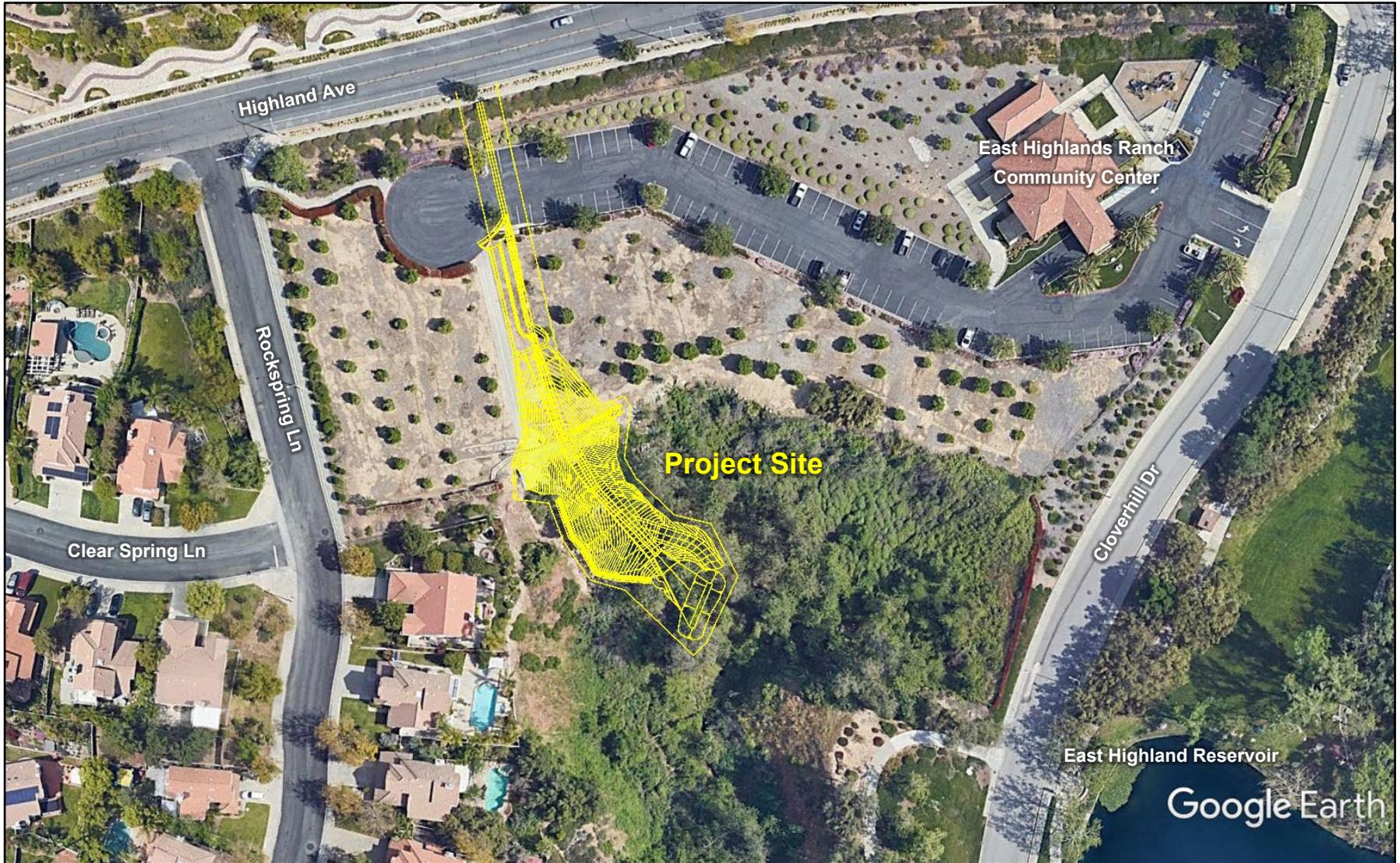
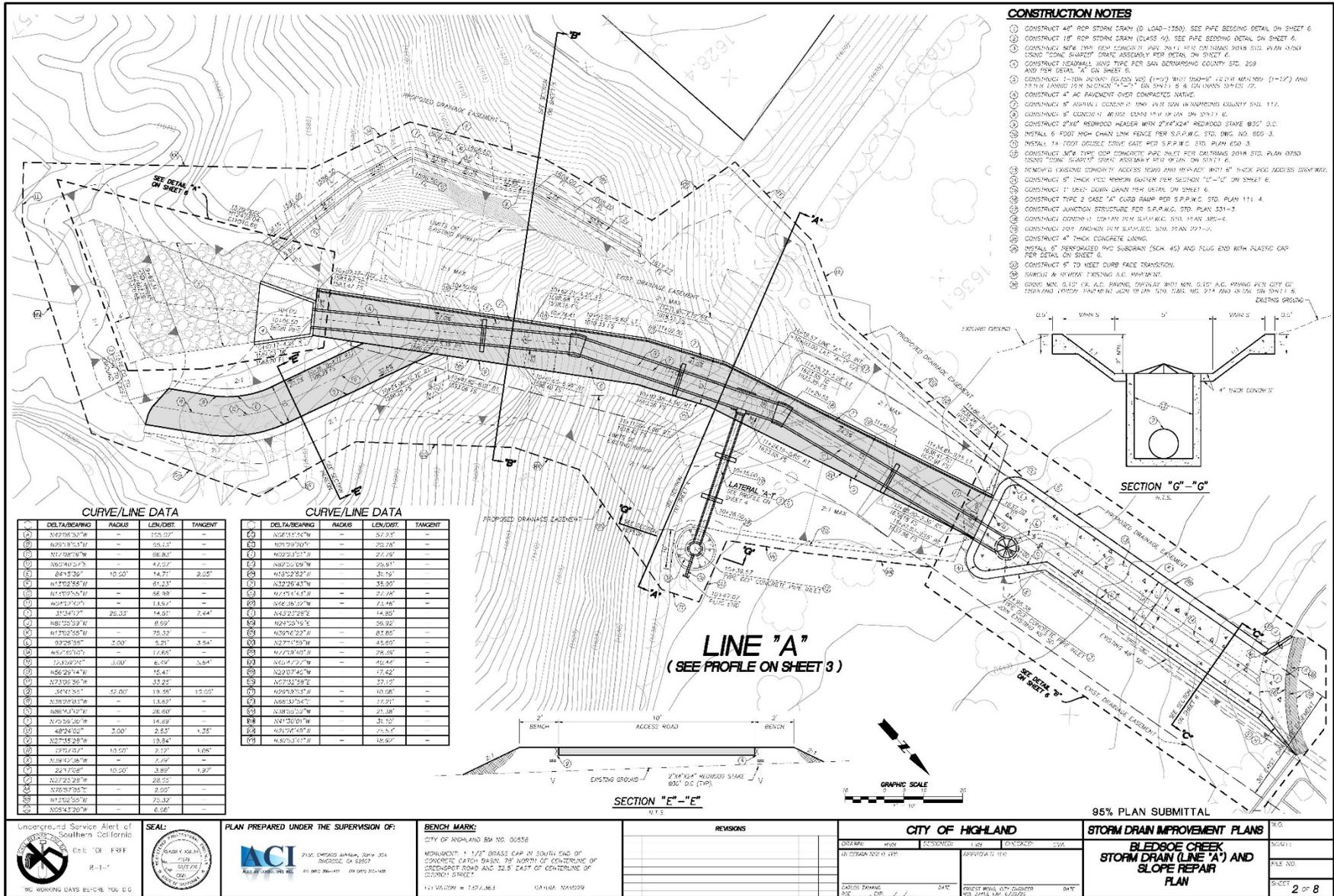


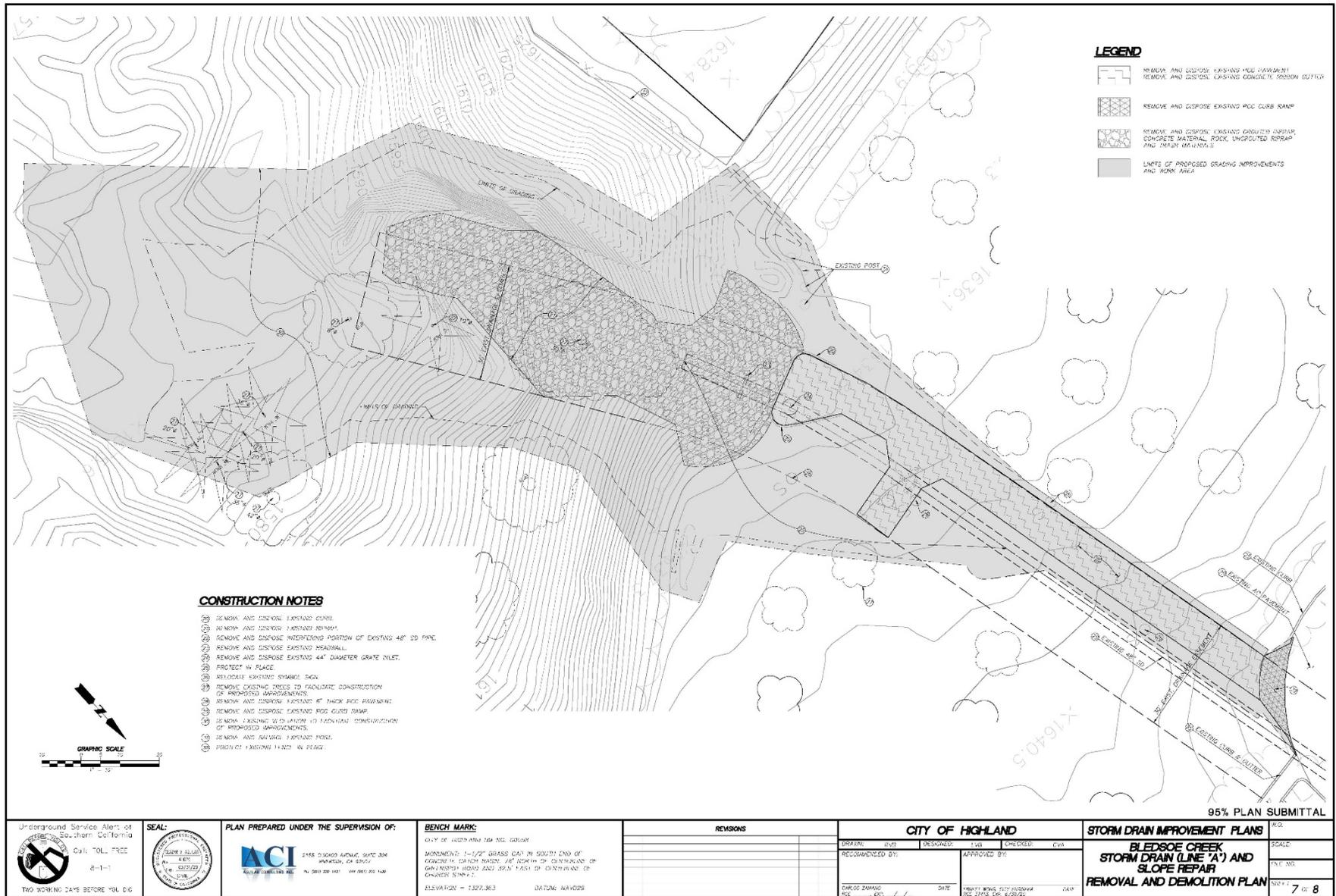
Exhibit 2.3-2 – Project Site
Line A Storm Drain and Bledsoe Gulch Outfall Reconstruction
Initial Study



Initial Study and Draft Mitigated Negative Declaration
Line A Storm Drain and Bledsoe Gulch Outfall Reconstruction



Initial Study and Draft Mitigated Negative Declaration
Line A Storm Drain and Bledsoe Gulch Outfall Reconstruction



Underground Service Alert of Southern California
Call: TOLL FREE
8-1-1
Two WORK DAYS BEFORE "CALL BEFORE YOU DIG"



PLAN PREPARED UNDER THE SUPERVISION OF:
ACI
2458 DUNSMUIR AVENUE, SUITE 204
MARTINEZ, CA 94553
TEL: 925.226.1101 FAX: 925.226.1100

BENCH MARK:
CITY OF HIGHLAND T&M NO. 02104
MONUMENT: 1-1/2" BRASS CAP IN SOUTHWEST CORNER OF CONCRETE FOUNDATION, 78' NORTH OF CENTERLINE OF GRAYMOUTH ROAD AND 55.0' EAST OF CENTERLINE OF CHANDLER STREET.
ELEVATION = 1327.363 DATUM: NAVD83

REVISIONS

CITY OF HIGHLAND			
DRAWN BY:	DESIGNED BY:	CHECKED BY:	DATE:
RECOMMENDED BY:	APPROVED BY:		
COURSE EXAMINED:	DATE:	REMARKS: (SEE COMMENTS SHEET)	DATE:

STORM DRAIN IMPROVEMENT PLANS	
BLEDSOE CREEK STORM DRAIN (LINE 'A') AND SLOPE REPAIR	
REMOVAL AND DEMOLITION PLAN	
NO.:	7 OF 8

3 ENVIRONMENTAL ANALYSIS AND DETERMINATION

In accordance with the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000-21178.1), this Initial Study has been prepared to analyze the proposed Project to determine any potential significant impacts upon the environment that would result from construction and implementation of the Project. In accordance with California Code of Regulations, Section 15063, this Initial Study is a preliminary analysis prepared by the Lead Agency in consultation with other jurisdictional agencies, to determine whether a Negative Declaration, Mitigated Negative Declaration, or an Environmental Impact Report is required for the proposed Project. The purpose of this Initial Study is to inform the decision-makers, affected agencies, and the public of potential environmental impacts associated with the implementation of the proposed Project.

3.1 ORGANIZATION OF ENVIRONMENTAL ANALYSIS

Section 4 provides a discussion of the potential environmental impacts of the Project. The evaluation of environmental impacts follows the questions provided in the Checklist provided in the CEQA Guidelines.

3.2 TERMINOLOGY USED IN THIS ANALYSIS

For each question listed in the IS checklist, a determination of the level of significance of the impact is provided. Impacts are categorized in the following categories:

- **No Impact.** A designation of no impact is given when no adverse changes in the environment are expected.
- **Less Than Significant.** A less than significant impact would cause no substantial adverse change in the environment.
- **Less Than Significant with Mitigation.** A potentially significant (but mitigatable) impact would have a substantial adverse impact on the environment but could be reduced to a less-than-significant level with incorporation of mitigation measure(s).
- **Potentially Significant.** A significant and unavoidable impact would cause a substantial adverse effect on the environment and no feasible mitigation measures would be available to reduce the impact to a less-than-significant level.

3.3 EVALUATION OF ENVIRONMENTAL IMPACTS

A brief explanation is required for all answers except “No Impact” answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A “No Impact” answer is adequately supported if the referenced information sources show that the impact simply does not apply to the project (e.g., the project falls outside a fault rupture zone). A “No Impact” answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

All answers must take account of the whole action involved, including off site as well as on site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

Once the Lead Agency has determined that a particular physical impact may occur, the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant.

“Potentially Significant Impact” is appropriate if there is substantial evidence that an effect may be significant. If there are one or more “Potentially Significant Impact” entries when the determination is made, an EIR is required.

“Less Than Significant with Mitigation Incorporated” applies where the incorporation of mitigation measures has reduced an effect from “Potentially Significant Impact” to a “Less Than Significant Impact.” Mitigation measures are identified and explain how they reduce the effect to a less than significant level (mitigation measures may be cross-referenced).

Earlier analyses may be used where, pursuant to the Program EIR or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. (Section 15063[c] [3][D]. In this case, a brief discussion should identify the following:

- a) Earlier analyses used where they are available for review.
- b) Which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards and whether such effects were addressed by mitigation measures based on the earlier analysis.
- c) The mitigation measures that were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project for effects that are “Less than Significant with Mitigation Measures Incorporated.

References and citations have been incorporated into the checklist references to identify information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document, where appropriate, include a reference to the page or pages where the statement is substantiated.

Source listings and other sources used, or individuals contacted are cited in the discussion.

The explanation of each issue should identify:

- a) The significance criteria or threshold, if any, used to evaluate each question
- b) The mitigation measure identified, if any, to reduce the impact to less than significant.

3.4 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

Based on the analysis in Section 4, the proposed Project could potentially affect (“Potentially Significant” or “Less than Significant with Mitigation Incorporated”) the environmental factor(s) checked below. The following pages present a more detailed checklist and discussion of each environmental factor and identifies where mitigation measures would be necessary to reduce all impacts to less than significant.

- | | | |
|--|---|---|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture and Forestry Resources | <input type="checkbox"/> Air Quality |
| <input checked="" type="checkbox"/> Biological Resources | <input checked="" type="checkbox"/> Cultural Resources | <input type="checkbox"/> Energy |
| <input checked="" type="checkbox"/> Geology / Soils | <input type="checkbox"/> Greenhouse Gas Emissions | <input checked="" type="checkbox"/> Hazards & Hazardous Materials |
| <input type="checkbox"/> Hydrology / Water Quality | <input type="checkbox"/> Land Use / Planning | <input type="checkbox"/> Mineral Resources |
| <input type="checkbox"/> Noise | <input type="checkbox"/> Population / Housing | <input type="checkbox"/> Public Services |
| <input type="checkbox"/> Recreation | <input type="checkbox"/> Transportation | <input checked="" type="checkbox"/> Tribal Cultural Resources |
| <input type="checkbox"/> Utilities / Service Systems | <input type="checkbox"/> Wildfire | <input type="checkbox"/> Mandatory Findings of Significance |

3.5 DETERMINATION

On the basis of this initial evaluation, the following finding is made:

	The proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
X	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.
	The proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
	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.
	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

Date

Name

Title

4 ENVIRONMENTAL IMPACTS

4.1 AESTHETICS

4.1.1 Environmental Setting

The Project site is situated at the south end of the East Highlands Ranch Community Center, located in the northeastern end of the City of Highland. Views in the Project area are of the surrounding mountains to the north and east, and suburban developments to the south and south west.

4.1.2 Impact Analysis

CEQA THRESHOLDS	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
I. AESTHETICS: Except as provided in Public Resources Code Section 21099, would the project:				
a) Have a substantial adverse effect on a scenic vista?			X	
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				X
c) In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?			X	
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?				X

Discussion

a) *Have a substantial adverse effect on a scenic vista?*

Less than Significant Impact. The CEQA Guidelines do not provide a definition of what constitutes a “scenic vista” or “scenic resource” or a reference as to from what vantage point(s) the scenic vista and/or resource, if any, should be observed. However, a scenic vista can generally be defined as a viewpoint from a public vantage that provides expansive views of a highly valued landscape for the benefit of the general public. Common examples include undeveloped hillsides, ridgelines, and open space areas that provide a unifying visual backdrop to a developed area. Scenic resources are those landscape patterns and features that are visually or aesthetically pleasing and

that contribute affirmatively to the definition of a distinct community or region such as trees, rock outcroppings, and historic buildings.

The Project consists of reconstructing the underground Line A facility and the Bledsoe Gulch head. While Bledsoe Gulch affords a view of plants and a water feature, it can only be seen from the backyards of private residences along Rockspring Lane. Portions of the Project also occur behind the East Highland Community Center, which is fronted by Highland Avenue. In this area, Highland Avenue users are slightly higher than the work area, and the viewshed is of the Project area and south, over an urban landscape of Redlands and areas south of Redlands. These views, as viewed by the adjacent residents, may be temporarily impacted by the Project during construction. No post-construction impacts will occur. The Project will not change the landforms in a manner that would alter the existing visual character of the area. Impacts would be less than significant, and no mitigation is required.

- b) *Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?*

No Impact. The Project does not occur within a scenic highway. Therefore, there are no impacts, and no mitigation is required.

- c) *In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?*

Less than Significant Impact. The Project is in an urbanized area. As noted above, the Project proposes improvements to an existing underground storm drain. The Project would not conflict with any local zoning or other regulations regarding scenic quality. Impacts would be less than significant, and no mitigation is required.

- d) *Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?*

No Impact. No lighting is proposed, and all work will be conducted during daytime hours. Therefore, there are no impacts, and no mitigation is required.

4.1.3 Mitigation Measures:

No mitigation measures are required.

4.2 AGRICULTURE & FORESTRY RESOURCES

4.2.1 Environmental Setting

The proposed Project is located an urbanized area of the City of Highland. The Project improvements will occur on an existing developed site.

4.2.2 Impact Analysis

CEQA THRESHOLDS	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
II. AGRICULTURE AND FORESTRY 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 Dept. 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 regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy 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 of the California Resources Agency, to non-agricultural use?				X
b) Conflict with existing zoning for agricultural use or a Williamson Act contract?				X
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 zoned Timberland Production (as defined by Government Code section 51104(g))?				X
d) Result in the loss of forest land or conversion of forest land to non-forest use?				X
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 or conversion of forest land to non-forest use?			X	

Discussion

- 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 of the California Resources Agency, to nonagricultural use?*

No Impact. According to the California Department of Conservation Farmland Mapping and Program, the Project site does not contain prime agricultural soils. There are no agricultural uses on the site, and none are proposed. There are no impacts, and no mitigation is required.

- b) *Conflict with existing zoning for agricultural use, or a Williamson Act contract?*

No Impact. The Project site is not zoned for agricultural use by the City of Highland General Plan and is not the site of any Williamson Act contracts. There are no impacts, and no mitigation is required.

- 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 zoned Timberland Production (as defined by Government Code section 51104(g))?*

No Impact. No part of the Project site or its surroundings are designated as timberland. There are no impacts, and no mitigation is required.

- d) *Result in the loss of forest land or conversion of forest land to non-forest use?*

No Impact. There is no designated forestland on the Project site, and the proposed Project would therefore not affect forests during construction or operations. There are no impacts, and no mitigation is required.

- e) *Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to nonagricultural use or the conversion of forest land to non-forest use?*

Less Than Significant. The Project site is not zoned for or under use as Farmland or forest land. The EHR-MHOA operates a non-commercial orange orchard within the Project boundaries for recreational use of homeowners. Between 1 and 10 trees may be removed or relocated to accommodate the Project trenching and staging and storage. The orchard is non-commercial, therefore, therefore, the impact would be less than significant, and no mitigation is required.

4.2.3 Mitigation Measures:

No mitigation measures are required.

4.3 AIR QUALITY

4.3.1 Regulatory Setting

Air pollutants are regulated at the national, state, and air basin level; each agency has a different level of regulatory responsibility. The United States Environmental Protection Agency (EPA) regulates at the national level under the Clean Air Act of 1970. The California Air Resources Board (ARB) regulates at the state level. The South Coast Air Quality Management District (SCAQMD) regulates at the air basin level.

The City of Highland lies within the South Coast Air Basin (SCAB), located on a coastal plain with connecting broad valleys and low hills to the east. Regionally, the SCAB is bounded by the Pacific Ocean to the southwest and high mountains to the east forming the inland perimeter.

Dominant airflows provide the driving mechanism for transport and dispersion of air pollution. The mountains surrounding the region form natural horizontal barriers to the dispersion of air contaminants. Air pollution created in the coastal areas and around the Los Angeles area is transported inland until it reaches the mountains where the combination of mountains and inversion layers generally prevent further dispersion. This poor ventilation results in a gradual degradation of air quality from the coastal areas to inland areas.

Air Quality in the SCAB which is managed by the South Coast Air Quality Management District (SCAQMD), the air pollution control agency for all of Orange County and the urban portions of Los Angeles, Riverside and San Bernardino Counties. The SCAQMD prepares an Air Quality Management Plan (AQMP) every three years, following its mandate from the Federal Clean Air Act.

There are six common air pollutants, called criteria pollutants, which were identified from the provisions of the Clean Air Act of 1970.

- Ozone
- Nitrogen Dioxide
- Lead
- Particulate Matter (PM10 and PM2.5)
- Carbon Monoxide
- Particulate Matter
- Sulfur Dioxide

The US environmental Protection Agency (EPA) and the California Air Resources Board (CARB) designate air basins where ambient air quality standards are exceeded as “nonattainment” areas. If standards are met, the area is designated as an “attainment” area. If there is inadequate or inconclusive data to make a definitive attainment designation, they are considered “unclassified.” National nonattainment areas are further designated as marginal, moderate, serious, severe, or extreme as a function of deviation from standards.

The SCAQMD’s 2016 AQMP assesses the attainment status of the SCAB. The NAAQS and CAAQS attainment statuses for the SCAB are listed in Table 4.3-1. The SCAQMD updates the AQMP every three

years. Each iteration of the AQMP is an update of the previous plan and has a 20-year horizon. The latest AQMP, the 2016 AQMP, was adopted on March 3, 2017.

Table 4.3-1: South Coast Air Basin Attainment Status

CRITERIA POLLUTANT	STANDARD	AVERAGING TIME	DESIGNATION ^{a)}	ATTAINMENT DATE ^{b)}
1-Hour Ozone	NAAQS	1979 1-Hour (0.12 ppm)	Nonattainment (Extreme)	2/6/2023 Originally 11/15/2010 (not attained) ^{c)}
	CAAQS	1-Hour (0.09 ppm)	Nonattainment	N/A
8-Hour Ozone ^{d)}	NAAQS	1997 8-Hour (0.08 ppm)	Nonattainment (Extreme)	6/15/2024
	NAAQS	2008 8-Hour (0.075 ppm)	Nonattainment (Extreme)	7/20/2032
	NAAQS	2015 8-Hour (0.070 ppm)	Nonattainment (Extreme)	8/3/2038
	CAAQS	8-Hour (0.070 ppm)	Nonattainment	Beyond 2032
CO	NAAQS	1-Hour (35 ppm) 8-Hour (9 ppm)	Attainment (Maintenance)	6/11/2007 (attained)
	CAAQS	1-Hour (20 ppm) 8-Hour (9 ppm)	Attainment	6/11/2007 (attained)
NO ₂ ^{e)}	NAAQS	1-Hour (0.10 ppm)	Unclassifiable/Attainment	N/A (attained)
	NAAQS	Annual (0.053 ppm)	Attainment (Maintenance)	9/22/1998 (attained)
	CAAQS	1-Hour (0.18 ppm) Annual (0.030 ppm)	Attainment	---
SO ₂ ^{f)}	NAAQS	1-Hour (75 ppb)	Designations Pending (expect Uncl./Attainment)	N/A (attained)
	NAAQS	24-Hour (0.14 ppm) Annual (0.03 ppm)	Unclassifiable/Attainment	3/19/1979 (attained)
PM ₁₀	NAAQS	1987 24-hour (150 µg/m ³)	Attainment (Maintenance) ^{g)}	7/26/2013 (attained)
	CAAQS	24-hour (50 µg/m ³) Annual (20 µg/m ³)	Nonattainment	N/A
PM _{2.5} ^{h)}	NAAQS	2006 24-Hour (35 µg/m ³)	Nonattainment (Serious)	12/31/2019
	NAAQS	1997 Annual (15.0 µg/m ³)	Attainment	8/24/2016
	NAAQS	2012 Annual (12.0 µg/m ³)	Nonattainment (Serious)	12/31/2025
	CAAQS	Annual (12.0 µg/m ³)	Nonattainment	N/A
Lead	NAAQS	3-Months Rolling (0.15 µg/m ³)	Nonattainment (Partial) ⁱ⁾	12/31/2015
Hydrogen Sulfide (H ₂ S)	CAAQS	1-Hour (0.03 ppm/42 µg/m ³)	Attainment	---
Sulfates	CAAQS	24-Hour (25 µg/m ³)	Attainment	---
Vinyl Chloride	CAAQS	24-Hour (0.01 ppm/26 µg/m ³)	Attainment	---

Notes:

- a) U.S. EPA often only declares Nonattainment areas; everywhere else is listed as Unclassifiable/Attainment or Unclassifiable
- b) A design value below the NAAQS for data through the full year or smog season prior to the attainment date is typically required for attainment demonstration

- c) 1-hour O₃ standard (0.12 ppm) was revoked, effective June 15, 2005 ; however, the Basin has not attained this standard based on 2008-2010 data and is still subject to anti-backsliding requirements
- d) 1997 8-hour O₃ standard (0.08 ppm) was reduced (0.075 ppm), effective May 27, 2008; the revoked 1997 O₃ standard is still subject to anti-backsliding requirements
- e) New NO₂ 1-hour standard, effective August 2, 2010; attainment designations January 20, 2012; annual NO₂ standard retained
- f) The 1971 annual and 24-hour SO₂ standards were revoked, effective August 23, 2010; however, these 1971 standards will remain in effect until one year after U.S. EPA promulgates area designations for the 2010 SO₂ 1-hour standard. Area designations are still pending, with Basin expected to be designated Unclassifiable /Attainment.
- g) Annual PM₁₀ standard was revoked, effective December 18, 2006; 24-hour PM₁₀ NAAQS deadline was 12/31/2006; SCAQMD request for attainment redesignation and PM₁₀ maintenance plan was approved by U.S. EPA on June 26, 2013, effective July 26, 2013.
- h) Attainment deadline for the 2006 24-Hour PM_{2.5} NAAQS (designation effective December 14, 2009) is December 31, 2019 (end of the 10th calendar year after effective date of designations for Serious nonattainment areas). Annual PM_{2.5} standard was revised on January 15, 2013, effective March 18, 2013, from 15 to 12 µg/m³. Designations effective April 15, 2015, so Serious area attainment deadline is December 31, 2025.
- i) Partial Nonattainment designation – Los Angeles County portion of Basin only for near-source monitors. Expect redesignation to attainment based on current monitoring data.

Thresholds of Significance

The SCAQMD provides numerical thresholds to analyze the significance of a project's construction and operational emissions impacts on regional air quality. These thresholds are designed so a project that is consistent with the thresholds would not have an individually or cumulatively significant impact to the SCAB's air quality.

Thresholds of Significance for Construction:

- 75 pounds per day of ROG
- 100 pounds per day of NO_x
- 550 pounds per day of CO
- 150 pounds per day of SO_x
- 150 pounds per day of PM₁₀
- 55 pounds per day of PM_{2.5}

Thresholds of Significance for Operations:

- • 55 pounds per day of ROG
- • 55 pounds per day of NO_x
- • 550 pounds per day of CO
- • 150 pounds per day of SO_x
- • 150 pounds per day of PM₁₀
- • 55 pounds per day of PM_{2.5}

Localized Significance Thresholds

In addition to the listed thresholds, the SCAQMD has developed Localized Significance Thresholds (LSTs) in response to the Governing Board's Environmental Justice Enhancement Initiative (1-4), which was prepared to update the CEQA Air Quality Handbook. LSTs were devised in response to concern regarding exposure of individuals to criteria pollutants in local communities and have been developed for nitrogen oxides (NO_x), carbon monoxide (CO), PM₁₀, and PM_{2.5}. LSTs represent the maximum emissions from a project that will not cause or contribute to an air quality exceedance of the most stringent applicable federal or State ambient air quality standard at the nearest sensitive receptor, taking into consideration ambient concentrations in each SRA, distance to the sensitive receptor, and project size. LSTs only apply to emissions within a fixed stationary location and are not applicable to mobile sources, such as cars on a

roadway (SCAQMD 2008a). According to the SCAQMD (2008) Final Localized Significant Thresholds Methodology, the use of LSTs is voluntary, to be implemented at the discretion of local agencies.

The SCAQMD has divided the SCAB into 38 air-monitoring areas with a designated ambient air monitoring station representative of each area. The Project site is located in SRA 35, East San Bernardino Valley and would include up to 1.0 acre of disturbance. LSTs have been developed for emissions within construction areas up to five acres in size. The SCAQMD provides lookup tables for sites that measure up to 1, 2, or 5 acres.

Sensitive Receptors

Sensitive receptors are considered land uses or other types of population groups that are more sensitive to air pollution than others due to their exposure. Sensitive population groups include children, the elderly, the acutely and chronically ill, and those with cardio-respiratory diseases. For CEQA purposes, a sensitive receptor would be a location where a sensitive individual could remain for 24-hours or longer, such as residencies, hospitals, and schools (etc.).

The closest existing sensitive receptors (to the site area) are residential land uses located adjacent to the west, approximately 40 feet from the western bank of Bledsoe Gulch.

4.3.2 Environmental Setting

Meteorology and Climate

The climate of the City of Highland is similar to that of most cities in the eastern San Bernardino Valley, and most cities in Southern California. The climate is governed largely by the strength and location of the semi-permanent high pressure center over the Pacific Ocean and the moderating effects of the nearby vast oceanic heat reservoir. Local climatic conditions are characterized by very warm summers, mild winters, infrequent rainfall, moderate daytime on-shore breezes, and comfortable humidity levels. Unfortunately, the same climatic conditions that create such a desirable living climate combine to severely restrict the ability of the local atmosphere to disperse the large volumes of air pollution generated by the population and industry attracted in part by the climate.

The Project is situated in an area where the pollutants generated in coastal portions of the Los Angeles basin undergo photochemical reactions and then move inland across the Project site during the daily sea breeze cycle. The resulting smog at times gives western San Bernardino County some of the worst air quality in all of California. Fortunately, significant air quality improvement in the last decade suggests that healthful air quality may someday be attained despite the limited regional meteorological dispersion potential.

Winds across the Project area are an important meteorological parameter because they control both the initial rate of dilution of locally generated air pollutant emissions as well as controlling their regional trajectory. Winds across the Project site display a very unidirectional onshore flow from the southwest-west that is strongest in summer with a weaker offshore return flow from the northeast that is strongest on winter nights when the land is colder than the ocean. The onshore winds during the afternoon average 6-8 mph while the offshore flow is often calm or drifts slowly westward at 1-3 mph.

During the daytime, any locally generated air emissions are thus rapidly transported eastward toward Banning Pass without generating any localized air quality impacts. The nocturnal drainage winds which move slowly across the area have some potential for localized stagnation, but fortunately, these winds have their origin in the adjacent mountains where background pollution levels are low such that any localized contributions do not create any unhealthful impacts.

In conjunction with the two characteristic wind regimes that affect the rate and orientation of horizontal pollutant transport, there are two similarly distinct types of temperature inversions that control the vertical depth through which pollutants are mixed. The summer on-shore flow is capped by a massive dome of warm, sinking air which caps a shallow layer of cooler ocean air. These marine/subsidence inversions act like a giant lid over the basin. They allow for local mixing of emissions, but they confine the entire polluted air mass within the basin until it escapes into the desert or along the thermal chimneys formed along heated mountain slopes.

In winter, when the air near the ground cools while the air aloft remains warm, radiation inversions are formed that trap low-level emissions such as automobile exhaust near their source. As background levels of primary vehicular exhaust rise during the seaward return flow, the combination of rising non-local baseline levels plus emissions trapped locally by these radiation inversions can create micro-scale air pollution "hot spots" near freeways, shopping centers and other traffic concentrations in coastal areas of the Los Angeles Basin. Because the nocturnal airflow down the slopes of Mt. San Geronio has its origin in very lightly developed areas of the San Bernardino Mountains, background pollution levels at night in winter are very low in the Project vicinity. Localized air pollution contributions are insufficient to create a "hot spot" potential when superimposed upon the clean nocturnal baseline. The combination of winds and inversions are thus critical determinants in leading to the degraded air quality in summer, and the generally good air quality in winter in the Project area.

4.3.3 Impact Analysis

CEQA THRESHOLDS	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
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?				X
b) 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?			X	

CEQA THRESHOLDS	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
c) Expose sensitive receptors to substantial pollutant concentrations?			X	
d) Result in other emissions (such as those leading to odors adversely affecting a substantial number of people?)			X	

Discussion

- a) *Conflict with or obstruct implementation of the applicable air quality plan?*

No Impact. A project may be inconsistent with the AQMP if it would generate population, housing, or employment growth exceeding the forecasts used in the development of the AQMP. The proposed Project is to replace and reconstruct underground storm drain facilities, replacement of a concrete apron, and the re-grading and stabilization on an existing embankment. The Project does not include new housing or businesses, nor would operation and maintenance of the proposed Project require new employees; therefore, the Project would not generate population, housing, or employment growth. As a result, the Project would not exceed the Southern California Association of Governments’ projected growth forecasts, which underlie the emissions forecasts in the 2016 AQMP. Therefore, the Project would not conflict with or obstruct implementation of the AQMP. No impact would occur, and no mitigation measures are required.

- b) *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?*

Less Than Significant. The Project would generate short-term emissions associated with Project construction and no operational emissions. The proposed improvement Project would require earthmoving, material removal, and other activities such as removal of plants and/or other organics during construction. The Project’s construction activities were screened for emission generation using SCAQMD “Air Quality Handbook” guidelines, Emission Factors for On-Road Heavy-Heavy Duty Diesel Trucks (2022), and SCAQMD Emission Factors for On-Road Heavy Heavy Duty Diesel Trucks (2022). These tables are used to generate emissions estimates for development projects. The criteria pollutants screened for included: reactive organic gases (ROG), nitrous oxides (NO_x), carbon monoxide (CO), and particulates (PM₁₀ and PM_{2.5}). Two of these, ROG and NO_x, are ozone precursors.

Project construction emissions are considered short-term, temporary emissions and were calculated based on the estimated construction parameters listed below. The resulting emission levels as compared to SCAQMD thresholds are shown in Table 2.5-1: Equipment Assumptions and in Table 4.3-2.

Table 4.3-2: Equipment Assumptions

Equipment Type	Numbers of Equipment	Duration
Caterpillar 950 Wheel Front-End Loader	1	3 months
Caterpillar 349L Track Excavator – Long Reach	2	3 months
Caterpillar D-8 or D-9 sized bulldozer	2	3 months
Truck Crane	1	1 month
Other Construction/Material Handling Equipment such as dump truck, water truck, employee truck	3	3 months
Material Export/Import 10 trips per day, 25 miles haul distance		2 weeks

The resulting emissions from the equipment is identified in Table 4.3-3.

**Table 4.3-3: Construction Emissions
(Pounds per Day)**

Source	ROG	NO_x	CO	PM₁₀	PM_{2.5}
Excavator	1.0	5.1	8.2	0.2	0.2
Dozer	3.1	21.8	11.8	0.9	0.9
Crane	0.6	4.4	3.1	0.2	0.2
Loader	0.5	3.1	3.5	0.1	0.1
Other Construction Equip.	0.8	4.5	5.6	0.2	0.2
Other Material Handling Equip.	0.7	4.2	3.6	0.2	0.2
Material Export/Import	0.2	2.7	1.2	0.2	0.2
Totals (lbs/day)	7.0	45.7	36.8	1.9	1.9
SCAQMD Threshold	75	100	550	150	55
Significant	No	No	No	No	No

Source: SCAQMD Off-Road Mobile Source Emissions Factors (2022); SCAQMD ON-Road Heavy Heavy Duty Diesel Trucks, 2022.

As shown in Table 4-3.3, Project emissions would not exceed SCAQMD thresholds. Therefore, less than significant impact is anticipated.

Compliance with SCAQMD Rules 402 and 403

Although the proposed Project does not exceed SCAQMD thresholds during construction activities, the SBCFCD is required to comply with all applicable SCAQMD rules and regulations as the SCAB is in non-attainment status for ozone and suspended particulates (PM₁₀). The Project shall comply with, Rules 402 nuisance, and 403 fugitive dust, which require the implementation of Best Available Control Measures (BACM) for each fugitive dust source; and the AQMP, which identifies Best Available Control Technologies (BACT) for area sources and point sources, respectively. This would include, but not be limited to the following BACMs and BACTs:

Exhaust emissions from construction vehicles and equipment and fugitive dust generated by equipment traveling over exposed surfaces would increase NO_x and PM₁₀ levels in the area.

Although the proposed Project does not exceed SCAQMD thresholds during construction, the District will be required to implement the following conditions as required by SCAQMD:

1. To reduce emissions, all equipment used in earthwork must be tuned and maintained to the manufacturer's specification to maximize efficient burning of vehicle fuel.
2. The project proponent shall ensure that construction personnel are informed of ride sharing and transit opportunities.
3. The operator shall maintain and effectively utilize and schedule on-site equipment in order to minimize exhaust emissions from truck idling.
4. The operator shall comply with all existing and future CARB and SCAQMD regulations related to diesel-fueled trucks, which may include among others: (1) meeting more stringent emission standards; (2) retrofitting existing engines with particulate traps; (3) use of low sulfur fuel; and (4) use of alternative fuels or equipment.

Implementation of the Project does not exceed the SCAQMD significance thresholds for construction activities. Although there would be emissions from vehicles and equipment during construction, the emissions would be temporary, of short duration, and below the established thresholds. In addition, Project emissions of particulate matter would be reduced by implementing BACMs as outlined in SCAQMD dust control Rules 402 - Nuisance and 403 - Fugitive Dust. As no operational emissions will be generated, the Project would not generate long-term emissions of criteria pollutants that would exceed thresholds and would therefore not cause a cumulatively considerable increase in criteria pollutants. A less than significant impact is identified, and no mitigation measures are required.

c) *Expose sensitive receptors to substantial pollutant concentrations?*

Less Than Significant. Certain population groups, such as children, the elderly, and people with health problems, are particularly sensitive to air pollution. Sensitive receptors are defined as land uses that are more likely to be used by these population groups and include health care facilities, retirement homes, school and playground facilities, and residential areas. The Project site is located adjacent to a residential neighborhood.

LSTs are provided for receptors at a distance of 25 to 500 meters (82 to 1,640 feet) from the Project site boundary. According to the SCAQMD's LST methodology, projects with boundaries closer than 25 meters (82 feet) to the nearest receptor should use the LSTs for receptors located at 25 meters (SCAQMD 2008).

As discussed under item (b), the Project's construction emissions would not exceed the SCAQMD regional thresholds. The Proposed Project's construction emissions with the appropriate LST are presented in Table 4.3-4.

**Table 4.3-4: Localized Significance Thresholds
(Pounds Per Day)**

Source	NO _x	CO	PM ₁₀	PM _{2.5}
Construction Emissions (Table 3)	45.7	36.8	1.9	1.9
LST Value (lbs/day)	45.7	36.8	1.9	1.9
LST Threshold	118	775	4	4
Greater Than Threshold	No	No	No	No

Sources: SCAQMD Final Localized Significance Threshold Methodology; SCAQMD Mass Rate Look-up Tables for 1-acre site in SRA No. 35, distance of 25 meters.

Note: PM10 and PM2.5 emissions are separated into construction and operational thresholds in accordance with the SCAQMD Mass Rate LST Look-up Tables.

¹ Per LST Methodology, mobile source emissions do not need to be included except for land use emissions and on-site vehicle emissions. It is estimated that approximately 10 percent of mobile emissions will occur on a Project Site.

Traffic-congested roadways and intersections have the potential for the generation of localized CO levels (i.e., CO hotspots). In general, CO hotspots occur in areas with poor circulation or areas with heavy traffic. The temporary increase in traffic volumes during construction would not significantly impact congestion on local roadways. Therefore, the Project would not result in CO hotspots on adjacent roadways. The Project would not expose sensitive receptors to substantial pollutant concentrations. Impacts would be less than significant, and no mitigation measures are required.

- d) *Result in other emissions (such as those leading to odors adversely affecting a substantial number of people)?*

Less Than Significant. During construction, the Project would generate oil and diesel fuel odors from use of heavy equipment. Construction-related odors would be limited to the two-month construction period. In addition, the improvements would be constructed in segments and construction activity would continue to move along the alignment; odors would not be associated with one location for the entire two-month schedule. The adjacent receptors would only be exposed to construction-generated odors for a short period of time. Construction-related odor impacts would be less than significant, and no mitigation measures are required.

4.3.4 Mitigation Measures:

No mitigation measures are required.

4.4 BIOLOGICAL RESOURCES

A Biological Resources Assessment was conducted in September 2020 for the proposed Project (Appendix B).

4.4.1 Environmental Setting

The Project site will occur on a single parcel. Approximately 0.48 acre occurs in the upland area within the grounds behind the East Highlands Ranch Community Center, and approximately 0.23 acre occurs within Bledsoe Gulch. The grounds behind the community center contains an orange grove and bare ground. Bledsoe Gulch is bounded by Cloverhill Drive on the east, and an existing chain link fencing lines the bank top of slope on the west bank. Bledsoe Gulch continues approximately 0.5 mile downstream as a heavily vegetated, natural channel to Baseline Road, where it is directed under the road and continues to meander through the City of Highland and areas south.

Topography and Soils

Elevation on Around the community center is generally flat with no areas of significant topographic relief, lying at an elevation of approximately 1,634 mean sea level (msl), and slopes gently toward Bledsoe Gulch. Bledsoe Gulch is a natural topographic dry canyon feature. Bledsoe creek, which originates in the mountains to the north, enters the site south of the Bledsoe Gulch head.

The head of Bledsoe Gulch abuts the south property boundary of the community center and is approximately 375 feet wide. The eastern bank in this area, which abuts Cloverhill Drive, is a steep 2:1 slope, with a drop of approximately 58 feet to the creek bottom, at an elevation of approximately 1,576. The west bank of the head has become severely eroded over the years, and now exists at an approximately 1.5:1 slope, with the chain link fence of residential backyards now lining the top of the western bank. This section of Bledsoe Gulch between its head and approximately 0.5 mile downstream (Baseline Road) is very incised and heavily wooded with native riparian trees and shrub species.

Based on the NRCS USDA Web Soil Survey, the Project site consists of Greenfield fine sandy loam, 9 to 15 percent slopes (GtD) for most of the Project site, and Saugus sandy loam, 30 to 50 percent slopes (ShF) in the southern end.

Vegetation

The Biological Resources Assessment in Appendix B identified the habitat in the Bledsoe Gulch portion of the Project site to be riparian dominate with western sycamore (*Planatus racemosa*), poison oak (*Toxicodendron diversilobum*), Mexican fan palm (*Washingtonia robusta*), castor bean (*Ricinus communis*), tree tobacco (*Nicotiana glauca*), and Pacific willow (*Salix lasiandra* var. *lasiandra*), with an understory of stinging nettle (*Urtica dioica*), California sagebrush (*Artemisia californica*), brittlebush (*Encelia farinosa*), and California buckwheat (*Eriogonum fasciculatum*).

Sensitive Plants

Sensitive plants to potentially occur locally included smooth tarplant (*Centromadia pungens* ssp. *laevis*), California satintail (*Imperata brevifolia*), California muhly (*Muhlenbergia californica*), Sonoran maiden fern

(*Thelypteris pubercula* var. *sorensis*) (refer to Appendix B). However, these sensitive plant species were identified in Appendix B to have low potential to occur within and/or adjacent to the Project site because the required associated habitat types/communities within the Project footprint are absent due to existing anthropogenic disturbances associated with the existing outfall structure, riprap and surrounding development, which has eliminated that natural plant communities that these plant species are typically associated with.

None of the sensitive species known to occur within the *Harrison Mountain* quadrangle were observed during the general floristic survey (Appendix B). No suitable environment for these species occurs within the survey area.

Sensitive Plant Communities

According to Appendix B, the only sensitive habitat documented within 1 mile of the Project site is Southern Sycamore Alder Riparian Woodland.

The sawyer-Keeler Wolfe alliance is California sycamore woodlands (*Platanus racemose*) Woodland Alliance with the Holland ID of Southern Sycamore Alder Riparian Woodland. Southern Sycamore Alder Riparian Woodlands are found in gullies, intermittent streams, springs, seeps, stream banks, and terraces adjacent to floodplains that are subject to high-intensity flooding. Soils are rocky or cobbly alluvium with permanent moisture at depth. This habitat type is a tall deciduous riparian woodland that is dominated by western sycamore by at least 30 percent with occasional white alders. The USFWS Wetland Inventory (1996) recognizes *P. racemosa* as a FACW plant. These woodland stands seldom form closed canopies and may even appear as trees scattered in a shrubby thicket. The intermittent nature these high intensity flow drainages favor western sycamore as the dominant species, but white alder increases in abundance on more perennial streams.

The habitat within the southern portion of the Project site would best be classified as a mixed riparian scrub habitat that has been subject to anthropogenic disturbances from erosion associated with the failing outfall structure and riprap. Outside of the Project footprint, beyond the proposed apron, Bledsoe Gulch supports a California sycamore woodland plant community due to its vegetative cover and lack of anthropogenic disturbances.

Special Status Wildlife

According to the analysis in Appendix B, no State- and/or federally-listed threatened or endangered wildlife species are documented within 1 mile of the Project site. There are several sensitive wildlife species that are particularly important in this region, which are either documented to occur in the *Harrison Mountain* USGS quadrangle or have a moderate likelihood of occurring on the site. These special status wildlife species are described below.

Least Bell's Vireo

Least Bell's vireo is a federally and state endangered subspecies of the Bell's vireo. It is a summer migrant to California and is the only regularly-occurring subspecies of Bell's vireo in San Bernardino County. Its nesting habitat typically consists of a well-developed over-story and understory, along with low densities of aquatic and herbaceous plant cover. The understory frequently contains dense sub-shrub or shrub

thickets that are often dominated by plants such as willow, mulefat, and one or more herbaceous species. Least Bell's vireos begin to arrive at their breeding grounds in southern California riparian areas from mid-March to early April. Upon arrival, males establish breeding territories that range in size from 0.5 to 7.4 acres, with an average size of approximately two acres. In California, females begin laying eggs in April, fledging birds until the end of July (Kus et al. 2010). The fledglings will remain in the parental territory for up to a month. Bell's vireos leave the breeding grounds and migrate south mid- to late September. Although not common, a few have been found wintering in southern California (Hamilton and Willick 1996).

The plant communities within the southern portion of the Project, were determined to have a high potential to provide suitable habitat for least Bell's vireo. However, no least Bell's vireo were observed/heard onsite during the field investigation performed as part of the study in Appendix B.

Western Yellow Bat

The western yellow bat is a tree bat found in California in riparian, wash, and palm oasis habitats. The species is found year-round in California and roosts within the fronds of palm trees. They forage for flying insects over water and among trees using steady and maneuverable flight.

Per the analysis provided in Appendix B, the nearest yellow bat was documented in 1984 and 1988 with captured specimens. Location data for these specimens were limited to the general Highland area. Suitable habitat for the species occurs near/downstream of the project site. Because of the palm trees that are within the Project footprint, the potential for yellow bat to occur is moderate.

Critical Habitat

According to the analysis in Appendix B, the Project site is not located within designated Critical Habitat.

Jurisdictional Waters

One (1) unnamed ephemeral drainage feature (Drainage 1) was observed within the boundaries of the Project site during the field delineation. The onsite drainage feature generally flows north to south from the outlet of the Line A pipeline along the northern slope of Bledsoe Gulch on the southern portion of the Project site. Drainage 1 was created from stormwater runoff from the surrounding development that begins at the top of slope, where Line A outlets, and ends at the base of the slope, which is the area mapped as the head of Bledsoe Gulch. Drainage 1 conveys flows into Bledsoe Gulch which flows through a series of earthen channels and concrete lined flood control channels before conveying flows into City Creek. City Creek conveys flows into the Santa Ana River (Relatively Permanent Water), and ultimately the Pacific Ocean (Traditional Navigable Water).

Drainage 1, on the slope of Bledsoe Gulch within the project footprint, was created from the installation of the storm drain outlet (Line A) that was installed to convey storm flows from the surrounding development. It should be noted that Bledsoe Gulch can be observed on historic aerials dating back to 1938 and is seen as a topographic low spot with native vegetation amongst citrus groves. However, residential development in the late 1980s began to eliminate the surrounding citrus groves, further altering the flow regime of the Bledsoe Gulch. The OHWM within Drainage 1 was approximately 3 feet

wide and extending for approximately 155 feet, totaling 0.01 acre. This feature only conveys surface flow in direct response to precipitation and urban runoff from the surrounding developments.

As previously noted, the habitat found in the southern portion of the Project site, adjacent to Drainage 1, is composed of a mix of non-native/invasive and native plant species, that would be classified as mixed riparian scrub. Non-native/invasive plant species found within this portion of the project site include tree tobacco, Mexican fan palm, castor bean, tocalote, short-podded mustard, and non-native grasses. Native plant species observed within this plant community include western sycamore, poison oak, with an understory of stinging nettle, wild grape, California sagebrush, brittlebush, coyote bush, and California buckwheat.

Federal Jurisdictional Waters

Prior to leaving the site, and after transmission losses, surface flows from Drainage 1 flow approximately 0.5 mile to the south within the earthen bottom of Bledsoe Gulch before flowing into a culvert under Baseline Road and into an open concrete flood control channel. Flows are then conveyed within the concrete channel from Baseline Road to Church Street for 0.12 mile before entering a culvert under Church Street. From Church Street, flows are then conveyed via an earthen channel for approximately 0.13 mile before entering another culvert west of the terminus of Sycamore Drive. From the culvert west of the terminus of Sycamore Drive, water is conveyed via a series of open concrete flood control channels and underground culverts for approximately 1 mile before converging into City Creek.

Based on the detailed analysis of onsite hydrologic conditions, it was preliminarily determined that Drainage 1 has an insubstantial or speculative effect on the chemical, physical or biological significant nexus to the downstream RPW (Santa Ana River); and, therefore to the TNW (Pacific Ocean). The onsite drainage feature is an ephemeral feature that flow only in direct response to precipitation, is not considered a perennial or intermittent tributary, and does not possess a significant nexus (surface hydrologic connection) to downstream waters of the United States. Therefore, it is non jurisdictional in terms of the federal CWA.

Federal Wetlands

Areas with standing or flowing water or with seasonally or permanently saturated soils commonly support wetland communities. Freshwater wetlands are complex and variable, and their species composition and overall structure are dependent on a number of factors. Water depth, seasonal fluctuations in water levels, rate of water movement, water and sediment chemistry (including salinity, pH, and quantity of organic matter), depth and texture of bottom sediments, amount of sunlight, and water and air temperatures are among the most important variables affecting overall wetland dynamics. Along rivers and streams, fine-grained alluvial soils settle in the bottom of the drainages, and annual inundation after rains provide a significant load of nutrients, soil, and new germination sites. Wetland communities support an abundant variety of wildlife and often form the most productive habitats among the world's ecosystems. Numerous animal species depend on wetlands for critical parts of their life cycles.

On site soils are sandy and boulder strewn. No wetland soils occur in the Project area. There appears to be no seep areas or areas where water pools within the Project area. The slope is very steep at 46 percent or 1.5:1. Therefore, flows are conveyed downslope and do not collect on site or percolate into the soil. As such, there is no wetland hydrology that would allow for water to pond for long enough to create

anaerobic conditions in the soil to form hydric soils. In terms of vegetation on site, facultative wetland species, such as western sycamore, Pacific willow, and stinging nettle grow on site. In terms of the federal CWA, the site does not meet the criteria of being a wetland area since the site lacks hydric soils.

State Jurisdictional Waters

Regional Water Quality Control Board

The onsite drainage feature exhibits characteristics consistent with the Regional Board's methodology and would be considered jurisdictional waters of the State. Approximately 0.01 acre (155 linear feet) of non-wetland waters of the State occur onsite. Based on the proposed site plan, approximately 0.01 acre (155 linear feet) of Regional Board jurisdictional areas will be impacted.

State Wetlands

Under the State Water Resources Control Board State Wetland Definition, an area is a wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation. Based on the results of the field delineation, it was determined that no areas within the project site meet the State Wetland Definition. Therefore, no state wetland features exist within the Project site.

California Department of Fish and Wildlife

The onsite drainage feature exhibits characteristics consistent with CDFW's methodology and would be considered CDFW streambed. Approximately 0.20 acre of CDFW jurisdiction was mapped within boundaries of the project site, consisting of 0.01 acre (155 linear feet) of streambed, and 0.19 acre of associated riparian habitat. Based on the proposed site plan, approximately 0.20 acre (155 linear feet) of CDFW jurisdictional areas will be impacted.

4.4.2 Impact Analysis

CEQA THRESHOLDS	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
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 Wildlife or U.S. Fish and Wildlife Service?		X		
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 Wildlife or U.S. Fish and Wildlife Service?			X	
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means				X
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?		X		
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?			X	
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?				X

Discussion

- a) *Have a substantial adverse effect, either directly or through habitat modification, 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?*

Less than Significant Impact with Mitigation Incorporated. Based on the literature review and field survey in Appendix B, implementation of the Project will have no significant impacts on

federally, or State, listed species because none are known to occur in the general vicinity of the Project. Additionally, the Project will have no effect on designated Critical Habitat because none exists within the area.

The habitat within the vegetated portions of Bledsoe Gulch, beyond the proposed apron, have the potential to support least Bell's vireo, although none were found during the surveys conducted in Appendix B.

The Project site has the potential to support suitable habitat for foraging and nesting birds, which are protected by the Migratory Bird Treaty Act and the Fish and Game Code. The loss of individuals would result in a potentially significant impact. **Mitigation Measures BIO-1 and BIO-2** for worker education and avian monitoring will reduce impacts to less than significant. Mitigation measures are located at the end of this section.

- b) *Have a substantial adverse effect on any riparian habitat or 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?*

Less than Significant Impact With Mitigation Incorporated. The Biological Resources records search and site visit in Appendix B found mixed riparian scrub habitat that has been subject to anthropogenic disturbances from erosion associated with the failing outfall structure and riprap. Outside of the Project footprint, beyond the proposed apron, Bledsoe Gulch supports a California sycamore woodland plant community due to its vegetative cover and lack of anthropogenic disturbances. The analysis in Appendix B identified the potential to impact 0.19 acre of associated riparian habitat, primarily around the Bledsoe Gulch head and apron. Implementation of **Mitigation Measure BIO-3**, located at the end of this section, requires the City to obtain jurisdictional waters permits for modification of the riparian habitat and associated drainage impacts to reduce potential impacts to less than significant. With implementation of this mitigation, impacts would be less than significant.

- c) *Have a substantial adverse effect on state or federally protected wetlands (including but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?*

No Impact. The analysis in Appendix B identified that the Project site does not contain state or federally protected wetlands. No impacts would occur, and no mitigation is required.

- 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?*

Less than Significant With Mitigation Incorporated. A wildlife corridor is defined as a linear landscape element which serves as a linkage between historically connected habitats/natural areas and is meant to facilitate movement between these natural areas. During the field survey,

the Project site was assessed for its ability to facilitate wildlife movement and for the presence of wildlife corridors.

The Project site is not considered an established wildlife movement corridor because the area does not connect two or more significant habitat areas and the area is not a major feature influencing the local plant and small mammal communities, due to surrounding development. Therefore, this project will not interfere substantially with the movement of any native resident or migratory fish or wildlife species through the Project site.

The Project site has the potential to support suitable habitat for foraging and nesting birds, which are protected by the Migratory Bird Treaty Act and the Fish and Game Code. The loss of individuals would result in a potentially significant impact. **Mitigation Measures BIO-1** and **BIO-2** for worker education and avian monitoring will reduce impacts to less than significant. Mitigation measures are located at the end of this section.

- e) *Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?*

Less Than Significant Impact. The Project does not propose the removal of any trees that would be protected by any City of Highland Heritage Tree protection ordinance (Highland Municipal Code Chapter 8.32 Heritage Trees). The Project is exempt from the ordinance per Section 8.32.030. (Exemptions) "E. Trees which require maintenance or removal action for the protection of existing electrical power or communication lines or other property of a public utility as determined by the city engineer or designee." No impacts would occur, and no mitigation is required.

- 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?*

No Impact. There are no adopted Habitat Conservation Plans, Natural Community Plans or other approved local, regional or state habitat conservation plans for the Project area. No impacts would occur, and no mitigation is required.

4.4.3 Mitigation Measures:

The following mitigation measures are required to reduce potential impacts to less than significant:

BIO-1 Worker Environmental Awareness Program (WEAP) – Biological Resources A Worker Environmental Awareness Program (WEAP) training shall be developed and provided by a biologist familiar with least Bell's vireo and southwestern willow flycatcher. and their habitats. The WEAP training shall be presented by the biologist to all construction personnel. For the life of the Project, each employee (including temporary contractors and subcontractors) will receive WEAP training prior to conducting any work on the site.

- BIO-2: Avian Monitoring.** If construction occurs between February 1st and August 31st, a pre-construction clearance survey for nesting birds should be conducted within three (3) days of the start of any vegetation removal or ground disturbing activities to ensure that no nesting birds will be disturbed during construction. The biologist conducting the clearance survey should document a negative survey with a brief letter report indicating that no impacts to active avian nests will occur. If an active avian nest is discovered during the pre-construction clearance survey, construction activities should stay outside of a no-disturbance buffer. The size of the no-disturbance buffer will be determined by the wildlife biologist and will depend on the level of noise and/or surrounding anthropogenic disturbances, line of sight between the nest and the construction activity, type and duration of construction activity, ambient noise, species habituation, and topographical barriers. These factors will be evaluated on a case-by-case basis when developing buffer distances. Limits of construction to avoid an active nest will be established in the field with flagging, fencing, or other appropriate barriers; and construction personnel will be instructed on the sensitivity of nest areas. A biological monitor should be present to delineate the boundaries of the buffer area and to monitor the active nest to ensure that nesting behavior is not adversely affected by the construction activity. Once the young have fledged and left the nest, or the nest otherwise becomes inactive under natural conditions, construction activities within the buffer area can occur.
- BIO-3 Obtain Jurisdictional Waters Permits.** Prior to construction, obtain permits from agencies having jurisdiction over Drainage 1 and the associated habitat.

4.5 CULTURAL RESOURCES

A Cultural Resources Assessment for the proposed Project was performed by CRM Tech in June 2020 (Appendix C).

Cultural resources include archaeological sites, buildings and other kinds of structures, historic districts, cultural landscapes, and resources important to specific ethnic groups. Archaeological sites represent the material remains of human occupation and activity either prior to European settlement (prehistoric sites) or after the arrival of Europeans (historical sites). The historic "built environment" includes structures used for habitation, work, recreation, education and religious worship, and may be represented by houses, factories, office buildings, schools, churches, museums, hospitals, bridges and other kinds of structures. An historic district is any "geographically definable area, urban or rural, possessing a significant concentration, linkage, or continuity of sites, buildings, structures, or objects united by past events or aesthetically by plan or physical development. A district may also comprise individual elements separated geographically but linked by association or history" (36 CFR 60.3). The National Park Service defines a cultural landscape as "a geographic area, including both cultural and natural resources and the wildlife or domestic animals therein, associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values".

4.5.1 Environmental Setting

History

The City of Highland area is adjacent to the historic Ranchos of San Bernardino and Muscupiabe, which dominated the region's early history. During the 1860s, large tracts owned by the U.S. Government became locally available for homesteading but various pressures forced Mormon pioneers to recede to Salt Lake City during this period. In the wake of the Mormon exodus, other settlers began to take advantage of new homestead opportunities. Since the City of Highland is located near the headwaters of the abundant Santa Ana River, City Creek, and other tributaries, these precious resources soon became thoroughly exploited during this era.

Historic maps consulted for the Cultural Resources Assessment (Appendix C) demonstrate ample evidence of settlement and development activities in the Project vicinity at least by the mid-19th century. In 1853-1877, when the U.S. government conducted the earliest systematic land surveys in the San Bernardino Valley, the surveyors noted settler Bledsoe's house and a small grain field a short distance to the southeast and the east of the Project location, respectively, as well as a trail traversing east-west near the northern end of the Project area the east of the Project location, respectively, as well as a trail traversing east-west near the northern end of the Project area.

The Project area became a part of James S. Edwards' East Highlands Ranch in the late 1880s (Appendix C). Maps from the late 1890s show the Project area to be surrounded by the road on the north, the North Fork Canal on the south, and the forerunner of the East Highland Reservoir on the southeast, but no man-made features are depicted in the immediate vicinity except the winding road (Appendix C).

During the 1930s-1960s, most of the land around the Project location was planted in orchards, presumably citrus groves, but the Project area was part of a strip of land along the Bledsoe Gulch that remained uncultivated (Appendix C). By that time the road that ran across the northern tip of the Project area in the

1890s, still a dirt road as late as 1995, was joined by another dirt road that traversed roughly north-south across the Project location (Appendix C).

Starting in the 1980s, the East Highlands Ranch underwent a rapid transformation from agriculture to suburbia, and by 2007 the redevelopment had been largely completed. In the immediate vicinity of the Project area, Highland Avenue was extended and paved along the northern edge of the Project area between 1995 and 2002, and the community center and its parking lot were built in 2004-2005, replacing the last patch of the original orchards of the ranch. The citrus trees that are now found on the grounds of the community center were evidently planted in 2007-2009 (Appendix C). Since then, the character of the Project area has remained unchanged.

The City of Highland incorporated in 1987.

Results of Cultural Resources Study

CRM Tech conducted a literature search and field review of the Project area as part of its Cultural Resources Assessment (Appendix C). According to the records search results provided by South Central Coastal Information Center (SCCIC), the Project area was involved in a series of six cultural resources studies completed between 1974 and 1995 on the East Highlands Ranch, a 1,635-acre agricultural enterprise that has since given way to the suburban residential development bearing that name today. Some of these studies entailed systematic archaeological field surveys on various portions of the ranch, while others were focused on historical background research on the ranch and the buildings and other built-environment features on the property.

As a result of these studies, the entire East Highlands Ranch complex and its various features and components were recorded collectively between 1990 and 2003 as a historical site and subsequently designated 36-007051 (CA-SBR-7051H) in the California Historical Resources Inventory. The Project area was included in the overall boundaries of the site, but no features or artifacts of the site are known to have been found within the Project location.

4.5.2 Impact Analysis

CEQA THRESHOLDS	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
V. CULTURAL RESOURCES:				
Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in 15064.5?			X	
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to 15064.5?		X		
c) Disturb any human remains, including those interred outside of formal cemeteries?			X	

Discussion

- a) *Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?*

Less Than Significant Impact. The entire East Highlands Ranch complex and its various features and components were recorded collectively between 1990 and 2003 as a historical site and subsequently designated 36-007051 (CA-SBR-7051H) in the California Historical Resources Inventory. The Project area was included in the overall boundaries of the site, but no features or artifacts of the site are known to have been found within the Project location.

The Project will replace and relocate underground stormdrain utilities both behind the community center and within Bledsoe Gulch. The underground utilities will not change the character of the East Highlands Ranch or impact its significance as a historical resource. The impact will be less than significant, and no mitigation is required.

- b) *Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?*

Less Than Significant with Mitigation Incorporated. Construction and excavation associated with ground disturbing activities upon Project implementation has the potential to unearth unknown archaeological resources in the Project area, especially due to the depths of excavation being approximately 20 feet below ground surface. Although no specific resources in the Project area have been identified through records searches, compliance with **Mitigation Measures CUL-1** and **CUL-2** to educate workers and spot-check during deep excavation will ensure that impacts are less than significant. Mitigation measures are located at the end of this section.

- c) *Disturb any human remains, including those interred outside of formal cemeteries?*

Less than Significant Impact. Based on an analysis of records and archaeological survey of the property, it has been determined that the Project site does not include a formal cemetery or any archaeological resources that might contain interred human remains. Nonetheless, the Project will be required to adhere to State Health and Safety Code Section 7050.5 if in the event that human remains are encountered and by ensuring that no further disturbance occur until the County Coroner has made the necessary findings as to origin of the remains. Furthermore, pursuant to Public Resources Code Section 5097.98 (b), remains shall be left in place and free from disturbance until a final decision as to the treatment and their disposition has been made. Compliance with State Law is not considered mitigation. Therefore, impacts in this regard are considered less than significant.

4.5.3 Mitigation Measures:

The following mitigation measures are required to reduce potential impacts to less than significant:

CUL-1 Worker Environmental Awareness Program (WEAP) – Cultural/ Archaeological Resources. A WEAP training shall be developed and presented by a cultural resource specialist to educate construction workers about various potentially significant buried resources. The training will be presented to all construction personnel. For the life of the Project, each employee (including temporary contractors and subcontractors) will receive WEAP training prior to conducting any work on the site.

CUL-2: Cultural Resource Monitoring: A Secretary of the Interior qualified archaeologist will spot check, on a schedule to be developed with the construction contractor, the construction excavations, within undisturbed soil to determine the presence or absence of cultural resources. The qualified archaeologist will then be able to recommend increasing or decreasing monitoring activities based on sub-surface findings.

4.6 ENERGY

4.6.1 Environmental Setting

California is one of the lowest per capita energy users in the United States, ranked 48th in the nation, due to its energy efficiency programs and mild climate (United States Energy Information Administration [EIA] 2018). California consumed 292,039 gigawatt-hours (GWh) of electricity and 2,110,829 million cubic feet of natural gas in 2017 (California Energy Commission [CEC] 2019; EIA 2018). In addition, Californians consume approximately 18.9 billion gallons of motor vehicle fuels per year (Federal Highway Administration 2019). The single largest end-use sector for energy consumption in California is transportation (39.8 percent), followed by industry (23.7 percent), commercial (18.9 percent), and residential (17.7 percent) (EIA 2018).

Most of California's electricity is generated in-state with approximately 30 percent imported from the Northwest (Alberta, British Columbia, Idaho, Montana, Oregon, South Dakota, Washington, and Wyoming) and Southwest (Arizona, Baja California, Colorado, Mexico, Nevada, New Mexico, Texas, and Utah) in 2017. In addition, approximately 30 percent of California's electricity supply comes from renewable energy sources such as wind, solar photovoltaic, geothermal, and biomass (CEC 2018). Adopted on September 10, 2018, SB 100 accelerates the State's Renewables Portfolio Standards Program by requiring electricity providers to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020, 60 percent by 2030, and 100 percent by 2045.

To reduce statewide vehicle emissions, California requires that all motorists use California Reformulated Gasoline, which is sourced almost exclusively from refineries located in California. Gasoline is the most used transportation fuel in California with 15.5 billion gallons sold in 2017 and is used by light-duty cars, pickup trucks, and sport utility vehicles (California Department of Tax and Fee Administration 2018). Diesel is the second most used fuel in California with 4.2 billion gallons sold in 2015 and is used primarily by heavy duty-trucks, delivery vehicles, buses, trains, ships, boats and barges, farm equipment, and heavy-duty construction and military vehicles (CEC 2016). Both gasoline and diesel are primarily petroleum-based, and their consumption releases greenhouse gas (GHG) emissions, including CO₂ and NO_x. The transportation sector is the single largest source of GHG emissions in California, accounting for 41 percent of all inventoried emissions in 2016 (California Air Resources Board [CARB] 2018).

Building Energy Efficiency Standards

The California Energy Conservation and Development Commission (California Energy Commission) adopted Title 24, Part 6, of the California Code of Regulations; energy Conservation Standards for new residential and nonresidential buildings in June 1977 and standards are updated every three years. Title 24 ensures building designs conserve energy by requiring the use of new energy efficiency technologies and methods into new developments. Currently, the California Energy Commission (CEC) Title 24 2016 Building Energy Efficiency Standards are in effect; however, the updated 2019 Building Energy Efficiency Standards will take effect on January 1, 2020. The 2019 Building Energy Efficiency Standards states that nonresidential buildings will use about 30 percent less energy compared to the 2016 standards due mainly to lighting upgrades.

Senate Bill 350

Senate Bill (SB) 350 (de Leon) was signed into law in October 2015 and established new clean energy, clean air, and greenhouse gas reduction goals for 2030. SB 350 establishes periodic increases to the California Renewables Portfolio Standard (RPS) Program with the target to increase the amount of electricity generated per year from eligible renewable energy resources to an amount that equals at least 33% of the total electricity sold annually to retail customers, by December 31, 2020. The SB 350 specifically calls for the quantities of eligible renewable energy resources to be procured for all other compliance periods reflecting reasonable progress in each of the intervening years to ensure that the procurement of electricity products from eligible renewable energy resources achieves 40 percent by December 31, 2024, 45 percent by December 31, 2027, and 50 percent by December 31, 2030.

Senate Bill 100

Senate Bill 100 (SB 100) was signed into law September 2018 and increased the goal of the California RPS Program to achieve at least 50 percent renewable resources by 2026, 60 percent renewable resources by 2030, and 100 percent renewable resources by 2045. SB 100 also includes a State policy that eligible renewable energy resources and zero-carbon resources supply 100 percent of all retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all State agencies by December 31, 2045. Under the bill, the State cannot increase carbon emissions elsewhere in the western grid or allow resource shuffling to achieve the 100 percent carbon-free electricity target.

4.6.2 Impact Analysis

CEQA THRESHOLDS	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
VI. ENERGY:				
Would the project:				
a) Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?			X	
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?				X

Discussion

- a) *Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?*

Less than Significant Impact. Energy use during Project construction would be primarily in the form of fuel consumption to operate heavy equipment, light-duty vehicles, machinery and

employee trips. The anticipated energy consumption from construction equipment and vehicles is estimated at a total of 1,815 gallons of gasoline fuel and 7,808 gallons of diesel fuel.

Energy use during construction would be temporary in nature, and construction equipment used would be typical of similar-sized construction projects in the region. In the interest of cost efficiency, construction contractors are not anticipated to utilize fuel in a manner that is wasteful or unnecessary. Therefore, Project construction would not result in a potential impact due to wasteful, inefficient, or unnecessary consumption of energy resources, and no construction-related energy impact would occur. As the proposed Project is a repair/improvement of an existing storm drain, no operational emissions are anticipated. Therefore, impacts would be less than significant, and no mitigation measures are required.

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

No Impact. SB 100 mandates 100 percent clean electricity for California by 2045. SCE has achieved over 46% Carbon-Free energy sources as of the 2018 Suitability Report. The proposed Project is a repair/improvement of an existing storm drain and no operational emissions are anticipated. Therefore, approval of the improvements would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. No impact would occur, and no mitigation measures are required.

Mitigation Measures:

No mitigation measures are required.

4.7 GEOLOGY AND SOILS

LOR Geotechnical Group performed a Preliminary Geotechnical Investigation for the Project in November 2013 and March 2020 (Appendix D-1 and D-2, respectively). A Paleontological Resources Assessment was completed for the Project in June 2020 (Appendix D-3).

4.7.1 Environmental Setting

Regional Geologic Setting

According to the City of Highland's General Plan (COH, 2006), Highland and the surrounding areas are part of a gently sloping alluvial plain bordered on the north by the San Bernardino Mountains, a traverse range that runs from east to west. The plain is predominantly composed of alluvium deposited by rivers and creeks that drain from the nearby mountains.

The Project area is situated on the northeastern edge of the San Bernardino Valley, in the northernmost portion of the Peninsular Ranges Province, near where it adjoins the Transverse Ranges Province. The Peninsular Ranges Province is bounded on the north by the Transverse Ranges Province, on the northeast by the Colorado Desert Province, and on the west by the Pacific Ocean. It extends southward to the southern tip of Baja California (Appendix D-3).

The Project area lies a short distance south of the main branch of the San Andreas Fault and near the base of the San Bernardino Mountains. The San Andreas Fault, a right-lateral strike-slip fault, runs roughly east-west in this region and generally divides the metamorphic and igneous rocks of the San Bernardino Mountains to the north from the alluvial soils of the valley to the south (Appendix D-3). It is also regarded as the boundary between the Peninsular Ranges and Transverse Ranges Geomorphic Provinces.

Bledsoe Gulch was created through movement along the San Andreas fault which is thought to cross the northern portion of the Project site from southeast to northwest, in the vicinity of the orange orchard (Appendix D-2).

Paleontological Environment

The City of Highland's General Plan (COH, 2006) identifies that older alluvial deposits extend down from the foothills and cover approximately half of the City. The older alluvium consists of terrace deposits in major stream canyons, older conglomerates of alluvial fans downstream from canyon mouths, and deposits under mesas. Younger alluvium including river channel deposits consisting of unconsolidated gravel, sand, and silt underlies much of the City. These materials appear near the surface of the Santa Ana River course in the eastern portion of Highland. The younger alluvium is highly permeable and conducive to groundwater recharge, particularly in streambeds. Pleistocene alluvial units are generally considered to be of high paleontological potential.

A Paleontological Resources Assessment for the Project was performed by CRM Tech (Appendix D-3). In order to identify any paleontological resource localities that may exist in or near the Project area and to assess the probability for such resources to be encountered during the Project, CRM TECH initiated a records search at the San Bernardino County Museum, conducted a literature review, and carried out a systematic field survey of the Project area.

The results indicate of the Paleontological Assessment identified that pertinent literature suggest that the Project area is situated upon exposures of Pleistocene- to Holocene-age alluvium. Sources vary in their characterization of the surface soils but generally agree on the presence, at varying depths throughout the Project area, of Pleistocene (including early Pleistocene) sediments, which have a high potential to contain significant, nonrenewable fossil remains, especially in the older deposits. These soils are known to have produced paleontological remains elsewhere in the surrounding area.

The records search by SBCM indicates that the Regional Paleontological Locality Inventory at the museum contains no known localities within the Project area (Appendix D-3). However, the records search reveals the presence of two known fossil localities approximately 3 miles northwest of the Project location, each consisting of a single leaf mold found in older alluvium.

Soils

The surface geology in the Project area is identified as $Qvof_2$ in the northern portion and $Qvof_3$ in the southern portion (Appendix D-3, Figure 5). These sediments are described as very old alluvial fan channel deposits, with the $Qvof_3$ dating to the early and middle Pleistocene and the $Qvof_2$ dating to the early Pleistocene. The older of the two units, $Qvof_2$, represents sequences of sand and gravel up to 30 meters in thickness, composed of well consolidated and stratified sands of medium to very coarse grains of angular potassium feldspars granules and pebbles. The younger unit, $Qvof_3$, is crudely stratified and well consolidated, and it consists of poorly sorted fine- to very coarse-grained sand. It is limited to localized deposits that overlie $Qvof_2$ at the depth of “a few meters.” The upper surfaces of $Qvof_3$ are strewn with angular and subrounded boulders (Appendix D-3).

The geotechnical investigation (Appendix D-2) determined that fills on the order of 35 feet or more were placed at various times across the top end of Bledsoe Gulch which has resulted in the existing sloping topography observed at the site.

Liquefaction

The potential for liquefaction generally occurs during strong ground shaking within loose, granular sediments where the groundwater is usually less than 50 feet. The Project site is not mapped within the City of Highland’s General Plan (COH, 2006) as being in an area of high or moderate liquefaction.

Faulting

The seismic setting of Highland and surrounding areas is dominated by the San Andreas Fault. Several “active” and “potentially active” faults of the San Andreas Fault are present within and nearby Highland.

The Project site is identified by the City of Highland General Plan, the geotechnical analysis and the California Department of Conservation as being within an Alquist-Priolo Earthquake Zone as a trace of the South Branch of the San Andreas Fault is mapped traversing Project site.

4.7.2 Impact Analysis

CEQA THRESHOLDS	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
VII. GEOLOGY AND SOILS:				
Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
<ul style="list-style-type: none"> • 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. 		X		
<ul style="list-style-type: none"> • Strong seismic ground shaking? 		X		
<ul style="list-style-type: none"> • Seismic-related ground failure, including liquefaction? 			X	
<ul style="list-style-type: none"> • Landslides? 		X		
b) Result in substantial soil erosion or the loss of topsoil?			X	
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- site or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?		X		
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?			X	
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				X
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		X		

Discussion

- a) *Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:*

- *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.*
- *Strong seismic ground shaking?*
- *Seismic related ground failure, including liquefaction?*
- *Landslides?*

Less than Significant Impact With Mitigation Incorporated.

Alquist Priolo Fault/Seismic Ground Shaking. The Project is located in Southern California, a seismically active area and susceptible to the effects of seismic activity include rupture of earthquake faults. The geotechnical report in Appendix D-2 indicates that although the precise location of the San Andreas fault is unknown, the San Andreas fault has been mapped as traversing the northern portion of the Project site according to State mapping. Whether it crosses the existing or proposed storm drain alignment, the pipe is subject to rupture (off-setting and displacement) if and when the San Andreas fault in this area should rupture. The geotechnical report provided no provisions for protection against fault rupture hazard and/or strong seismic shaking.

While this Project is located in an Alquist-Priolo zone, there is no alternative location for this Project outside of this zone to still achieve the desired results of reducing the headcutting and damage to the western slope adjacent to residences. The existing reinforced concrete pipe will be placed with a new reinforced concrete pipe within the same alignment, but at depths up to approximately 15 feet below ground surface to promote positive flow. The pipeline is located underground, therefore, any substantial adverse effects would occur underground, which would significantly reduce the risk of loss, injury, or death as a result of rupture of the pipeline and related Project components. However, because the pipeline is in an Alquist-Priolo zone, **Mitigation Measures GEO-1** and **GEO-2**, located at the end of this section, are required to ensure the integrity of the pipeline during construction and operations.

Liquefaction. The Project area is not within an area of liquefaction, therefore, there will be no impact as a result of the location of the Project within a possible liquefaction area.

Landslides. The Project site is mapped by San Bernardino County to be an area of low to moderate susceptibility to natural landslide hazards. The Project site is situated within the foothills of the San Bernardino mountains, less than one-half mile west of several low ridges. The Project is situated underground, therefore, the risk injury from landslides from the adjacent foothills is less than significant.

The geotechnical report in Appendix D-2 indicated that the Project site, including a portion of the head and bank adjacent to the community center, is underlain by various units of non-structural fill materials that ranges from 8 to 35 or more feet in thickness. The fill soils were identified to contain large rocks and pieces of concrete but, in the locations explored, did not appear to contain a large amount of deleterious man-made debris. The Project will excavate the fill soils directly within the work area and replace them with clean, compacted soils. Given that this replaced stormwater pipeline

would be subject to potential cracks and rupture during strong seismic events, there is the potential for water to be released out of the pipeline and into the fill material that exists throughout the head of Bledsoe Gulch. This could cause the fill material to become unstable and cause a landslide into Bledsoe Gulch. Because the undocumented fill material is limited to a specific area approximately 170 feet behind the community center, it is unlikely that the slide could reach the community center and cause significant damage. The fill is not believed to exist within the western bank of Bledsoe Gulch, behind the homes. Therefore, the impact is anticipated to be less than significant. However, because the Project is to replace a stormwater pipeline in an Alquist-Priolo zone, **Mitigation Measures GEO-1** and **GEO-2**, located at the end of this section, are required to ensure the integrity of the pipeline during construction and operations and to ensure impacts will be less than significant.

b) *Result in substantial soil erosion or the loss of topsoil?*

Less than Significant Impact. Construction activities associated with the Project would involve earth movement and the exposure of soil, which would temporarily increase erosion susceptibility. However, the Project would also be required to adhere to standard regulatory requirements, including, but not limited to, requirements imposed by the City's National Pollutant Discharge Elimination System (NPDES) Municipal Stormwater Permit (State Water Resources Control Board Order No. 2012-0011- DWQ) and a Project-specific Erosion Control Plan (ECP) that includes Best Management Practices (BMPs) to minimize water pollutants including sedimentation in stormwater runoff. Therefore, impacts would be less than significant. No mitigation is required.

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?*

Less than Significant Impact With Mitigation Incorporated. Refer to the discussion of Thresholds above for a discussion of hazards associated with liquefaction and landslide hazards. As noted, there is a low to moderate potential for a natural landslide, and the area is not subject to liquefaction. Because the Project is to replace a stormwater pipeline in an Alquist-Priolo zone and in an area known to contain undocumented fill, **Mitigation Measures GEO-1** and **GEO-2**, located at the end of this section, are required to ensure the integrity of the pipeline during construction and operations.

d) *Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?*

Less than Significant Impact. The Project will not construct habitable structures. The geotechnical analysis indicated that the Project will likely occur within an area of undocumented fill. The area of the new pipeline will be excavated and recompacted to engineering standards. Therefore, there is a less than significant impact.

- e) *Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?*

No Impact. The Project does not propose to install any septic tanks or alternative wastewater disposal systems. No impacts would occur.

- f) *Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?*

Less than Significant Impact with Mitigation Incorporated. Site excavation activities are anticipated to be greater than 5 feet in the area of the new pipelines. The Project area is situated upon exposures of Pleistocene- to Holocene-age alluvium, which have a high potential to contain significant, nonrenewable fossil remains, especially in the older deposits. These soils are known to have produced paleontological remains elsewhere in the surrounding area.

The records search conducted for the paleontological study (Appendix D-3) identified that there were no localities identified within the Project area or within a 1-mile radius; however, there were records within 3 miles that presented paleontological finds within similar alluvial mapped units. The geotechnical report (Appendix D-3) identified that the Project area may have significant areas of undocumented fill.

Since the young alluvial fan deposits of the Late Pleistocene to Holocene are considered paleontologically sensitive and the location of the undocumented fill cannot be confirmed to the depth of all excavation, **Mitigation Measure GEO-3** to include spot-checking by a will be implemented to reduce potential impacts to less than significant. The mitigation measure is located at the end of this section.

4.7.3 Mitigation Measure:

The following mitigation measure is required to reduce potential impacts to less than significant:

GEO-1 Pipeline Inspection – Construction. During construction, geotechnical observation and testing should be conducted at a schedule to be identified between the City and the Contractor and the Geotechnical specialist. Additional expansion testing will be performed at the direction of the Geotechnical specialist. The geotechnical specialist shall have the authority to halt work if subsurface conditions warrant additional exploration.

GEO-2 Pipeline Inspection – Operations. The City shall inspect the pipeline on an annual schedule at a minimum. Inspection should also occur immediately following earthquakes of a magnitude 3.0 or above that occur near the Project site or where strong seismic shaking has been felt in the Highland area, and/or earthquakes which occur within the San Andreas fault zone. Inspection methods shall include both camera and/or physical inspections in sufficient detail to identify cracking and/or breaches in the concrete pipe and/or roadway and drainage ditch on the west bank such that water may leak from the

pipeline to the adjacent fill. Pipeline, roadway and drainage ditch repairs should occur immediately upon discovery of any cracks or breaches.

GEO-3 Provision for Unanticipated Buried Paleontological Resources: A qualified cultural resource specialist or paleontologist will spot check construction excavations that would impact Late Pleistocene to Holocene units, which are generally below 10 feet in the Project area. The frequency will be determined with the cultural resource specialist and the construction contractor based on the work schedule.

- The paleontologist will be able to recommend increasing or decreasing monitoring activities based on the sub-surface findings.
- The monitor shall have the ability to salvage fossils if they are unearthed to avoid construction delays and to remove samples of the soils that may contain the remains of small fossil invertebrates and vertebrates.
- The monitor shall be empowered to temporarily halt or divert equipment to allow the removal of larger fossils in a timely manner.
- The extent of the monitoring may be reduced if, in the opinion of the paleontologist, potentially fossiliferous units are not found in the subsurface, or if present that they are determined to be a low potential to contain or yield fossil resources.

4.8 GREENHOUSE GAS EMISSIONS

4.8.1 Environmental Setting

Climate change is the observed increase in the average temperature of the earth's atmosphere and oceans along with other substantial changes in climate (such as wind patterns, precipitation, and storms) over an extended period of time. The baseline against which these changes are measured originates in historical records identifying temperature changes that have occurred in the past, such as during previous ice ages. The global climate is continuously changing, as evidenced by repeated episodes of substantial warming and cooling documented in the geologic record. The rate of change has typically been incremental, with warming or cooling trends occurring over the course of thousands of years. The past 10,000 years have been marked by a period of incremental warming, as glaciers have steadily retreated across the globe. However, scientists have observed acceleration in the rate of warming during the past 150 years. Per the United Nations Intergovernmental Panel on Climate Change (IPCC), the understanding of anthropogenic warming and cooling influences on climate has led to a high confidence (95 percent or greater chance) that the global average net effect of human activities has been the dominant cause of warming since the mid-twentieth century (IPCC 2007).

Gases that absorb and re-emit infrared radiation in the atmosphere are called greenhouse gases (GHGs). The gases widely seen as the principal contributors to human-induced climate change include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), fluorinated gases such as hydrofluorocarbons (HFC) and perfluorocarbons (PFC), and sulfur hexafluoride (SF₆). Water vapor is excluded from the list of GHGs as it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation.

GHGs are emitted by both natural processes and human activities. Of these gases, CO₂ and CH₄ are emitted in the greatest quantities from human activities. Emissions of CO₂ are largely by-products of fossil fuel combustion, whereas CH₄ results from off-gassing associated with agricultural practices and landfills. Man-made GHGs, many of which have greater heat-absorption potential than CO₂, include fluorinated gases and SF₆ (United States Environmental Protection Agency 2018). Different types of GHGs have varying global warming potentials (GWPs). The GWP of a GHG is the potential of a gas or aerosol to trap heat in the atmosphere over a specified timescale (generally, 100 years). As GHGs absorb different amounts of heat, a common reference gas, CO₂ is used to relate the amount of heat absorbed to the amount of gas emitted, referred to as "carbon dioxide equivalent" (CO₂e), and is the amount of a GHG emitted during a 100-year period multiplied by its GWP. CO₂ has a 100-year GWP of 1 (one). By contrast, CH₄ has a GWP of 25, meaning its global warming effect is 25 times greater than CO₂ on a molecule per molecule basis (IPCC 2007).

Project implementation would generate GHG emissions through the burning of fossil fuels and other construction-related emission sources, thus potentially contributing to cumulative impacts related to climate change. In response to an increase in man-made GHG concentrations over the past 150 years, California implemented Assembly Bill (AB) 32, the "California Global Warming Solutions Act of 2006." AB 32 codified the statewide goal of reducing emissions to 1990 levels by 2020 (essentially a 15 percent reduction below 2005 emission levels) and adopted regulations to require reporting and verification of statewide GHG emissions.

On September 8, 2016, the governor signed Senate Bill (SB) 32 into law, which requires the State to further reduce GHGs to 40 percent below 1990 levels by 2030. SB 32 extends AB 32, directing CARB to reduce GHGs to 40 percent below 1990 levels by 2030. In response, on December 14, 2017, CARB adopted the 2017 Scoping Plan, which provides a framework for achieving the 2030 target. The 2017 Scoping Plan does not provide project-level thresholds for land use development. Instead, it recommends that local governments adopt policies and locally appropriate quantitative thresholds consistent with a statewide per capita goal of six metric tons (MT) CO₂e by 2030 (CARB 2017). As stated in the 2017 Scoping Plan, these goals may be appropriate for plan-level analyses (city, county, subregional, or regional level), but not for specific individual projects as they include all emissions sectors in the state.

The vast majority of individual projects do not generate sufficient GHG emissions to directly influence climate change. However, physical changes caused by a project can contribute incrementally to cumulative effects that are significant, even if individual changes resulting from a project are limited. The issue of climate change typically involves an analysis of whether a project's contribution towards an impact would be cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects (CEQA Guidelines Section 15064[h][1]).

Significance Thresholds

The CEQA Guidelines provide regulatory direction for the analysis and mitigation of GHG emissions appearing in CEQA documents, while giving lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHGs and climate change impacts.

In guidance provided by the SCAQMD's GHG CEQA Significance Threshold Working Group in September 2010, SCAQMD considered a tiered approach to determine the significance of residential, commercial, and mixed-use projects. The draft tiered approach is outlined in meeting minutes dated September 29, 2010 (SCAQMD 2010).

- Tier 1. If the project is exempt from further environmental analysis under existing statutory or categorical exemptions, there is a presumption of less than significant impacts with respect to climate change. If not, then the Tier 2 threshold should be considered.
- Tier 2. Consists of determining whether or not the project is consistent with a GHG reduction plan that may be part of a local general plan, for example. The concept embodied in this tier is equivalent to the existing concept of consistency in CEQA Guidelines section 15064(h)(3), 15125(d) or 15152(a). Under this Tier, if the proposed project is consistent with the qualifying local GHG reduction plan, it is not significant for GHG emissions. If there is not an adopted plan, then a Tier 3 approach would be appropriate.
- Tier 3. Establishes a screening significance threshold level to determine significance. The Working Group has provided a recommendation of 3,000 MT of CO₂e per year for residential, commercial, and mixed-use projects. 10,000 MT of CO₂e per year for Industrial Projects.
- Tier 4. Establishes a service population threshold to determine significance. The Working Group has provided a recommendation of 4.8 MT of CO₂e per year for land use projects.

Under Tier 2, project impacts would be less than significant if a project is consistent with an approved local or regional plan. The City of Highland has not adopted a plan for the reduction of GHG emissions; therefore, Tier 2 does not apply, and the GHG analysis of the Project cannot be streamlined via CEQA Guidelines Section 15183.5. As the City of Highland does not have a “qualified” GHG reduction plan, this analysis relies on SCAQMD’s Tier 3 screening significance threshold of 3,000 MT of CO₂e per year to evaluate the Project’s GHG emissions.

4.8.2 Impact Analysis

CEQA THRESHOLDS	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
VIII. GREENHOUSE GAS EMISSIONS:				
Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			X	

Discussion

- a) *Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?*

Less Than Significant Impact. Project emissions were estimated using SCAQMD “Air Quality Handbook”, On-Road Heavy-Heavy Duty Diesel Trucks (2022) and SCAQMD Off-Road Mobile Source Emissions Factors (2022). Emission estimates are based on the assumptions outlined in the Air Quality Section. Calculations of CO₂, CH₄, and N₂O emissions are provided to identify the magnitude of potential Project effects. The analysis focuses on CO₂, CH₄, and N₂O as these make up 98.9 percent of all GHG emissions by volume and are the GHG emissions that the Project would emit in the largest quantities (IPCC 2007). Calculations are based on the methodologies discussed in the California Air Pollution Control Officers Association (2008) CEQA and Climate Change white paper and included the use of the California Climate Action Registry (2009) General Reporting Protocol. CO₂, CH₄, and N₂O emissions were quantified using the Emissions Factors.

Project construction would generate GHG emissions from the operation of heavy equipment. As the proposed Project is a repair/improvement of an existing storm drain, no operational emissions are anticipated. As shown in Table 4.8-1, emissions from Project construction would be approximately 392.2 MTCO₂e total over the entire construction period, or approximately 13.1

MTCO₂e per year when amortized over a 30-year period in accordance with SCAQMD recommendations (SCAQMD 2008b).

**Table 4.8-1: Greenhouse Gas Construction Emissions
(MT Per Year)**

Source/Phase	CO ₂	CH ₄	N ₂ O
Excavator	1,920.0	0.1	0.0
Dozer	3,824.0	0.3	0.0
Crane	1,032.0	0.1	0.0
Loader	872.0	0.0	0.0
Other Construction Equip.	1,968.0	0.1	0.0
Other Material Handling Equip.	1,216.0	0.1	0.0
Material Export/Import	34.8	0.0	0.0
Total MTCO₂e	392.2		
Amortized over 30 years	13.1		
SCAQMD Threshold	3,000		
Significant	No		

Source: SCAQMD Off-Road Mobile Source Emissions Factors (2022); SCAQMD: Emission Factors for On-Road Heavy Heavy Duty Diesel Trucks (2022); N₂O: California Climate Action Registry General Reporting Protocol, 2009; Table A9-8-C SCAQMD Handbook; Climate Leaders EPA, Section 3, Table 2
Duration: 3 Month (66 days) Construction Period

As discussed, the proposed Project would have a significant impact related to GHG emissions if Project-related emissions would exceed 3,000 MTCO₂e per year. The Project’s GHG emissions would be approximately 13.1 MTCO₂e per year; therefore, the proposed Project would not exceed the threshold. Impacts would be less than significant, and no mitigation measures are required.

b) Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Less than Significant Impact. The City of Highland has not adopted a plan for the reduction of GHG emissions; therefore, and the GHG analysis of the Project cannot be streamlined via CEQA Guidelines Section 15183.5. As the City of Highland does not have a “qualified” GHG reduction plan, this analysis relies on SCAQMD’s Tier 3 screening significance threshold of 3,000 MT of CO₂e per year to evaluate the Project’s GHG emissions. As shown in Table 4.8-1, emissions from Project construction would be approximately 392.2 MTCO₂e total over the entire construction period, or approximately 13.1 MTCO₂e per year when amortized over a 30-year period in accordance with SCAQMD recommendations (SCAQMD 2008b). Therefore, the Project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Mitigation Measures:

No mitigation measures are required.

4.9 HAZARDS AND HAZARDOUS MATERIALS

4.9.1 Environmental Setting

A hazardous material is a substance that is toxic, flammable/ignitable, reactive, or corrosive. Extremely hazardous materials are substances that show high or chronic toxicity, carcinogenic, bioaccumulative properties, persistence in the environment, or that are water reactive. Improper use, storage, transport, and disposal of hazardous materials and waste may result in harm to humans, surface and groundwater degradation, air pollution, fire, and explosion.

Both the EPA and the California Department of Health Services (DHS) regulate the concentration of various chemicals in drinking water. variety of pesticides, fungicides and herbicides are used in the cultivation of row crops. Some pesticides and herbicides are injected into the soil as fumigants, while fungicides are generally sprayed by crop dusters. The CalEPA's Department of Pesticide Regulations establishes regulations regarding agricultural chemical use. These regulations are designed to prevent pesticides from being used in such a way as to jeopardize or cause injury to others. Among these regulations is Section 6614 from Title 3 of the California Code of Regulations.

4.9.2 Impact Analysis

CEQA THRESHOLDS	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
IX. HAZARDS AND HAZARDOUS MATERIALS:				
Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	
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?		X		
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
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?				X

CEQA THRESHOLDS	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
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?				X
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X
g) Expose people or structures, either directly or indirectly to a significant risk of loss, injury or death involving wildland fires?		X		

Discussion

- a) *Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?*

Less than Significant Impact. Construction of the proposed Project would involve the use of construction-related chemicals. These include but are not limited to hydraulic fluids, motor oil, grease, runoff, and other related fluids and lubricants. The construction activities would involve the disposal and recycling of materials, trash, and debris. The City’s General Plan Safety Element addresses potential hazards in the City and identifies goals and policies to reduce risks and damages associated with hazards, including disposal of hazardous materials due to human activities.

The proposed Project would comply with local, state, and federal requirements for proper storage and handling of hazardous materials, including development of a hazardous materials business plan. In addition, the Project would implement Best Management Practices to minimize impacts in the event of a spill or release of hazardous materials used on site. These include, but are not limited to routine cleaning, inspection, and maintenance, development of procedures to mitigate spills, provide signage in construction areas, proper storage and handling procedures, and providing secondary containment of liquid materials.

With mandatory regulatory compliance with federal, State, and local laws (as described above), potential hazardous materials impacts associated with long-term operation of the Project would be less than significant and mitigation is not required.

- 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?*

Less than Significant Impact With Mitigation Incorporated. Construction and operation of the Project would involve the routine transport, use, or disposal of hazardous materials on- and off-site.

Construction activities would require the temporary use of hazardous substances, such as fuel, lubricants, and other petroleum-based products for operation of construction equipment as well as oil, solvents, or paints. As a result, the proposed Project could result in the exposure of persons and/or the environment to an adverse environmental impact due to the accidental release of a hazardous material. However, the transportation, use, and handling of hazardous materials would be temporary and would coincide with the short-term Project construction activities. Further, these materials would be handled and stored in compliance with all with applicable federal, state, and local requirements, any handling of hazardous materials would be limited to the quantities and concentrations set forth by the manufacturer and/or applicable regulations, and all hazardous materials would be securely stored in a construction staging area or similar designated location within the Project site. In addition, the handling, transport, use, and disposal of hazardous materials must comply with all applicable federal, state, and local agencies and regulations, including the Department of Toxic Substances Control; Occupational Health and Safety Administration (OSHA); Caltrans; and the County Health Department - Hazardous Materials Management Services.

With the compliance with local, state, and federal regulations short-term construction impacts associated with the handling, transport, use, and disposal of hazardous materials would be less than significant.

Because the Project will occur within Bledsoe Creek, but is less than 1 acre, the City will prepare an Erosion Control Plan that will also address BMPs and procedures to implement should a spill occur within the creek.

The 2013 geotechnical report (Appendix D-1) identified that there is approximately 30 feet of unknown fill in the Project area. The report notes that in the mid to late 1980's, grading for development of the East Highlands Ranch started and, during this time, the groves around the site were removed, and a dirt road was graded in just west of the site. Soil piles were stockpiled in areas adjacent to this dirt road and some fill soils were placed just to the northeast of the site. Between 1986 and 1991, significant quantities of fill soils were placed in areas including the site and areas to the west and north. These fills were apparently placed in connection with grading for the adjacent residential housing tract located to the southwest.

The geotechnical report indicated that the Project area consists of the eroded upper portion of an existing slope, west of the East Highlands Ranch Community Center, where the existing 48-inch diameter storm drain empties into adjacent Bledsoe Gulch. The Project site condition during the 2013 geotechnical report noted that erosion had created a void, into which the last two storm drain segments fell, that measured approximately 30 feet wide, 40 feet long and up to about 15 feet deep. Along with the pipe segments, loose soils and concrete panels from formerly existing flatwork, were present in the bottom of the erosion gully. Additional areas of weakened soil, up to about 10 feet wide, were present locally along the side of the existing erosion gully and these are indicated by tension cracks in the soil. The 2013 geotechnical report identified that up to about 20 additional feet of fill material may be present beneath the area of failure.

Given that the contents of the fill are unknown, it is unknown if potentially hazardous materials, such as old use oil drums or other items, may be uncovered during excavation. As such, implementation of **Mitigation Measure HAZ-1**, located at the end of this section, that educates construction crews as to how to identify potential hazardous waste and protocols for its discovery, is required to reduce potential impacts to less than significant. Mitigation measures are located at the end of this section.

- c) *Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?*

No Impact. The proposed Project is not within one-quarter mile of any school. No impacts would occur.

- d) *Would the project 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?*

No Impact. According to the Department of Toxic Substances Control GeoTracker database, there are no hazardous materials sites on or adjacent to the Project site. Therefore, the proposed Project would not create a significant hazard to the public because the Project is not located on a hazardous waste site.

- e) *For a project located within an airport land use plan or, where such a plan had not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?*

No Impact. No airports exist within 2 miles of the Project site. No impacts would occur.

- f) *Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?*

No Impact. The construction occurs off major roadways. As a result, construction of the proposed Project would have no impact on emergency response or evacuation plans. Workers for the Project would also not generate significant traffic, and have ample off-street parking. No impacts to emergency response or evacuation plans would occur.

- g) *Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?*

Less Than Significant With Mitigation Incorporated. The Project is identified by the California Department of Forestry and Fire Protection's Fire and Resource Assessment Program (FRAP) as

being within a Very High Fire Hazard Zone, and the area is subject to Santa Ana winds, which can spread fires rapidly. Construction may include the use of gas-powered hand tools such as chain saws and/or welding equipment that may produce sparks. Bledsoe Gulch has a high concentration of vegetation. Therefore, there is a high potential to indirectly cause a wildfire during construction. As such, implementation of **Mitigation Measure HAZ-2** that requires the contractor to implement fire protection protocols during construction will reduce potential impacts to less than significant. Mitigation measures are located at the end of this section.

4.9.3 Mitigation Measures:

The following mitigation measures are required to reduce potential impacts to less than significant:

HAZ-1 Worker Environmental Awareness Program (WEAP) – Hazardous Materials. A WEAP training shall be developed and presented by a specialist to educate construction workers about signs of buried hazardous waste. The training will be presented to all construction personnel. For the life of the Project, each employee (including temporary contractors and subcontractors) will receive WEAP training prior to conducting any work on the site.

The training shall include but not be limited to the following requirements:

- The Department of Toxic Substances Control (DTSC) and San Bernardino County Fire Department Hazardous Materials Division shall be immediately notified in the event malodorous or discolored soils, liquids, containers, or other materials known or suspected to contain hazardous materials and/or contaminants are encountered during activities associated with the proposed Project. Earthmoving activities in the vicinity of said material shall be halted until the extent and nature of the suspect material is determined by qualified personnel (as determined by the DTSC). The removal and/or disposal of any such contaminants shall be in accordance with all applicable local, State, and Federal standards.
- In the event of any identification of or spill of hazardous materials and/or contaminants in the construction area, the party whose activity resulted in the spill or release shall notify the City of the location, extent, and nature of the spill or release. The City shall thereupon work with East Valley Water District to assess the depth to groundwater in the area of the release, and if it appears that groundwater tables are high enough to create a potential for exposure of the groundwater table to the spill or release, will modify its recharge operations as much as feasible to prevent groundwater table intersection with the identified spill or release.

HAZ-2 During construction, all staging areas, welding areas, or areas slated for construction using spark-producing equipment will be cleared of dried vegetation or other material that could ignite. Spark arresting equipment shall be in good working order. The City shall require all vehicles and crews working at the Project site to have access to functional fire extinguishers at all times. In addition, construction crews are required to have a spotter during welding activities to look out for potentially dangerous situations, including accidental sparks. The contractor also shall provide a safety plan for the implementation

of additional protocols when the National Weather Service issues a Red Flag Warning. Such protocols should address smoking and fire rules, storage and parking areas, use of gasoline-powered tools, use of spark arresters on construction equipment, road closures, use of a fire guard, fire suppression tools, fire suppression equipment, and training requirements.

4.10 HYDROLOGY AND WATER QUALITY

A Drainage Technical Report was prepared for the Project in December 2021 (Appendix E).

4.10.1 Regulatory Setting

National Pollutant Discharge Elimination System (NPDES)

The RWQCB also requires that dischargers whose construction projects disturb one (1) 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, obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity Construction General Permit Order 2009-0009-DWQ. Construction activity subject to this permit includes clearing, grading and disturbances to the ground such as stockpiling, or excavation. The Construction General Permit requires the development of a Storm Water Pollution Prevention Plan (SWPPP) by a certified Qualified SWPPP Developer (QSD). The SWPPP would include BMPs to be implemented during and after project construction to minimize erosion and sedimentation of downstream watercourses.

Cal Green Building Code

The California Green Building Standards Code 2019 (CAL Green), Nonresidential Mandatory Measures, Section 5.106.1 requires a SWPPP for projects that disturb less than 1 acre of land. The CAL Green code is designed for planning, design and development methods that include environmentally responsible site selection, building design, building siting and development to protect, restore and enhance the environmental quality of the site and respect the integrity of adjacent properties. Section 5106.01 identifies a number of Best Management Practices that should be included in a SWPPP prepared under this section of CAL Green.

The Project disturbs less than 1 acre but is not a type of project that is covered under the CAL Green code.

4.10.2 Environmental Setting

Groundwater

The Project within the Santa Ana River Hydrologic Unit, Bunker Hill Groundwater Basin. Based on groundwater level data from the California Dept of Water Resources, groundwater in the Project vicinity ranges from approximately 40 to 200 feet bgs. The geotechnical report prepared for the Project identified that groundwater was encountered at 26 feet in exploratory boring B-3, in the northern portion of the Project site, but did not encounter groundwater in the remainder of the exploratory borings including one conducted by the creek.

Water service is provided to Highland by the East Valley Water District, which derives 76 percent of its water supply from local groundwater wells, 23 percent imported from State Water Project, and 1 percent from the Santa Ana River through the North Fork Water Company.

Surface Water/Stormwater

The Drainage report in Appendix E identifies that the existing Line “A” storm drain is a 290-foot-long, 48-inch underground RCP that was installed in 2002 between the community center and Bledsoe Gulch to convey the tributary drainage within the East Highlands Ranch subdivision, as part of the subdivision development from just north of Highland Avenue. The existing pipe outlets approximately 50 feet downstream of the Bledsoe Gulch head, near the top of the slope embankment. The depth of the RCP ranges from 4 feet to 5 feet below ground surface between the existing community center and the Bledsoe Gulch outlet. A 75-foot long by 20-foot wide grouted riprap pad (0.03- acre) was also constructed along the existing slope embankment down to the bottom of the slope on a very steep slope of approximately 2:1.

Over time, the slope embankment area surrounding the RCP outlet has been severely eroded by high flow velocity flows coming from the RCP outfall, resulting in significant erosion along the creek sideslopes and invert, to currently an approximately 1.5:1 slope, which is threatening the backyards of the adjacent homes that are situated along the west embankment, along Rockspring Lane. The existing grouted riprap pad below the RCP has also sustained damaged from the high flow velocity and is no longer providing erosion protection for the slope embankment and the RCP.

In 2012, a remedial repair was performed by lining an approximate 0.02-acre area of the creek head near the RCP outlet with concrete and extending the existing RCP downstream using a 20-foot long, 48-inch plastic pipe. However, this limited repair did not stop the erosion of the creek head or adjacent embankment slope, and continual lateral erosion of the slope embankment caused structural cracking at the pipe joint of the RCP near the existing inlet riser. Currently, the creek head invert is approximately 58 feet below the top of the slope over a distance of approximately 120 feet, yielding an approximate slope of approximately 1.5:1.

Floodplains

The Flood Insurance Rate Maps issued by the Federal Emergency Management Agency (FEMA) indicate the Project site is located within Zone D, defined as an Area of Undetermined Flood Hazard.

4.10.3 Impact Analysis

CEQA THRESHOLDS	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
X. HYDROLOGY AND WATER QUALITY:				
Would the project:				
a) Violate any water quality standards or waste discharge requirements?			X	
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge			X	

CEQA THRESHOLDS	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
such that the project may impede sustainable groundwater management of the basin?				
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner which would:			X	
<ul style="list-style-type: none"> • result in substantial erosion or siltation onsite or offsite; 		X		
<ul style="list-style-type: none"> • substantially increase the rate or amount of surface water runoff in a manner which would result in flooding on or offsite; 			X	
<ul style="list-style-type: none"> • create or contribute to runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or 				X
<ul style="list-style-type: none"> • impede or redirect flood flows? 				X
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation??				X
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?			X	

Discussion

a) *Violate any water quality standards or waste discharge requirements, or otherwise substantially degrade surface or ground water quality?*

Less than Significant Impact.

Construction

Construction-related runoff pollutants are typically generated from waste and hazardous materials handling or storage areas, outdoor work areas, material storage areas, and general maintenance areas (e.g., vehicle or equipment fueling and maintenance, including washing). Construction projects that disturb 1 acre or more of soil, including the proposed Project, are regulated under the construction general permit (CGP, Order No. 2009-009-DWQ) and its subsequent revisions (Order No. 2012-0006-DWQ) issued by the SWRCB. Projects obtain coverage under the CGP by developing and implementing a SWPPP, estimating sediment risk from construction activities to receiving waters, and specifying best management practices that

would be implemented as a part of the Project's construction phase to minimize pollution of stormwater prior to and during grading and construction.

The proposed Project is less than 1 acre, therefore, the Project is not required to prepare an SWPPP. However, given that the Project occurs within a creek, the City or its contractor will prepare an Erosion Control Plan (ECP) that will identify Best Management Practices (BMPs) for managing excavation and stockpile of materials and measures to prevent hazardous materials and soils from unnecessarily entering the creek during construction. The BMPs are similar to those found in a traditional SWPPP that would be prepared under the CGP and may include but not be limited to the following:

- Prevent mud and debris from entering roadways, including the main entry road by providing trackout measures.
- Installation of perimeter silt fences and perimeter sandbags and/or gravel bags
- Locate stockpiles away from drainage courses, drain inlets or concentrated flows of storm water.
- For wind erosion control, apply water or other dust palliative to stockpiles. Smaller stockpiles may be covered as an alternative.
- Place bagged materials on pallets under cover.
- During the rainy season, non-active soil stockpiles will be covered with heavy plastic and the stockpile contained within a temporary perimeter sediment barrier, such as berms, dikes, silt fences, or sandbag barriers. A soil stabilization measure may be used in lieu of cover.
- During the non-rainy season prior to the onset of rain, the stockpile should either be covered or protect them with temporary perimeter sediment barriers.
- Year-round, active soil stockpiles will be protected with temporary linear sediment barriers prior to the onset of rain.
- The main haul road will be graded and watered at least once per day, or as often as necessary to control dust as required by the South Coast Air Quality Management District (SCAQMD).
- Any equipment that enters Bledsoe Gulch temporarily will be monitored for spills using standard Best Management Practices in accordance with State Water Resources Control Board requirements. Standard measures including placement of matts under the equipment and using wheeled, not track, equipment. No equipment will remain in the creekbed overnight or for an extended period.

- The tracks and under carriage of any equipment that enters Bledsoe Gulch will be checked for invasive weed species; if found, the weed species will be removed and properly disposed of off-site.

Adherence to the BMPs in the ECP would reduce, prevent, minimize, and/or treat pollutants and prevent degradation of downstream receiving waters; reduce or avoid contamination of urban runoff with sediment; and reduce or avoid contamination with other pollutants such as trash and debris, oil, grease, fuels, and other toxic chemicals.

Therefore, with implementation of the BMPs in the required SWPPP, water quality or waste-discharge impacts from Project-related grading and construction activities would be less than significant, and no mitigation is required.

Operations

The new Project facilities will operate in the same manner as prior to the Project, but the new facilities will better handle the storm flows and will correct the existing erosion and reduce potential for future erosion. New facilities are included in the Project that include a larger outfall pipeline, a paved access road to the debris apron, and a v-ditch along the western slope to act as the first line of defense from stormwater sheetflow from the residential parcels above.

The Project also allows for more efficient removal of debris that would be deposited at the base of the slope after a storm by allowing better access to the debris apron. It is anticipated that City crews in pickup trucks using hand tools would be sufficient to remove debris from the debris apron. Debris removal on the apron will eliminate or remove the potential for debris to be deposited downstream.

Overall, implementation of the BMPs requirements during construction and the ability for better maintenance would reduce potential impacts to water quality and waste discharge to less than significant, and no mitigation is required.

- b) *Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?*

Less than Significant Impact. The Geotechnical Study prepared for the proposed Project identified that groundwater 26 ft bgs, and excavation is anticipated to be approximately 15 feet deep in the northern end of the property, and was not encountered in the creek portion. The Project is not anticipated to need to dewater the excavations or use more than a standard temporary supply for construction dust control. And though the Project will install an impervious roadway, stormflows will be directed into Bledsoe Gulch. Therefore the proposed Project is not anticipated to interfere with groundwater supplies or deplete groundwater supplies. Therefore, overall, the impact is less than significant.

c) *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner which would:*

- *result in substantial erosion or siltation onsite or offsite;*
- *substantially increase the rate or amount of surface water runoff in a manner which would result in flooding on or offsite;*
- *create or contribute to runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or*
- *impede or redirect flood flows?*

Less than Significant Impact With Mitigation Incorporated The Project will replace approximately 300 feet of the existing 48-inch RCP with a new 48-inch RCP within the same alignment but at depths up to approximately 15 feet below ground surface (bgs) to promote positive flow and reduce creek erosion due to the severely eroded creek head, base and sideslopes. The Project also includes constructing a new storm drain segment within Bledsoe Gulch and regrading the head, base, and slopes of Bledsoe Gulch to mitigate the ongoing severe erosion that is threatening adjacent homes along the west creek bank.

To ensure that the Project improvements would satisfy the remedial activities as well as accommodate future flow, the Project was designed used the 100-year design flow rate of 10.1 CFS and 257.7 CFS was obtained from the City of Highland as shown on the As-Built Plans for "Drainage Improvement Plan, East Highlands Ranch, Highland Avenue, Line "A", prepared by Sitetech, Inc. The 100-year flow rate of 0.57 CFS for Lateral "A-1" was calculated using the Rational Method for San Bernardino County.

Erosion. All work in the creek occurs at the headwall and sideslopes to create overall positive flow of the drainage and reduce the ongoing erosion. The work includes replacing a stormwater pipeline, outfall structure and grouted rock apron in Bledsoe Creek to serve as promoting positive flow.

Because the Project construction area is less than 1 acre, a Stormwater Pollution Prevention Plan (SWPPP) is not required as part of the National Pollutant Discharge Elimination System (NPDES) General Construction requirements. However, Project plans include the preparation of an Erosion Control Plan (ECP) that will identify the Best Management Practices (BMPs) for managing excavation and stockpile of materials and measures to prevent hazardous materials and soils from unnecessarily entering the creek during construction. Therefore, the impact from potential construction erosion is less than significant.

Operationally, the Project site, including a portion of the head and bank adjacent to the community center, is underlain by various units of non-structural fill materials that ranges from 8 to 35 or more feet in thickness. The Project will excavate the fill soils directly within the work area and replace them with clean, compacted soils. Given that this replaced stormwater pipeline would be subject to potential cracks and rupture during strong seismic events, there is the potential for water to be released out of the pipeline and into the fill material that exists throughout the head of Bledsoe Gulch. This could cause the fill material to become unstable and cause erosion into

Bledsoe Gulch. **Mitigation Measures GEO-1 and GEO-2**, as identified in Section 4.7, are required to ensure the integrity of the pipeline during construction and operations and to ensure impacts will be less than significant.

Increase Surface Runoff: The site would experience a minor increase in impervious surfaces associated with the new asphalt access road that will be constructed on top of the new pipeline to better access the apron at the outfall at the creek/pipeline base for maintenance. However, the slope of the road and grouted rock apron are designed to manage this additional nominal increase. Therefore, this is less than significant.

Stormdrain System Overflow: The Project does not propose to connect to the City's storm drain, therefore, there will be no impact on the City's storm drain systems.

Redirect Flood Flows: The Project is to replace a stormwater pipeline in the same location but at a depth that will promote positive flow. There will be no impact to flood flows from the Project. In conclusion, the Project would not substantially alter existing drainage patterns, cause alteration of streams or rivers, or result in substantial erosion or siltation on- or off-site because the purpose of the Project is to repair and maintain an area of severe creek erosion that is impacting homes. However, the Project requires implementation of **Mitigation Measures GEO-1 and GEO-2** to manage erosion control during project construction and maintain the new infrastructure during operations..

- d) *Would the project in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?*

No Impact. The proposed Project is located inland, more than 60 miles northeast of the Pacific Ocean. According to the Federal Emergency Management Agency (FEMA) flood maps, the Project site is located Flood Zone D, an undetermined flood hazard, and would not significantly impede or redirect flood flows. There are no bodies of water in the vicinity of the site that could experience seiche conditions that would impact the site. There are no impacts.

- e) *Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?*

Less than Significant Impact. The proposed Project would comply with the City's MS4 permit, as noted above. Implementation of Project BMPs from the SWPPP during proposed construction activities would reduce any impacts associated with water quality to less than significant. In addition, the proposed Project does not include any activities that will interfere with any groundwater management plan as all construction would occur entirely within a portion of the site. Impacts would be less than significant.

4.10.4 Mitigation Measures:

Mitigation Measures GEO-1 and GEO-2, as identified in Section 4.7, will ensure that potential impacts are less than significant.

4.11 LAND USE PLANNING

4.11.1 Environmental Setting

The Project is located within EHR of the Cit of Highland. The Project proposes to replace an existing storm drain.

4.11.2 Impact Analysis

CEQA THRESHOLDS	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XI. LAND USE AND PLANNING:				
Would the project:				
a) Physically divide an established community?				X
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?				X

Discussion

a) *Would the project physically divide an established community?*

No Impact. The Project proposes to replace an existing storm drain. No impacts would occur, and no mitigation is required.

b) *Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?*

No Impact. The proposed Project would replace an existing storm drain and stabilize the surrounding hillside adjacent to residential development. The work is in conformance with the anticipated land use plan of the East Highland Ranch PUD as it related to the use of the site for storm drain conveyance, and the associated environmental policy adopted in PUD’s EIR. As a result, no conflicts would occur with any land use plan, policy, or regulation. No impacts would occur, and no mitigation is required.

Mitigation Measures:

No mitigation measures are required.

4.12 MINERAL RESOURCES

4.12.1 Environmental Setting

In 1975, the California legislature enacted the Surface Mining and Reclamation Act (SMARA). This act provides for the reclamation of mined lands and directs the State Geologist to classify (identify and map) the non-fuel mineral resources of the state to show where economically significant mineral deposits occur and where they are likely to occur based upon the best available scientific data.

The City of Highland overlies areas identified as Mineral Resource Zones (MRZs, Categories 1–3). The Project site lies within Category 3 which represents areas whose significance cannot be evaluated from available data.

4.12.2 Impact Analysis

CEQA THRESHOLDS	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XII. 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?				X
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?				X

Discussion

- a) *Would the project 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?*

No Impact. The Project site is not located on a known important mineral resource recovery site and is not currently being mined or has plans to be mined. No impacts would occur, and no mitigation is required.

- b) *Would the project 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?*

No Impact. As discussed above, the Project site is not located on a known mineral deposit and is not currently being mined or has plans to be mined. No land use plan that applies to the site

designates it as a mineral resource recovery site. No impacts would occur, and no mitigation is required.

4.12.3 Mitigation Measures:

No mitigation measures are required.

4.13 NOISE

Environmental noise is commonly measured in A-weighted decibels (dBA). A decibel (dB) is a unit of sound energy intensity. Sound waves, traveling outward from a source, exert a sound pressure level (commonly called a “sound level”) measured in dB. An A-weighted decibel (dBA) is a decibel corrected for the variation in frequency response that duplicates the sensitivity of human ears. Decibels are measured on a logarithmic scale. Generally, a three dBA increase in ambient noise levels represents the threshold at which most people can detect a change in the noise environment; an increase of 10 dBA is perceived as a doubling of loudness.

Noise Descriptors

These noise descriptors include but are not limited to the following:

- Ambient Noise Level: The composite of noise from all sources, near and far. In this context, the ambient noise level constitutes the normal or existing level of environmental noise at a given location.
- Community Noise Equivalent Level (CNEL): The average equivalent A-weighted sound level during a 24- hour day, obtained after addition of five (5) decibels to sound levels in the evening from 7:00 to 10:00 PM and after addition of ten (10) decibels to sound levels in the night before 7:00 AM and after 10:00 PM.
- Equivalent Sound Level (LEQ): The sound level corresponding to a steady noise level over a given sample period with the same amount of acoustic energy as the actual time-varying noise level. The energy average noise level during the sample period.

Federal Regulations

The adverse impact of noise was officially recognized by the federal government in the Noise Control Act of 1972, which serves three purposes:

- Publicize noise emission standards for interstate commerce
- Assist state and local abatement efforts
- Promote noise education and research

The federal government advocates that local jurisdictions use their land use regulatory authority to arrange new development in such a way that “noise sensitive” uses are either prohibited from being constructed adjacent to a highway or, or alternatively that the developments are planned and constructed in such a manner that potential noise impacts are minimized.

Since the federal government has preempted the setting of standards for noise levels that can be emitted by the transportation source, the City is restricted to regulating the noise generated by the transportation system through nuisance abatement ordinances and land use planning.

State Regulations

The State of California has established noise insulation standards as outlined in Title 24 and the Uniform Building Code (UBC) which in some cases requires acoustical analyses to outline exterior noise levels and to ensure interior noise levels do not exceed the interior threshold.

The State Department of Health Services has published guidelines that rank noise land use compatibility in terms of normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable as illustrated in *Table 4.13-1: Land Use Compatibility Guidelines*.

Table 4.13-1: Land Use Compatibility Guidelines

Land Uses Category	Community Noise Exposure Level Ldn or CNEL, dBA					
	55	60	65	70	75	80
Residential-Low Density Single Family Dwellings, Duplexes and Mobile Homes	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Unacceptable	Normally Unacceptable	Clearly Unacceptable
Residential Multi-Family Dwellings	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Unacceptable	Normally Unacceptable	Clearly Unacceptable
Transient Lodging – Motels, Hotels	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Unacceptable	Normally Unacceptable	Clearly Unacceptable
Schools, Libraries, Churches, Hospitals, Nursing Homes	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Unacceptable	Normally Unacceptable	Clearly Unacceptable
Auditoriums, Concert Halls, Amphitheaters	Normally Acceptable	Normally Acceptable	Normally Unacceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Sports Arena, Outdoor Spectator Sports	Normally Acceptable	Normally Acceptable	Normally Unacceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Playgrounds, Neighborhood Parks	Normally Acceptable	Normally Acceptable	Normally Unacceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Golf Courses, Riding Stables, Water Recreation, Cemeteries	Normally Acceptable	Normally Acceptable	Normally Unacceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Commercial and Office Buildings	Normally Acceptable	Normally Acceptable	Normally Unacceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Industrial, Manufacturing, Utilities, Agriculture	Normally Acceptable	Normally Acceptable	Normally Unacceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable

Explanatory Notes	
<p>Normally Acceptable: Specified land use is satisfactory based upon the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements.</p>	<p>Normally Unacceptable: New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made with needed noise insulation features included in the design. Outdoor areas must be shielded.</p>
<p>Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply system or air conditioning will normally suffice. Outdoor environment will seem noisy.</p>	<p>Clearly Unacceptable: New construction or development should generally not be undertaken. Construction cost to make the indoor environment acceptable would be prohibitive and the outdoor environment would not be usable.</p>

Source: California Office of Noise Control

City of Highland

The City of Highland Municipal Code sets forth the City’s standards, guidelines and procedures concerning the regulation of noise use. Specifically, the Code includes Title 8, Health and Safety, which includes a chapter on noise control, and Title 16, Land Use and Development.

Chapter 8.50.060 of the City Municipal Code exempts temporary construction activities.

Vibration

Ground-borne vibrations consist of rapidly fluctuating motions within the ground that have an average motion of zero. The effects of ground-borne vibrations typically only cause a nuisance to people, but at extreme vibration levels, damage to buildings may occur. Although ground-borne vibration can be felt outdoors, it is typically only an annoyance to people indoors where the associated effects of the shaking of a building can be notable. Ground-borne noise is an effect of ground-borne vibration and only exists indoors since it is produced from noise radiated from the motion of the walls and floors of a room and may also consist of the rattling of windows or dishes on shelves.

Table 4.13-2: Vibration Source Levels for Construction Equipment identifies typical construction sources of vibration as identified by the Federal Transit Administration.

Table 4.13-2: Vibration Source Levels for Construction Equipment

	Peak Particle Velocity (inches/second) at 25 feet	Approximate Vibration Level LV (dVB) at 25 feet
Pile driver (impact)	1.518 (upper range)	11 2
	0.644 (typical)	10 4
Pile driver (sonic)	0.734 upper range	10 5
	0.170 typical	93
Clam shovel drop (slurry wall)	0.202	94
Hydromill	0.008 in soil	66
(slurry wall)	0.017 in rock	75
Vibratory Roller	0.21	94
Hoe Ram	0.089	87
Large bulldozer	0.089	87
Caisson drill	0.089	87
Loaded trucks	0.076	86
Jackhammer	0.035	79
Small bulldozer	0.003	58

Source: Transit Noise and Vibration Impact Assessment, Federal Transit Administration, May 2006.

4.13.1 Environmental Setting

Sensitive receptors that may be affected by Project construction noise are located along the western edge of the Project as their homes back up to Bledsoe Gulch.

4.13.2 Impact Analysis

CEQA THRESHOLDS	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XIII. NOISE: Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project site in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			X	
b) Generation of excessive groundborne vibration or groundborne noise levels?			X	
c) For a project located within the vicinity of a private airstrip or 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?				X

a) *Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?*

Less than Significant. The proposed Project would generate noise during construction. Construction will generally occur between the hours of 10:00 a.m. and 6:00 p.m. Monday through Saturday and will not be undertaken anytime on Sundays or holidays. Therefore, noise generated by the heavy equipment will not violate City ordinances standards or requirements. Therefore, overall, construction will have a less than significant impact.

b) *Would the project result in the generation of excessive groundborne vibration or groundborne noise levels?*

Less than Significant Impact. Construction activities can produce vibration that may be felt by adjacent land uses. The construction of the proposed Project would not require the use of equipment such as pile drivers, which are known to generate substantial construction vibration levels. Therefore, excessive groundborne vibrations will not occur, and the impacts will be less than significant.

c) *For a project located within the vicinity of a private airstrip or 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?*

No Impact. The Project site is not within the vicinity of a private airstrip, not within two miles of a public airport or public use airport and is not within an airport land use plan. No impacts would occur.

4.13.3 Mitigation Measures:

No mitigation measures are required.

4.14 POPULATION AND HOUSING

4.14.1 Environmental Setting

The Project is to repair an existing storm drain and does not involve housing, or the construction of structures for housing.

4.14.2 Impact Analysis

CEQA THRESHOLDS	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XIV. 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)?				X
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				X

Discussion

- a) *Would the project induce substantial unplanned 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)?*

No Impact. The purpose of the Project is to replace an existing storm drain, which does not induce growth. Therefore, the Project does not indirectly induce an increase in population.

- b) *Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?*

No Impact. No existing housing would be displaced as the Project site is vacant and would remain as such upon Project implementation. No impacts would occur, and no mitigation is required.

4.14.3 Mitigation Measures:

No mitigation measures are required.

4.15 PUBLIC SERVICES

4.15.1 Environmental Setting

The Project is to replace an existing storm drain.

4.15.2 Impact Analysis

CEQA THRESHOLDS	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XV. PUBLIC SERVICES:				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for 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:				
Fire protection?			X	
Police protection?			X	X
Schools?				X
Recreation/Parks?				X
Other public facilities?				X

- a) *Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for 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: Fire Protection, Police Protection, Schools, Recreation/Parks, or Other Public Facilities.*

Less than Significant Impact. No significant demand for fire protection or other emergency services is anticipated to be necessary. The possibility exists for a work-related injury, but this type of occurrence is considered to be rare, and therefore, not create a substantial need for emergency medical services for the Project. The Project is located in a Very High Fire Hazard Zone, and implementation of Mitigation Measure HAZ-2 will be implemented to reduce the potential for a wildfire which would necessitate an increased need for fire services.

No Impact. The Project will not impact schools, recreational facilities or other public facilities because the Project is to replace an existing storm drain.

4.15.3 Mitigation Measures:

No mitigation measures are required.

4.16 RECREATION

4.16.1 Environmental Setting

The Project is located behind the East Highlands Ranch Community Center, a private community center.

4.16.2 Impact Analysis

CEQA THRESHOLDS	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XVI. 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?				X
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?			X	

Discussion

- 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?*

No Impact. The Project does not propose any residential use or other land use that may generate a population that would increase the use of existing neighborhood and regional parks or other recreational facilities. Accordingly, implementation of the proposed Project would not result in the increased use or substantial physical deterioration of an existing neighborhood or regional park, thus, impacts there will be no impacts.

- 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?*

Less Than Significant. The work will occur behind the East Highlands Ranch Community Center, within the existing concrete access road and adjacent orange grove which is maintained for recreational purposes. Work will impact less than 1 acre behind the community center in the vicinity of the existing concrete road. It is anticipated that between 1 and 10 orange trees may be removed during construction to facilitate equipment staging. The Community Center facility will remain open during construction, although a portion of the orange grove will be closed to patrons to ensure their safety during construction.

However, the Project does not include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. Therefore, there is a less than significant impact.

4.16.3 Mitigation Measures:

No mitigation measures are required.

4.17 TRANSPORTATION

4.17.1 Environmental Setting

The Project is to replace existing storm drain facilities that are generally located in areas where public access is restricted, and off the main roadways.

4.17.2 Impact Analysis

CEQA THRESHOLDS	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XVII. TRANSPORTATION / TRAFFIC:				
Would the project:				
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?			X	
b) Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?			X	
c) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				X
d) Result in inadequate emergency access?				X

- a) *Would the project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadways, bicycle and pedestrian facilities?*

Less than Significant. The storm drain is not located on major roadways and are accessed by local roads, then onto improved maintenance access roads. Therefore, the Project will not conflict with any applicable plan, ordinance, or policy that establishes the performance of the system. Since the Project does not conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadways, bicycle and pedestrian facilities, there is a less than significant impact, and no mitigation is required.

- b) *Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?*

Less than Significant. Per the CEQA Guidelines section 15064.3, subdivision (b)(1), projects that reduce vehicle miles traveled (VMT), such as pedestrian, bicycle and transit projects, should have a less than significant impact. Per the CEQA Guidelines section 15064.3, subdivision (b)(2), transportation projects which reduce vehicle miles traveled should be presumed to cause a less than significant impact.

The Project is not a land use project nor does it require any land use action. The construction crew is estimated at 10 people, working for less than six months. Impacts would be less than significant, and the Project traffic would not rise to a level that could conflict with CEQA Guidelines. Impacts would be less than significant.

- c) *Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?*

No Impact. The Project does not involve creating new public roads or maintaining existing roads where there would be public access. The Project will create a maintenance access road on top of the new pipeline and is designed for City vehicles to have safe access to maintain the outfall and apron. Therefore, there is no impact.

- d) *Would the project result in inadequate emergency access?*

No Impact. The proposed Project would not result in inadequate emergency access. The proposed construction and operational activities would not include any new design or development that would prevent access to the proposed Project area in the event of an emergency, either during construction or operations. No impacts would occur, and no mitigation is required.

Mitigation Measures:

No mitigation measures are required.

4.18 TRIBAL CULTURAL RESOURCES

A Cultural Resources Assessment for the proposed Project was performed by CRM Tech (Appendix C). The assessment addressed the ethnographic and archaeology of the Native American occupation in the City of Highland, as summarized in this section.

Native American Heritage Commission Sacred Land File Search

In response to CRM TECH's inquiry, the Native American Heritage Commission reported in a letter dated March 20, 2020, that Sacred Lands File identified no Native American cultural resources in the Project vicinity. Noting that the absence of specific information would not necessarily indicate the absence of cultural resources, however, NAHC recommended that local Native American groups be consulted for further information and provided a referral list of potential contacts.

City of Highland AB 52 Tribal Consultation

Additionally, the City of Highland conducted consultation with Native American tribes in compliance with AB 52. The mitigation measures in this section are a result of that consultation.

On July 27, 2021, the City of Highland notified the following tribal entity representatives of the Project and that the 30-day timeframe in which to request consultation would end on August 27, 2021, in accordance with AB52:

- Mr. Joseph Ontiveros, Director of Cultural Resources, Soboba Band of Luiseño Indians
- Mr. Ryan Nordess, Cultural Resource Analyst, San Manuel Band of Mission Indians
- Mr. Andrew Salas, Gabrieleno Band of Mission Indians

Of the tribes contacted, the following responses were received:

- Soboba Band of Luiseño Indians. No comments were received. Consultation concluded.
- San Manuel Band of Mission Indians. 8/4/2021 – no concerns with Project implementation but suggested that mitigation measures be made a part of the plan/permit conditions to address unanticipated finds. Consultation concluded.
- Gabrieleno Band of Mission Indians. No comments were received. Consultation concluded.

Mitigation measures that were submitted as part of the consultation request letters and have been reviewed incorporated as appropriate into the Initial Study.

4.18.1 Environmental Setting

The present-day Highland area is generally recognized as a part of the homeland of the Serrano people, although other Native groups, such as the Gabrielino of the Los Angeles Basin, also claim the area as a part of their cultural influence. Together with that of the Vanyume people, linguistically a subgroup, the traditional territory of the Serrano includes the San Bernardino Mountains, part of the San Gabriel Mountains, and the Mojave River Valley in the southern portion of the Mojave Desert, reaching as far east as the Cady, Bullion, Sheep Hole, and Coxcomb Mountains.

Prior to European contact, Serrano subsistence was defined by the surrounding landscape and primarily based on the gathering of wild and cultivated foods and hunting, exploiting nearly all of the resources available. They settled mostly on elevated terraces, hills, and finger ridges near where flowing water emerged from the mountains.

Although contact with Europeans may have occurred as early as 1771 or 1772, Spanish influence on Serrano lifeways was negligible until the 1810s, when a mission *asistencia* was established on the southern edge of Serrano territory. Between then and the end of the mission era in 1834, most of the Serrano in the western portion of their traditional territory were removed to the nearby missions. In the eastern portion, a series of punitive expeditions in 1866-1870 resulted in the death or displacement of almost all remaining Serrano population in the San Bernardino Mountains. Today, most Serrano descendants are affiliated with the San Manuel Band of Mission Indians, the Morongo Band of Mission Indians, or the Serrano Nation of Indians.

4.18.2 Impact Analysis

CEQA THRESHOLDS	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XVIII. TRIBAL CULTURAL RESOURCES:				
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or		✘	X	
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.		✘	X	

Discussion

- a) *Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is listed or*

eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?

Less Than Significant with Mitigation Incorporated. According to PRC Chapter 2.5, Section 21074, tribal cultural resources are sites, features, places, cultural landscapes, sacred places, and items with cultural value to a California Native American tribe that are either included or determined to be eligible for inclusion in the California Register of Historical Resources or included in a local register of historical resources as defined in Section 5020.1.

There are no resources that have been identified as eligible for listing to the California Register of Historic Places within or near the Project site. However, based on AB 52 tribal consultation, **Mitigation Measure CUL-2**, previously identified in Section 4.5, as well as **Mitigation Measure TCR-1** are included to reduce potential impacts to potential Native American resources. Mitigation measures are located at the end of this section.

- b) *Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?*

Less Than Significant Impact with Mitigation Incorporated. The Project site is previously disturbed land currently under commercial land use. Although ground-disturbing activities would occur on previously disturbed land, there is the potential to uncover unanticipated tribal cultural resources. There are no resources that have been identified as significant within or near the Project site. However, based on AB 52 tribal consultation, **Mitigation Measures CUL-1**, previously identified in Section 4.5, and **Mitigation Measure TCR-1** are included to reduce potential impacts to potential Native American resources. Mitigation measures are located at the end of this section.

4.18.3 Mitigation Measure:

The following mitigation measure is required to reduce potential impacts to less than significant:

TCR-1 Unanticipated Discovery of Human Remains and Associated Funerary Objects: Native American human remains are defined in PRC 5097.98 (d)(1) as an inhumation or cremation, and in any state of decomposition or skeletal completeness. Funerary objects, called associated grave goods in PRC 5097.98, are also to be treated according to this statute. Health and Safety Code 7050.5 dictates that any discoveries of human skeletal material shall be immediately reported to the County Coroner and excavation halted until the coroner has determined the nature of the remains. If the coroner recognizes the human remains to be those of a Native American or has reason to believe that they are

those of a Native American, he or she shall contact, by telephone within 24 hours, the NAHC and PRC 5097.98 shall be followed.

Upon discovery of human remains, the tribal and/ or archaeological monitor/ consultant/ consultant will immediately divert work at minimum of 100 feet and place an exclusion zone around the discovery location. The monitor/consultant(s) will then notify the Tribe, the qualified lead archaeologist, and the construction manager who will call the coroner. Work will continue to be diverted while the coroner determines whether the remains are human and subsequently Native American. The discovery is to be kept confidential and secure to prevent any further disturbance. If the finds are determined to be Native American, the coroner will notify the NAHC as mandated by state law who will then appoint a Most Likely Descendent (MLD). Should the discovery be deemed significant, as defined by CEQA (as amended, 2015), a cultural resources Monitoring and Treatment Plan shall be created by the archaeologist, in coordination with applicable tribe, and, all subsequent finds shall be subject to this Plan. This Plan shall allow for a monitor to represent SMBMI for the remainder of the Project, should the applicable tribe elect to place a monitor on-site.

Any and all archaeological/cultural documents created as a part of the Project (isolate records, site records, survey reports, testing reports, etc.) shall be supplied to the applicant and Lead Agency for dissemination to San Manuel Band of Mission Indians (SMBMI).

4.19 UTILITIES AND SERVICE SYSTEMS

4.19.1 Environmental Setting

The purpose of the Project is to replace an existing storm water facility that outlets to an existing channel. The City will use existing staff and/or contractors for the construction and/or maintenance of the facility.

4.19.2 Impact Analysis

CEQA THRESHOLDS	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XIX. UTILITIES AND SERVICE SYSTEMS:				
Would the project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?			X	
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?			X	
c) 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?			X	
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?			X	
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?			X	

Discussion

- a) *Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?*

Less than Significant Impact. The proposed Project consists of the reconstruction of an existing storm drain. Grading would occur on the site but would be subject to a Storm Water Pollution Prevention Plan that complies with the California Construction General Permit under the National Pollutant Discharge Elimination System, which would ensure that construction stormwater drainage impacts would be less than significant. The Project does not expand storm water volume or use. Because electric power, natural gas, and telecommunications facilities would not have to be expanded or relocated as a result of Project implementation, impacts would be less than significant. No mitigation is required.

- b) *Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?*

Less than Significant Impact. Construction activities may utilize water for dust control and/or other uses during construction. The amount to be used for the approximately 1 acre construction area is minimal and can be served by existing water supplies. Impacts would be less than significant, and no mitigation is required.

- c) *Would the project 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?*

Less than Significant Impact. Construction workers may use portable waste facilities serviced by a contractor. Wastewater demands would be accommodated existing facilities. Therefore, impacts would be less than significant as the Project does not propose activities that would necessitate an increase in the capacity of existing wastewater systems.

- d) *Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?*

Less than Significant Impact. Construction and operations may generate small amounts of construction debris such as wood waste and concrete. The City is served by a contract waste hauler who utilizes the County's landfill system, which has sufficient capacity to serve the Project needs. Impacts would be less than significant, and no mitigation is required.

- e) *Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?*

Less than Significant Impact. Federal, State, and local statutes and regulations regarding solid waste generation, transport, and disposal are intended to decrease solid waste generation through mandatory reductions in solid waste quantities (e.g., through recycling and composting of green waste) and the safe and efficient transport of solid waste. The Project needs would be served by a contract waste hauler that complies with State standards. The Project would be

required to comply with all applicable solid waste statutes and regulations; as such, impacts related to solid waste statutes and regulations would be less than significant.

4.19.3 Mitigation Measures:

No mitigation measures are required.

4.20 WILDFIRE

4.20.1 Environmental Setting

A wildland fire is an uncontrolled fire in combustible vegetation that is typically found in a rural or wilderness area. Wildland fires pose a great danger to urban areas where lives and property can be severely affected. Conditions contributing to the severity of wildland fires are primarily related to weather, including temperature, humidity, and wind. Winds commonly referred to as “Santa Ana” winds typically occur during the fall months and pose a particularly significant hazard.

The Project is identified by the City General Plan and by the California Department of Forestry and Fire Protection's Fire and Resource Assessment Program (FRAP) as being within a Very High Fire Hazard Zone due to its location being in the base of the foothills in the northeastern portion of the City. The City of Highland's General Plan identifies that the northeastern and eastern portions of the City, especially hillside areas, are most susceptible to wildfires due to the location of fire-prone vegetation, limited access for fire fighting equipment, steep topography, and seasonal conditions that exacerbate fire hazard conditions.

The California Department of Forestry and Fire Protection (CDF) provides fire protection and emergency medical services to the City of Highland through a cooperative agreement. The CDF also provides wildland fire protection to the unincorporated state responsibility area immediately adjacent to the eastern edge of the City. Additional wildland fire protection services are provided by the U.S. Forest Service on National Forest Lands adjacent to the City.

4.20.2 Impact Analysis

CEQA THRESHOLDS	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XX. WILDFIRE: If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, Would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?			X	
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of wildfire?		X		
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?				X

d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?			X	
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Discussion

a) *Substantially impair an adopted emergency response plan or emergency evacuation plan?*

Less Than Significant. The Project will occur behind the East Highlands Ranch community center, and not within any roadway. Depending on the nature of the emergency requiring evacuation, it is anticipated that the majority of the Project construction workers would exit the Project area via the existing roadway circulation system. Project implementation would not impair access to these roadways should an evacuation be required. It is not anticipated that the Project would impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Impacts will be less than significant, and no mitigation is required.

b) *Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?*

Less Than Significant. The Project is identified by FRAP as being within a Very High Fire Hazard Zone, and the area is subject to Santa Ana winds, which can spread fires rapidly. Construction may include the use of gas-powered hand tools such as chain saws and/or welding equipment that may produce sparks. Bledsoe Gulch has a high concentration of vegetation. Therefore, there is a high potential to indirectly cause a wildfire during construction. As such, implementation of **Mitigation Measure HAZ-2** that requires the contractor to implement fire protection protocols during construction will reduce potential impacts to less than significant. This Mitigation Measure is located in Section 4.9.

c) *Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?*

No Impact. The proposed construction and operational activities would not require installation of maintenance of associated structures that would exacerbate wildfire risk. No impacts would occur.

d) *Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?*

Less Than Significant. The proposed Project will replace a stormwater pipeline and outfall that is currently the source of severe erosion. The Project will also regrade the slopes of Bledsoe Creek which are currently failing due to the severe erosion. Areas of the new grading will be

recompacted and restored. A drainage swale will be constructed on the west slope, to capture storm flows from the adjacent homes. Construction activities involve temporarily removing materials along the slope, however, this is short-term and all controls and BMPs will be in place to reduce and eliminate risks of hillside failure during construction. Therefore, the Project will improve the drainage's slope conditions at the creek head. Therefore, construction and operational activities would have a less than significant impact on people or structures to risks involving post-fire slope instability or drainage changes, and no mitigation is required.

4.20.3 Mitigation Measures:

No mitigation measures are required.

4.21 MANDATORY FINDINGS OF SIGNIFICANCE

ENVIRONMENTAL IMPACTS	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XXI. MANDATORY FINDINGS OF SIGNIFICANCE:				
a) Does the project have the potential to substantially 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, substantially 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?		X		
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)?			X	
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?		X		

Discussion

- a) *Does the project have the potential to substantially 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, substantially 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?*

Less than Significant with Mitigation Incorporated. As stated in this Initial Study, although the proposed Project would affect the quality of the environment with respect to the habitat of a plant or animal community, the mitigation identified in the Initial Study would reduce such impacts through the provision of adherence to the MTBA and its protection of nesting birds through implementation of Mitigation Measure BIO-1 and BIO-2 and BIO-3. The Project may adversely affect unknown cultural and paleontological resources. Mitigation Measures CUL-1, CUL-2 and GEO-3 would reduce potential impacts to less than significant. Further, the Project may adversely affect Tribal Cultural Resources as referenced in Section 4.18. Implementation of Mitigation Measures TCR-1 would reduce potential impacts to less than significant. With mitigation, impacts related to this issue are considered to be less than significant.

- 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)?*

Less than Significant Impact. The proposed Project site is currently developed with a recreational citrus orchard and a creek head and drainage for the East Highlands Ranch subdivision. The Project has the potential to result in both short-term and long-term impacts to the environment. Grading and related site preparation activities are expected to generate short-term impacts; however, while short-term impacts are anticipated to occur, the achievement of short-term environmental goals would not be at the expense of long-term environmental goals. As such, impacts related to this issue are considered to be less than significant.

- c) *Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?*

Less Than Significant with Mitigation Incorporated. Implementation of the of the proposed Project may result in direct and indirect impacts such as exposure to hazards associated with strong seismic groundshaking and other hazards. However, adherence to standard requirements and identified mitigation measures (Mitigation Measure GEO-1, GEO-2, HAZ-1, and HAZ-2) would reduce these impacts to less than significant.

Conclusion: The Project would have a less-than-significant impact on the CEQA mandatory findings of significance with the incorporation of mitigation measures and standard permit conditions identified in this document.

5 SUMMARY OF MITIGATION MEASURES

The following mitigation measures were identified to reduce impacts to less than significant:

BIOLOGICAL RESOURCES

BIO-1 Worker Environmental Awareness Program (WEAP) – Biological Resources A Worker Environmental Awareness Program (WEAP) training shall be developed and provided by a biologist familiar with least Bell’s vireo and southwestern willow flycatcher. and their habitats. The WEAP training shall be presented by the biologist to all construction personnel. For the life of the Project, each employee (including temporary contractors and subcontractors) will receive WEAP training prior to conducting any work on the site.

BIO-2: Avian Monitoring. If construction occurs between February 1st and August 31st, a pre-construction clearance survey for nesting birds should be conducted within three (3) days of the start of any vegetation removal or ground disturbing activities to ensure that no nesting birds will be disturbed during construction. The biologist conducting the clearance survey should document a negative survey with a brief letter report indicating that no impacts to active avian nests will occur. If an active avian nest is discovered during the pre-construction clearance survey, construction activities should stay outside of a no-disturbance buffer. The size of the no-disturbance buffer will be determined by the wildlife biologist and will depend on the level of noise and/or surrounding anthropogenic disturbances, line of sight between the nest and the construction activity, type and duration of construction activity, ambient noise, species habituation, and topographical barriers. These factors will be evaluated on a case-by-case basis when developing buffer distances. Limits of construction to avoid an active nest will be established in the field with flagging, fencing, or other appropriate barriers; and construction personnel will be instructed on the sensitivity of nest areas. A biological monitor should be present to delineate the boundaries of the buffer area and to monitor the active nest to ensure that nesting behavior is not adversely affected by the construction activity. Once the young have fledged and left the nest, or the nest otherwise becomes inactive under natural conditions, construction activities within the buffer area can occur.

BIO-3 Obtain Jurisdictional Waters Permits. Prior to construction, obtain permits from agencies having jurisdiction over Drainage 1 and the associated habitat.

CULTURAL RESOURCES

CUL-1 Worker Environmental Awareness Program (WEAP) – Cultural/ Archaeological Resources. A WEAP training shall be developed and presented by a cultural resource specialist to educate construction workers about various potentially significant buried resources. The training will be presented to all construction personnel. For the life of the Project, each employee (including temporary contractors and subcontractors) will receive WEAP training prior to conducting any work on the site.

CUL-2: Cultural Resource Monitoring: A Secretary of the Interior qualified archaeologist will spot check, on a schedule to be developed with the construction contractor, the construction excavations, within undisturbed soil to determine the presence or absence of cultural resources. The qualified archaeologist will then be able to recommend increasing or decreasing monitoring activities based on sub-surface findings.

GEOLOGY AND SOILS

GEO-1 Pipeline Inspection – Construction. During construction, geotechnical observation and testing should be conducted at a schedule to be identified between the City and the Contractor and the Geotechnical specialist. Additional expansion testing will be performed at the direction of the Geotechnical specialist. The geotechnical specialist shall have the authority to halt work if subsurface conditions warrant additional exploration.

GEO-2 Pipeline Inspection – Operations. The City shall inspect the pipeline on an annual schedule at a minimum. Inspection should also occur immediately following earthquakes of a magnitude 3.0 or above that occur near the Project site or where strong seismic shaking has been felt in the Highland area, and/or earthquakes which occur within the San Andreas fault zone. Inspection methods shall include both camera and/or physical inspections in sufficient detail to identify cracking and/or breaches in the concrete pipe and/or roadway and drainage ditch on the west bank such that water may leak from the pipeline to the adjacent fill. Pipeline, roadway and drainage ditch repairs should occur immediately upon discovery of any cracks or breaches.

GEO-3 Provision for Unanticipated Buried Paleontological Resources: A qualified cultural resource specialist or paleontologist will spot check construction excavations that would impact Late Pleistocene to Holocene units, which are generally below 10 feet in the Project area. The frequency will be determined with the cultural resource specialist and the construction contractor based on the work schedule.

- The paleontologist will be able to recommend increasing or decreasing monitoring activities based on the sub-surface findings.
- The monitor shall have the ability to salvage fossils if they are unearthed to avoid construction delays and to remove samples of the soils that may contain the remains of small fossil invertebrates and vertebrates.
- The monitor shall be empowered to temporarily halt or divert equipment to allow the removal of larger fossils in a timely manner.
- The extent of the monitoring may be reduced if, in the opinion of the paleontologist, potentially fossiliferous units are not found in the subsurface, or if present that they are determined to be a low potential to contain or yield fossil resources.

HAZARDS AND HAZARDOUS MATERIALS

HAZ-1 Worker Environmental Awareness Program (WEAP) – Hazardous Materials. A WEAP training shall be developed and presented by a specialist to educate construction workers about signs of

buried hazardous waste. The training will be presented to all construction personnel. For the life of the Project, each employee (including temporary contractors and subcontractors) will receive WEAP training prior to conducting any work on the site.

The training shall include but not be limited to the following requirements:

- The Department of Toxic Substances Control (DTSC) and San Bernardino County Fire Department Hazardous Materials Division shall be immediately notified in the event malodorous or discolored soils, liquids, containers, or other materials known or suspected to contain hazardous materials and/or contaminants are encountered during activities associated with the proposed Project. Earthmoving activities in the vicinity of said material shall be halted until the extent and nature of the suspect material is determined by qualified personnel (as determined by the DTSC). The removal and/or disposal of any such contaminants shall be in accordance with all applicable local, State, and Federal standards.
- In the event of any identification of or spill of hazardous materials and/or contaminants in the construction area, the party whose activity resulted in the spill or release shall notify the City of the location, extent, and nature of the spill or release. The City shall thereupon work with East Valley Water District to assess the depth to groundwater in the area of the release, and if it appears that groundwater tables are high enough to create a potential for exposure of the groundwater table to the spill or release, will modify its recharge operations as much as feasible to prevent groundwater table intersection with the identified spill or release.

HAZ-2 During construction, all staging areas, welding areas, or areas slated for construction using spark-producing equipment will be cleared of dried vegetation or other material that could ignite. Spark arresting equipment shall be in good working order. The City shall require all vehicles and crews working at the Project site to have access to functional fire extinguishers at all times. In addition, construction crews are required to have a spotter during welding activities to look out for potentially dangerous situations, including accidental sparks. The contractor also shall provide a safety plan for the implementation of additional protocols when the National Weather Service issues a Red Flag Warning. Such protocols should address smoking and fire rules, storage and parking areas, use of gasoline-powered tools, use of spark arresters on construction equipment, road closures, use of a fire guard, fire suppression tools, fire suppression equipment, and training requirements.

TRIBAL CULTURAL RESOURCES

TCR-1 Unanticipated Discovery of Human Remains and Associated Funerary Objects: Native American human remains are defined in PRC 5097.98 (d)(1) as an inhumation or cremation, and in any state of decomposition or skeletal completeness. Funerary objects, called associated grave goods in PRC 5097.98, are also to be treated according to this statute. Health and Safety Code 7050.5 dictates that any discoveries of human skeletal material shall be immediately reported to the County Coroner and excavation halted until the coroner has determined the nature of the remains. If the coroner recognizes the human remains to be those of a Native American or has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the NAHC and PRC 5097.98 shall be followed.

Upon discovery of human remains, the tribal and/ or archaeological monitor/ consultant/ consultant will immediately divert work at minimum of 100 feet and place an exclusion zone around the discovery location. The monitor/consultant(s) will then notify the Tribe, the qualified lead archaeologist, and the construction manager who will call the coroner. Work will continue to be diverted while the coroner determines whether the remains are human and subsequently Native American. The discovery is to be kept confidential and secure to prevent any further disturbance. If the finds are determined to be Native American, the coroner will notify the NAHC as mandated by state law who will then appoint a Most Likely Descendent (MLD). Should the discovery be deemed significant, as defined by CEQA (as amended, 2015), a cultural resources Monitoring and Treatment Plan shall be created by the archaeologist, in coordination with applicable tribe, and, all subsequent finds shall be subject to this Plan. This Plan shall allow for a monitor to represent SMBMI for the remainder of the Project, should the applicable tribe elect to place a monitor on-site.

Any and all archaeological/cultural documents created as a part of the Project (isolate records, site records, survey reports, testing reports, etc.) shall be supplied to the applicant and Lead Agency for dissemination to San Manuel Band of Mission Indians (SMBMI).

6 REFERENCES

City of Highland, March 2006 (COH, 2006). *City of Highland General Plan*.

California Dept of Water Resources, Groundwater Level Data,
<https://wdl.water.ca.gov/WaterDataLibrary/GroundWaterLevel.aspx>

County of San Bernardino, *San Bernardino County Land Use Plan GENERAL PLAN, Geologic Hazard Overlays, Map FH31C*, publication date 3/10/2010.

Appendix A
Project Construction Plans

Appendix B
Biological Resources

Appendix C
Cultural Resources Report

Appendix D
Geotechnical and Subsurface Reports

D-1: Geotechnical Investigation, November 2013

D-2: Geotechnical Investigation, March 2020

D-3: Paleontological Resources Assessment

D-1: Geotechnical Investigation, November 2013

D-2: Geotechnical Investigation, March 2020

D-3: Paleontological Resources Assessment

Appendix E
Hydrology Analysis
