CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT
3900 MAIN STREET, 4TH FLOOR
RIVERSIDE, CALIFORNIA 92522
(951) 826-5311

CITY OF RIVERSIDE
INITIAL STUDY AND
DRAFT MITIGATED NEGATIVE DECLARATION
FOR THE
VAN BUREN BOULEVARD SEWER INSTALLATION PROJECT

DECEMBER 2019

Prepared by

KRIEGER & STEWART
Engineering Consultants
3602 UNIVERSITY AVENUE
RIVERSIDE, CALIFORNIA 92501
(951) 684-6900

SIGNATURE _____

DATE 12/31/19



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PART 1
PROJECT INFORMATION

PART 1 - PROJECT INFORMATION

A. INTRODUCTION

The City of Riverside, with a population of approximately 330,000, comprises approximately 81 square miles in northwestern Riverside County, California.

The City of Riverside Public Works Department operates, maintains, and improves the City's infrastructure, including streets, storm drains, traffic signals, and the wastewater collection system. The City's wastewater collection system currently includes approximately 1,000 miles of sewer pipelines, 19 lift stations, and a wastewater treatment facility known as the Regional Water Quality Control Plant (RWQCP). The RWQCP has the capacity to treat up to 46 million gallons of wastewater per day.

B. PROJECT DESCRIPTION

1. Proposed Project

The Van Buren Boulevard Sewer Installation Project (the Project) consists of construction and operation of facilities (sewer pipeline, sewage lift station, and force main) as required to provide sewer service to properties along Van Buren Boulevard, from the intersection of King Avenue (to the west) to the intersection of Wood Road (to the east). Said facilities will also provide sewer service to a proposed residential development (Tract 36897), located north of Van Buren Boulevard, on property northwesterly of the intersection of Iris Avenue and Chicago Avenue, and a neighboring parcel (west of Tract 36897) identified as Assessor's Parcel Number (APN) 245-300-004. The Project includes the following components:

Proposed Sewer and Force Main Pipelines (ranging from 6 inches to 12 inches in diameter)

- Construction of approximately 10,900 linear feet (LF) of new gravity sewer main in Van Buren Boulevard, from Wood Road to Washington Street;
- Construction of approximately 900 LF of new gravity sewer main in Washington Street, from Van Buren Boulevard to the new Krameria Avenue Lift Station (Krameria LS);

- Construction of approximately 1,300 LF of new gravity sewer main in Van Buren Boulevard, from King Avenue to Washington Street;
- Construction of approximately 900 LF each of two new parallel sewer force mains in Washington Street, from the new Krameria Avenue LS to Van Buren Boulevard; and
- Construction of approximately 10,900 LF each of two new parallel sewer force mains in Van Buren Boulevard, from Washington Street to Wood Road.

Proposed Krameria LS

Construction of the new Krameria LS, with an ultimate design capacity of 835 gallons per minute, will consist of the following:

- Two (2) 125 horsepower (hp) submersible pumping units (one duty and one standby);
- Ten-foot diameter wet well;
- Emergency storage vault;
- Electrical switchgear and control panels for pumps, automatic transfer switch, and main electrical service disconnect, all housed within a sunshade structure;
- 300-kilowatt emergency standby generator housed within a sound attenuated enclosure;
- Packaged biofilter odor control system (for wet well odor control);
- Calcium nitrate chemical injection system (for force main odor control); and
- Engine-driven backup pump housed within a sound attenuated enclosure.

Existing Martin Luther King 1 Lift Station

Demolition and removal of the existing City-owned Martin Luther King 1 Lift Station (MLK1 LS).

Existing Wood Road LS

Construction of a belowgrade emergency storage tank to provide 80 minutes of emergency sewage storage at the City's existing Wood Road Lift Station (Wood Road LS).

2. Purpose

The purpose of this Project is to provide sewer service facilities to properties along Van Buren Boulevard (from King Avenue to Wood Road) and a proposed residential development north of Van Buren Boulevard (Tract 36897 and adjoining parcel APN 245-300-004). The developed properties currently dispose of sewage via individual septic systems located within their respective property boundaries.

The Project is also intended to reduce the likelihood of a sewer system overflow by providing additional emergency facilities at the Wood Road LS. Said facilities will provide for additional sewage storage in the event of a total plant failure.

The MLK1 LS will be demolished and removed because it will no longer be needed once the other Project facilities become operational.

C. ENVIRONMENTAL SETTING

1. Location

The Project is located in the City of Riverside, as well as within some nearby unincorporated areas adjoining the City, as described below and depicted in **Figures 1 through 5** herein.

Sewer and Force Main Pipelines

Gravity Sewer Mains: The proposed gravity sewer mains are located in Van Buren Boulevard (extending from Wood Road to Washington Street, and extending from King Avenue to Washington Street) and within Washington Street (extending from Van Buren Boulevard to the Krameria Avenue LS).

Sewer Force Mains: The proposed sewer force mains are located in Washington Street (extending from the Krameria Avenue LS to Van Buren Boulevard), and within Van Buren Boulevard (extending from Washington Street to Wood Road).

The proposed Sewer and Force Main Pipelines are all located within existing paved streets. Refer also to **Figures 1 and 2** herein.

Krameria LS

The site of the proposed Krameria LS is located at the northeasterly corner of the intersection of Krameria Avenue and Washington Street in the community of Woodcrest, in unincorporated Riverside County, on a parcel identified as APN 274-040-051. Refer to **Figure 3** herein.

MLK1 LS

The existing MLK1 LS is located at 18601 Van Buren Boulevard in the City of Riverside. It is located in a fenced area behind the sidewalk and in front of a commercial building, in a landscaped area, on a parcel identified as Assessor's Parcel Number (APN) 266-040-051. Refer to **Figure 4** herein.

Wood Road LS

The existing Wood Road LS is located at 7802 Wood Road in the City of Riverside, just north of Zamora Way, on a parcel identified as APN 276-311-016. Refer to **Figure 5** herein.

2. Climate

Climate in the Project area is characterized by low to medium humidity, high summer temperatures, and mild dry winters. The area normally receives an average annual precipitation of approximately 10.2 inches, most of which occurs during December through March. Midsummer temperatures commonly approach, and occasionally exceed, 100 degrees Fahrenheit (°F).

3. Land Use

The Project facilities are located within and adjacent to existing paved streets in suburban areas largely consisting of commercial and residential development, as described in additional detail below.

Sewer and Force Main Pipelines

The Sewer and Force Main Pipelines are located within existing paved streets, namely Van Buren Boulevard and Washington Street. Both of these streets are classified as

"arterial streets", which have the highest traffic carrying capacity in the roadway system, carry through traffic, and connect to the state highway system.

Krameria LS

The Krameria LS is located on a parcel that is currently vacant and is surrounded by residential development, including Woodcrest Elementary School to the west. The land use designation of the Krameria LS site is Rural Community-Very Low Density Residential (RC-VLDR).

MLK1 LS

The MLK1 LS is an existing lift station facility that is located within a landscaped area on commercially-developed property along Van Buren Boulevard.

Wood Road LS

The Wood Road LS is an existing lift station facility located within an existing residential neighborhood, adjacent to a willow riparian woodland habitat preserve to the north.

D. COMPLIANCE WITH CEQA

This document has been prepared in compliance with the provisions of the California Environmental Quality Act, codified in California Public Resources Code, Division 13, Section 21000 *et seq* (CEQA) and the State CEQA Guidelines (California Code of Regulations, Title 14, Section 15000 *et seq*). Pursuant to CEQA and the State CEQA Guidelines, this Initial Study has been prepared to determine whether the Project may have a significant effect on the environment.

This Initial Study for City of Riverside's Van Buren Boulevard Sewer Installation Project has been prepared by Krieger & Stewart, Incorporated under contract with the City to comply with the provisions of CEQA.

E. LEAD AGENCY

City of Riverside is lead agency for the Project, as it is the public agency with the primary responsibility for preparing CEQA documents and for carrying out and approving the Project. Since the City is responsible for the Project, it must comply with the requirements of CEQA and the State CEQA Guidelines issued by the State of California.

The City routinely constructs new facilities, maintains them, and replaces them as necessary to maintain adequate, reliable, and safe domestic water service and wastewater service to its customers. The Project is a continuation of the authority that the City has exercised in the past.

F. PUBLIC INFORMATION DOCUMENT

This is a public information document prepared in accordance with CEQA and the State CEQA Guidelines. The purposes of this Initial Study are to provide the City with information to use as a basis for identifying the potential environmental impacts of the Project, for determining the appropriate CEQA document to prepare for the Project, to facilitate environmental assessment of the Project, and to provide documentation of the factual basis for the finding in the Project's Mitigated Negative Declaration. Additionally, this document identifies mitigation intended to avoid or reduce to levels less than significant any adverse environmental impacts of the Project.

PART 2
ENVIRONMENTAL EFFECTS AND CHECKLIST

PART 2 - ENVIRONMENTAL EFFECTS AND CHECKLIST

A. PROJECT INFORMATION

1. Project Title:

Van Buren Boulevard Sewer Installation Project

2. Lead Agency Name and Address:

City of Riverside Public Works Department
3900 Main Street, 4th Floor
Riverside, California 92522

3. Contact Person and Phone Number:

Thuy Nguyen, Principal Engineer
(951) 826-5706

4. Project Location:

Refer to **Part 1.C(1)**, beginning on page 3 herein. Refer also to **Figures 1 through 5** herein.

5. Project Sponsor's Name and Address:

City of Riverside Public Works Department
3900 Main Street, 4th Floor
Riverside, California 92522

6. General Plan Designation:

Sewer and Force Main Pipelines

Van Buren Boulevard:

- Urban Arterial (152-ft right-of-way; County of Riverside)
- 120-ft Arterial (6 lanes, Scenic Boulevard, Parkway; City of Riverside)

Washington Street:

- Secondary (100-ft right-of-way; County of Riverside)

Krameria LS

- Rural Community-Very Low Density Residential (RC-VLDR; County of Riverside)

MLK1 LS

- Commercial (C; City of Riverside)

Wood Road LS

- Very Low Density Residential (VLDR; City of Riverside)

7. Zoning:

Sewer and Force Main Pipelines: Public street rights-of-way

Krameria LS: Residential-Agricultural (R-A; County of Riverside)

MLK1 LS: Commercial Retail (CR, City of Riverside)

Wood Road LS: One-Family Dwellings - 1/2 Acre Minimum (R-1-1/2; City of Riverside)

8. Description of Project:

See **Part 1.B**, beginning on page 2 herein.

9. Surrounding Land Uses and Setting:

See **Part 1.C**, beginning on page 3 herein.

10. Other public agencies whose approval may be required (e.g., permits, financing approval, or participation agreement):

- Western Municipal Water District (owner of Krameria LS site)
- County of Riverside Department of Transportation (for work within public street rights-of-way)
- Regional Water Quality Control Board, Santa Ana River Region

11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code Section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

The City mailed out formal notification of the Project to nine local Native American tribes on July 3, 2019. The City received responses from five tribes: Agua Caliente Band of Cahuilla Indians (ACBCI) on July 9, 2019; Soboba Band of Luiseño Indians (Soboba) on July 20, 2019; Morongo Band of Mission Indians (Morongo) on July 31, 2019; and Rincon Band of Luiseño Indians (Rincon) and Pechanga Band of Luiseño Indians (Pechanga) on August 2, 2019. ACBCI requested additional project information and did not request consultation; all of the other tribes listed above requested formal consultation on the Project.

The City has sent, via email, to each of the tribes listed above, copies of the cultural resources assessments for the Project sites and has initiated formal consultation with the tribes requesting consultation on the Project.

Tribal Cultural Resources are also discussed in **Issue XVIII** herein.

B. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

- ❑ Aesthetics
- ❑ Agriculture/Forestry Resources
- ❑ Air Quality
- ❑ Biological Resources
- ❑ Cultural Resources
- ❑ Energy
- ❑ Geology/Soils
- ❑ Greenhouse Gas Emissions
- ❑ Hazards & Hazardous Materials
- ❑ Hydrology/Water Quality
- ❑ Land Use/Planning
- ❑ Mineral Resources
- ❑ Noise
- ❑ Population/Housing
- ❑ Public Services
- ❑ Recreation
- ❑ Transportation
- ❑ Tribal Cultural Resources
- ❑ Utilities/Service Systems
- ❑ Wildfire
- ❑ Mandatory Findings of Significance

C. DETERMINATION (To be completed by the Lead Agency):

On the basis of this initial evaluation:

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

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

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

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

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

DFS — 12/31/19

David F. Scriven — Date
KRIEGER & STEWART, INCORPORATED
for CITY OF RIVERSIDE PUBLIC WORKS DEPARTMENT

D. EVALUATION OF ENVIRONMENTAL IMPACTS

1. 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 projects like the one involved (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).

2. 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.

3. Once the lead agency has determined that a particular physical impact may occur, then 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 is significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an Environmental Impact Report (EIR) is required.

4. "Negative Declaration: 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." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).

5. Earlier analyses may be used where, pursuant to the tiering, 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. Identify and state where they are available for review.

   b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document

pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

c. Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g. general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7. Supporting Information Sources. A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9. The explanation of each issue should identify:

a. The significance criteria or threshold, if any, used to evaluate each question; and

b. The mitigation measure identified, if any, to reduce the impact to less than significant.

E. ENVIRONMENTAL CHECKLIST

Issue I. Aesthetics

Except as provided in Public Resources Code Section 21099, would the Project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	❑	❑	❑	☒

Sewer and Force Main Pipelines

The sewer and force main pipelines will be located belowground within public street rights-of-way and will not have an adverse effect on a scenic vista.

Krameria LS

The Krameria LS will be located on a vacant site in an existing residential neighborhood. There are no scenic vistas within view from the Krameria LS site and its surroundings, and proposed facilities on the site will not exceed 15 feet in height. The Krameria LS will not have an adverse effect on a scenic vista.

MLK1 LS

The MLK1 LS is being demolished and removed from an existing commercial property and will not have an adverse effect on a scenic vista.

Wood Road LS

The Wood Road LS is located in an existing residential neighborhood. Improvements at the Wood Road LS will be at or below the ground surface and will not have an adverse effect on a scenic vista.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	❑	☒	❑	❑

Sewer and Force Main Pipelines

Although the sewer and force main pipelines are not located within a state scenic highway, a historic building located at 17455 Van Buren Boulevard (currently identified as the Robert L. Wilks, Jr. Chapel) is located just south of the pipelines alignment. In order to minimize the potential for risks to the historic building resulting from vibration generated during Project construction, Mitigation

Measure NOISE-1 has been incorporated into the Project. NOISE-1 is summarized below and is set forth in the Mitigation Monitoring and Reporting Program for the Project. Refer also to ***Issue XIII(b)*** *herein. With incorporation of Mitigation Measure NOISE-1, the Sewer and Force Main Pipelines would not substantially damage scenic resources.*

> ***Mitigation Measure NOISE-1: Vibratory Rollers and Compactors***
> *During construction of the Sewer and Force Main Pipelines, vibratory rollers and vibratory compactors shall not be operated within 125 feet of the historic structure located at 17455 Van Buren Boulevard, Riverside, which is currently known as the Robert L. Wilks, Jr. Chapel.*

Krameria LS

The Krameria LS is not located along a scenic highway, and the site does not contain any scenic resources. Therefore, the Krameria LS will not damage any scenic resources.

MLK1 LS

The MLK1 LS is not located along a scenic highway, and the site does not contain any scenic resources. Therefore, demolition and removal of the MLK1 LS will not damage any scenic resources.

Wood Road LS

The Wood Road LS is not located along a scenic highway, and the site does not contain any scenic resources. Therefore, improvements to the Wood Road LS will not damage any scenic resources.

Issue I. Aesthetics (continued)

c) In non-urbanized 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?	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	❑	❑	❑	☒

Sewer and Force Main Pipelines

The proposed sewer and force main pipelines are located within existing paved streets in an urbanized area and will not conflict with applicable zoning or other regulations governing scenic quality.

Krameria LS

The proposed Krameria LS is located in a residential neighborhood within an urbanized area and will not conflict with applicable zoning or other regulations governing scenic quality.

MLK1 LS

The existing MLK1 LS is located in an urbanized, commercial area, and demolition and removal of the MLK1 LS will not conflict with applicable zoning or other regulations governing scenic quality.

Wood Road LS

The existing Wood Road LS is located in a residential neighborhood within an urbanized area, and improvements at the Wood Road LS will not conflict with applicable zoning or other regulations governing scenic quality.

Issue I. Aesthetics (continued)

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	❑	❑	❑	☒

Sewer and Force Main Pipelines

The Sewer and Force Main Pipelines do not include lighting and will not create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

Krameria LS

The Krameria LS will include lighting adequate for safety and security during operation and maintenance. The lighting will be designed to avoid glare or other impacts to the nearby roadway, school, and residences. Lighting will be directed downward and toward the facility and will not create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

MLK1 LS

Demolition and removal of the existing MLK1 LS will not create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

Wood Road LS

Proposed improvements at the Wood Road LS do not include lighting. Construction and operation of improvements at the existing Wood Road LS will not create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

Issue II. Agriculture and Forest Resources

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California 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.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project 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?	❑	❑	❑	☒

Sewer and Force Main Pipelines

The alignments of the Sewer and Force Main Pipelines are located within existing street rights-of-way amid land designated as "Urban and Built-Up Land" pursuant to the map titled, Riverside County Important Farmland 2016, Sheet 1 of 3, published July 2017 by the State of California Department of Conservation, Division of Land Resources Protection, Farmland Mapping and Monitoring Program. Therefore, construction and operation of the Sewer and Force Main Pipelines will not convert Farmland to non-agricultural use.

Krameria LS

The Krameria LS site is located on land designated as "Urban and Built-Up Land" pursuant to the map titled, Riverside County Important Farmland 2016, Sheet 1 of 3, published July 2017 by the State of California Department of Conservation, Division of Land Resources Protection, Farmland Mapping and Monitoring Program. Therefore, construction and operation of the Krameria LS will not convert Farmland to non-agricultural use.

MLK1 LS

The MLK1 LS is located on land designated as "Urban and Built-Up Land" pursuant to the map titled, Riverside County Important Farmland 2016, Sheet 1 of 3, published July 2017 by the State of California Department of Conservation, Division of Land Resources Protection, Farmland Mapping and Monitoring Program. Therefore, demolition and removal of the MLK1 LS will not convert Farmland to non-agricultural use.

Wood Road LS

The Wood Road LS site is located on land designated as "Urban and Built-Up Land" pursuant to the map titled, Riverside County Important Farmland 2016, Sheet 1 of 3, published July 2017 by the State of California Department of Conservation, Division of Land Resources Protection, Farmland Mapping and Monitoring Program. Therefore, construction and operation of the improvements at the existing Wood Road LS will not convert Farmland to non-agricultural use.

Definition of Urban and Built-Up Land: According to the Farmland Mapping and Monitoring Program, "Urban and Built-Up Land is occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel. Common examples include residential, industrial, commercial, institutional facilities, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, and water control structures."

Issue II. Agriculture and Forest Resources (continued)

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?	❑	❑	❑	☒

Sewer and Force Main Pipelines

The Sewer and Force Main Pipelines are located within existing paved streets. Based on the map, Riverside County Williamson Act FY 2015/2016, Sheet 1 of 3, published in 2016 by the California Department of Conservation, Division of Land Resource Protection, there are no Williamson Act contracts in effect on lands located along the alignments of the pipelines. For these reasons, the Sewer and Force Main Pipelines will not conflict with existing zoning for agricultural use or with a Williamson Act Contract

Krameria LS

The Krameria LS site is located in an existing residential neighborhood and is currently zoned as "Residential-Agricultural" by the County of Riverside. Based on the map, Riverside County Williamson Act FY 2015/2016, Sheet 1 of 3, published in 2016 by the California Department of Conservation, Division of Land Resource Protection, the Krameria LS site is not located on land that is within a Williamson Act contract. For these reasons, construction and operation of the Krameria LS will not conflict with existing zoning for agricultural use or with a Williamson Act contract.

MLK1 LS

The MLK1 LS site is located in an existing commercial area on land zoned as "Commercial Retail" by the City of Riverside. Based on the map, Riverside County Williamson Act FY 2015/2016, Sheet 1 of 3, published in 2016 by the California Department of Conservation, Division of Land Resource Protection, the MLK1 LS site is not located on land that is within a Williamson Act contract. For these reasons, demolition and removal of the MLK1 LS will not conflict with existing zoning for agricultural use or with a Williamson Act contract.

Wood Road LS

The Wood Road LS site is located in an existing residential neighborhood. The site is currently zoned as "One-Family Dwellings - ½ Acre Minimum" by the City of Riverside. Based on the map, Riverside County Williamson Act FY 2015/2016, Sheet 1 of 3, published in 2016 by the California Department of Conservation, Division of Land Resource Protection, the Wood Road LS site is not located on land that is within a Williamson Act contract. For these reasons, improvements at the existing Wood Road LS will not conflict with existing zoning for agricultural use or with a Williamson Act contract.

Issue II. Agriculture and Forest Resources (continued)

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Would the project 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))?	❑	❑	❑	☒

Sewer and Force Main Pipelines

The Sewer and Force Main Pipelines are located within existing street rights-of-way, and there are no lands zoned for forest land or timberland located adjacent to the pipeline alignments. Therefore, construction and operation of the Sewer and Force Main Pipelines will not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production.

Krameria LS

The Krameria LS site is not zoned for forest land or timberland and is not located adjacent to any land with such zoning designations. Therefore, construction and operation of the Krameria LS will not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production.

MLK1 LS

The MLK1 LS site is not zoned for forest land or timberland and is not located adjacent to any land with such zoning designations. Therefore, demolition and removal of the MLK1 LS will not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production.

Wood Road LS

The Wood Road LS site is not zoned for forest land or timberland and is not located adjacent to any land with such zoning designations. Therefore, construction and operation of the improvements to the existing Wood Road LS would not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production.

Issue II. Agriculture and Forest Resources (continued)

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Would the project result in the loss of forest land or conversion of forest land to non-forest use?	❑	❑	❑	☒

Sewer and Force Main Pipelines

The Sewer and Force Main Pipelines are located within existing paved streets that do not adjoin any forest land. Therefore, construction and operation of the Sewer and Force Main Pipelines will not result in the loss of forest land or conversion of forest land to non-forest use. Refer also to ***Issue II(c)*** *above.*

Krameria LS

The Krameria LS is located on a vacant site that is within a residential neighborhood and does not adjoin any forest land. Therefore, construction and operation of the Krameria LS will not result in the loss of forest land or conversion of forest land to non-forest use. Refer also to ***Issue II(c)*** *above.*

MLK1 LS

The existing MLK1 LS is located within a commercial area and does not adjoin any forest land. Therefore, demolition and removal of the existing MLK1 LS will not result in the loss of forest land or conversion of forest land to non-forest use. Refer also to ***Issue II(c)*** *above.*

Wood Road LS

The existing Wood Road LS is located in an existing residential neighborhood, just south of a willow riparian woodland habitat preserve. Construction and operation of the improvements to the existing

Wood Road LS will remain within the Wood Road LS site, will not disturb vegetated areas to the north, and will not result in the loss of forest land or conversion of forest land to non-forest use. Refer also to ***Issue II(c)*** *above.*

Issue II. Agriculture and Forest Resources (continued)

e) Would the project 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?	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	❑	❑	❑	☒

Sewer and Force Main Pipelines

The Sewer and Force Main Pipelines will not involve changes in the existing environment that could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use. Refer also to ***Issues II(a) through II(d)****, above.*

Krameria LS

The Krameria LS will not involve changes in the existing environment that could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use. Refer also to ***Issues II(a) through II(d)****, above.*

MLK1 LS

The MLK1 LS will not involve changes in the existing environment that could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use. Refer also to ***Issues II(a) through II(d)****, above.*

Wood Road LS

The Wood Road LS will not involve changes in the existing environment that could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use. Refer also to ***Issues II(a) through II(d)****, above.*

Issue III. Air Quality

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

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project conflict with or obstruct implementation of the applicable air quality plan?	❑	❑	☒	❑

The Project site is located within the South Coast Air Basin (SCAB), which encompasses all of Orange County and the non-desert portions of Los Angeles, San Bernardino, and Riverside Counties. Air quality conditions within the SCAB are under the jurisdiction of the South Coast Air Quality Management District (SCAQMD).

A project is considered to conflict with or obstruct implementation of the applicable air quality plan if it results in population or employment growth that would exceed the estimates for such growth that are set forth in the applicable air quality plan. The air quality plan applicable to the Project area is the Final 2016 Air Quality Management Plan, dated March 2017 (Air Quality Plan), which was prepared and adopted by the SCAQMD.

The Air Quality Plan sets forth goals and strategies for achieving federal air quality standards and healthful air amidst a growing population. The growth projections in the Air Quality Plan are based on The 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (2016 RTP), dated April 2016, which was prepared and adopted by the Southern California Association of Governments (SCAG). Based upon Krieger & Stewart staff's communications with SCAG staff, the 2016 RTP assigned population growth to areas in which a general plan or specific plan indicated that the parcels would be developed as residential areas. Based on Figure 3 of the Lake Mathews/Woodcrest Area Plan (last revised by County of Riverside on December 6, 2016), the proposed residential development (Tract 36897) and adjoining areas are shown as having a land use designation of "Rural Community - Very Low Density Residential"; therefore, this residential development (which would be served by the facilities constructed pursuant to this Project) is included in the existing growth estimates set forth in the Air Quality Plan. For these reasons, the Project will not conflict with or obstruct implementation of the applicable air quality plan.

Sewer and Force Main Pipelines

The Sewer and Force Main pipelines are intended to provide sewer service to existing commercial development along Van Buren Boulevard and a proposed residential development to the north and, as

described above, would not result in an unexpected increase in population in the area. For these reasons, construction and operation of the Sewer and Force Main Pipelines will not conflict with or obstruct implementation of the Air Quality Plan.

Krameria LS

The Krameria LS is intended to provide sewer service to existing commercial development along Van Buren Boulevard and a proposed residential development to the north and, as described above, will not result in an unexpected increase in population in the local community. For these reasons, construction and operation of the Krameria LS would not conflict with or obstruct implementation of the Air Quality Plan.

MLK1 LS

Demolition and removal of the MLK1 LS will not result in an unexpected increase in population or in the area and would not conflict with or obstruct implementation of the Air Quality Plan.

Wood Road LS

Improvements at the existing Wood Road LS are intended to provide emergency overflow containment of sewage, will not result in an unexpected increase in population in the area, and will not conflict with or obstruct implementation of the Air Quality Plan.

Impacts related to greenhouse gases are discussed in ***Issue VIII*** *herein.*

Issue III. Air Quality (continued)

b) Would the project 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 threshold?	Potentially Significant Impact ❑	Less Than Significant with Mitigation Incorporated ❑	Less Than Significant Impact ☒	No Impact ❑

The Project is located within the South Coast Air Basin (SCAB), which encompasses all of Orange County and the non-desert portions of Los Angeles, San Bernardino, and Riverside Counties. Air quality conditions in the SCAB are under the jurisdiction of the South Coast Air Quality Management District (SCAQMD).

State and federal designations based on the California Ambient Air Quality Standards (CAAQS) and the National Ambient Air Quality Standards (NAAQS) for the SCAB are listed below. "Attainment" is the category given to an area that has had no CAAQS or NAAQS violations in the past 3 years. "Non-

Attainment" is the category given to an area that has had one or more such violations in the past 3 years. An area is considered "Unclassified" when there is insufficient data.

Under the CAAQS, the SCAB is classified as Non-Attainment for ozone (O_3), for particulate matter measuring greater than 2.5 microns and up to 10 microns or less in diameter (PM_{10}), and for particulate matter measuring 2.5 microns or less in diameter ($PM_{2.5}$). The SCAB is classified as Attainment for carbon monoxide (CO), sulfur dioxide (SO_2), nitrogen dioxide (NO_2), sulfates (SO_4), and lead (Pb). Additional information about each of these pollutants and the CAAQS is available at the California Air Resources Board website at www.arb.ca.gov.

Under the NAAQS, the SCAB is classified as Non-Attainment for O_3 and $PM_{2.5}$ and as Attainment for CO, NO_2, SO_2, PM_{10}, and lead. Additional information about these pollutants and the NAAQS is available on the United States Environmental Protection Agency's website at www.epa.gov/criteria-air-pollutants.

*Project construction will result in a temporary increase in quantities of air pollutants in the area, including airborne dust, that are expected to result from construction vehicles and equipment. Dust will be mitigated to the extent possible using dust palliatives (such as water) and best management practices (BMPs) specified in the construction contract documents for the Project. Quantities of construction air pollutant emissions will not exceed the daily construction thresholds set forth by SCAQMD (as listed in **Table 1**) and will not result in a cumulatively considerable net increase in O_3, PM_{10}, or $PM_{2.5}$ emissions, for which the Project region is designated non-attainment under the CAAQS, the NAAQS, or both.*

*Project construction and operation air pollutant emissions were estimated using the California Emissions Estimator Model (CalEEMod, Version 2016.3.2). Copies of the CalEEMod output reports are included in **Appendix D** herein.*

*As shown in **Table 1**, below, short-term air pollutant emissions expected to be generated during construction of each Project component will not exceed the peak daily construction thresholds set forth by SCAQMD and are considered less than significant. While construction scheduling has not yet been determined, any of the Project components could potentially be constructed concurrently, with the exception of the Sewer and Force Main Pipelines. In order to keep Van Buren and Washington Street open, the gravity sewer mains and the force mains will be constructed separately and will require only lane closures (not full road closures). Full road closures would be required if the gravity sewer mains and the force mains were to be constructed concurrently.*

Ongoing operation of the Project will result in minimal quantities of air pollutant emissions that are considered less than significant. Construction and operation air pollutant emissions are further summarized for each Project component following ***Table 1****.*

Table 1
Estimated Peak Day Construction Equipment Exhaust Emissions for Van Buren Boulevard Sewer Installation Project

Project Components [1]	Pollutants (pounds/day)					
	ROG	NO_X	CO	SO_x	PM_{10}	$PM_{2.5}$
Sewer Pipelines	**3.2629**	**30.0928**	**27.7100**	**0.0548**	**1.6190**	**1.4584**
Force Main Pipelines	**3.2724**	**29.9601**	**27.2364**	**0.0540**	**1.6343**	**1.4723**
Krameria LS	**2.5746**	**22.2450**	**22.3016**	**0.0452**	**1.1851**	**1.0418**
MLK1 LS	**1.3740**	**12.1798**	**14.5847**	**0.0240**	**0.6803**	**0.6116**
Wood Road LS	**2.8830**	**27.0683**	**23.7499**	**0.0528**	**1.3068**	**1.1765**
SCAQMD Thresholds for Construction[2]	75	100	550	150	150	55
Exceeds Threshold? (Yes/No)	No	No	No	No	No	No

(1) Sewer Pipelines and Force Main Pipelines will be constructed consecutively, not concurrently. All other Project components may be constructed concurrently.

(2) South Coast AQMD Air Quality Significance Thresholds, April 2019

Sewer and Force Main Pipelines

As shown in ***Table 1****, air pollutant emissions resulting from construction of the Sewer and Force Main Pipelines will not exceed SCAQMD's maximum daily significance thresholds for construction. The Sewer and Force Main Pipelines will not generate air pollutant emissions during ongoing operation. Therefore, air pollutant emissions generated by construction and operation of the Sewer and Force Main Pipelines will be less than significant.*

Krameria LS

As shown in ***Table 1****, air pollutant emissions resulting from construction of the Krameria LS will not exceed SCAQMD's maximum daily significance thresholds for construction. During operation, the Krameria LS will generate air pollutant emissions as a result of vehicle miles traveled to and from the site during operation (approximately one City vehicle trip to the site per day), and potentially operating a standby emergency generator and/or a standby emergency pump. The standby emergency generator and standby emergency pump will operate only in the event of a power failure, pump failure, or for routine testing and maintenance. Based on usage of the standby emergency equipment for up to 200 hours per year, CalEEMod estimated the resultant air pollutant emissions generated during operation as the daily maximum quantities listed in* ***Table 2****, below. Said estimated quantities are well below the SCAQMD maximum daily significance thresholds for operation. The estimated operation air pollutant emissions include those generated during operation of the emergency standby*

equipment; typical daily operation will result in much lower quantities of air pollutant emissions. For these reasons, air pollutant emissions generated during construction and operation of the Krameria LS will be less than significant.

Table 2
Estimated Peak Day Air Pollutant Emissions for Operation of the Krameria Lift Station

	Pollutants (pounds/day)					
	ROG	**NO_X**	**CO**	**SO_x**	**PM_{10}**	**$PM_{2.5}$**
Krameria LS Operation(1)	**0.8204**	**2.2934**	**2.0922**	**0.0039**	**0.1207**	**0.1207**
SCAQMD Thresholds for Operation(2)	55	55	550	150	150	55
Exceeds Threshold? (Yes/No)	No	No	No	No	No	No

(1) Includes operation of standby emergency equipment

(2) South Coast AQMD Air Quality Significance Thresholds, April 2019

MLK1 LS

*As described above and shown in **Table 1**, air pollutant emissions resulting from demolition and removal of the MLK1 LS will not exceed SCAQMD's maximum daily significance thresholds for construction. Because the MLK1 LS is being removed, there will be no ongoing operation and maintenance of said facility. Therefore, air pollutant emissions generated by demolition and removal of the MLK1 LS will be less than significant.*

Wood Road LS

*As described above and shown in **Table 1**, air pollutant emissions resulting from construction of improvements at the existing Wood Road LS will not exceed SCAQMD's maximum daily significance threshold for construction. The Wood Road LS is an existing, operating facility, and the addition of the proposed improvements at the Wood Road LS will not result in an increase in operating emissions at the Wood Road LS site. Therefore, air pollutant emissions generated by construction and operation of improvements at the Wood Road LS will be less than significant.*

Issue III. Air Quality (continued)

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Would the project expose sensitive receptors to substantial pollutant concentrations?	❑	❑	☒	❑

Sewer and Force Main Pipelines

The Sewer and Force Main Pipelines alignment crosses through residential and commercial areas, including areas containing residences, schools, churches, and businesses, all of which could be considered sensitive receptors. Quantities of air pollutant emissions will temporarily increase along the Sewer and Force Main Pipelines alignment during construction; however, as described in ***Issue III(b)*** *herein, said increase will not exceed the daily construction emissions thresholds established by the SCAQMD. Further, this increase in emissions will be temporary and short-term. The Sewer and Force Main Pipelines will not generate air pollutant emissions during operation. For these reasons, construction and operation of the Sewer and Force Main Pipelines will not expose sensitive receptors to substantial pollutant concentrations.*

Krameria LS

The Krameria LS site is surrounded by residential properties and by Woodcrest Elementary School to the west across Washington Street. Quantities of air pollutant emissions will temporarily increase during construction of the Krameria LS, and will minimally increase during ongoing operation of the Krameria LS; however, as described in ***Issue III(b)*** *herein, said increases will not exceed the daily construction emissions or operation emissions thresholds established by the SCAQMD and will be less than significant. For these reasons, the Krameria LS will not expose sensitive receptors to substantial pollutant concentrations.*

MLK1 LS

The MLK1 LS is located in a landscaped area of an existing commercial property in an urban area. Quantities of air pollutant emissions will temporarily increase during demolition and removal of the MLK1 LS; however, as described in ***Issue III(b)*** *herein, said increase will not exceed the daily construction emissions thresholds established by the SCAQMD and will be very short-term. The MLK1 LS is being removed and will not generate ongoing air pollutant emissions. For these reasons, demolition and removal of the MLK1 LS will not expose sensitive receptors to substantial pollutant concentrations.*

Wood Road LS

The existing Wood Road LS is surrounded by residential properties, with a willow riparian woodland habitat preserve located to the north. Quantities of air pollutant emissions will temporarily increase during construction of improvements at the Wood Road LS; however, as described in ***Issue III(b)*** *herein, said increase will not exceed the daily construction emissions thresholds established by the SCAQMD and would be short-term. Further, the improvements proposed at the Wood Road LS will not generate air pollutant emissions during operation. For these reasons, construction and operation of improvements at the Wood Road LS improvements will not expose sensitive receptors to substantial pollutant concentrations.*

Issue III. Air Quality (continued)

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	❑	❑	☒	❑

Sewer and Force Main Pipelines

Construction of the Sewer and Force Main Pipelines may result in some odors during the replacement of asphalt in the streets after the pipelines are constructed. These asphalt odors will not be concentrated in the same place for a substantial period of time, will be short-term, and will be less than significant.

The Sewer and Force Main Pipelines are located below ground within public street rights-of-way. Sewers have the potential to result in odors in the proximity of the manholes, which are located every few hundred feet along the alignment. To control odors along the sewer alignment, a calcium nitrate chemical injection system is included at the Krameria LS for force main odor control in order to reduce odors along the sewer alignment. With inclusion of the calcium nitrate chemical injection system, the Sewer and Force Main Pipelines will not result in other emissions, including those leading to odors, that would adversely affect a substantial number of people.

Krameria LS

Without the use of an odor control system, operation of the Krameria LS has the potential to result in sewage odors that could affect nearby residences and the nearby Woodcrest Elementary School. However, because the Krameria LS includes a packaged biofilter odor control system to control odors from the wet well, the Krameria LS will not result in other emissions, including those leading to odors, that would adversely affect a substantial number of people.

MLK1 LS

Demolition and removal of the MLK1 LS will not result in other emissions, including those leading to odors, that would adversely affect a substantial number of people.

Wood Road LS

The emergency storage tank to be constructed at the existing Wood Road LS would only be used to contain sewage in the event of failure of the Wood Road LS, including all standby emergency equipment. Currently, a failure lasting greater than fifteen minutes at peak flow would result in a sewer system overflow. The emergency storage tank will provide 80 minutes of emergency sewage storage at peak flow in the event of failure of the Wood Road LS. Therefore, any sewage odors resulting from use of the emergency storage tank would not be greater than those resulting from failure of the Wood Road LS under current conditions, and the improvements at the existing Wood Road LS will not result in other emissions, including those leading to odors, that would adversely affect a substantial number of people.

Issue IV. Biological Resources

a) Would the project 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?	Potentially Significant Impact ❑	Less Than Significant with Mitigation Incorporated ☒	Less Than Significant Impact ❑	No Impact ❑

*LSA Associates, Inc. performed a biological resources assessment and MSHCP consistency analysis along the Sewer and Force Main Pipelines alignment, the findings and recommendations of which are set forth in the report titled, Western Riverside County Multiple Species Habitat Conservation Plan Consistency Analysis and Biology Report, Van Buren Boulevard Sewer Installation Project, City of Riverside, Riverside County, California, dated October 2019 (LSA Report). A copy of the LSA Report is included in **Appendix B** herein. The City of Riverside is a signatory to the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP), and therefore must comply with the provisions set forth therein.*

- *Burrowing Owl. Based on a burrowing owl habitat assessment conducted for the Project by LSA, suitable habitat for burrowing owl is located along portions of the Sewer and Force Main Pipelines alignment, on the Krameria LS site, and on the westernmost portion of the Wood Road LS, as depicted on Figure 6 of the LSA Report, a copy of which is included in **Appendix B** herein. Due to the presence of suitable burrowing owl habitat, focused burrow and burrowing owl surveys*

of the areas with suitable habitat are required by the MSHCP. Additionally, a 30-day preconstruction survey is required whether or not burrows or owls were found during the focused surveys. All surveys for burrows and burrowing owls will be performed in accordance with the Burrowing Owl Survey Instructions for the Western Riverside County Multiple Species Habitat Conservation Plan Area (Riverside County Environmental Programs Department, 2006).

- *Least Bell's Vireo. As part of its study, LSA assessed habitat suitability for riparian birds, including least Bell's vireo, southwestern willow flycatcher, and yellow-billed cuckoo, all of which generally require riparian forest habitat composed of willow and cottonwood species with a dense understory. There is riparian habitat located in several places along the Sewer and Force Main Pipelines alignment and north of the Wood Road LS site. (Potential impacts to riparian habitat are described separately in **Issue IV(b)** below.) LSA concluded that, due to lack of suitable riparian habitat, and lack of CNDDB records showing occurrence in the Project area, the southwestern willow flycatcher and the yellow-billed cuckoo are absent from the Project vicinity and that the Project would have no impact on these two bird species. Although construction of the Sewer and Force Main Pipelines and the improvements at the Wood Road LS will avoid direct impacts to nearby riparian habitat, the Project could have indirect effects on breeding least Bell's vireos, if present.*
- *Other Nesting Birds. Trees, shrubs, and other vegetation near the Sewer and Force Main Pipelines alignment, the Krameria LS, the MLK1 LS, and the Wood Road LS may provide nesting sites for birds. Nesting bird species that may occur in the area are protected by the California Fish and Game Code, the federal Migratory Bird Treaty Act, and the MSHCP.*

Sewer and Force Main Pipelines

*While no sensitive species were observed during surveys along the pipelines alignment, potential habitat for burrowing owl, least Bell's vireo, and other nesting bird species is present within areas surrounding the Sewer and Force Main Pipelines alignment along Van Buren Boulevard. Refer to the text above and to Figures 4 and 6 of the LSA Report cited above, a copy of which is included in **Appendix B** herein. In order to avoid or reduce potential impacts on burrowing owl, least Bell's vireo, and other nesting bird species, Mitigation Measures BIO-1 through BIO-3 are incorporated into the Project. Mitigation Measures BIO-1 through BIO-3 are summarized at the end of this **Issue IV(a)** and are set forth in the Mitigation Monitoring and Reporting Program for the Project, which is included in **Appendix A** herein. With incorporation of Mitigation Measures BIO-1 through BIO-3, construction and operation of the Sewer and Force Main Pipelines would not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species.*

Krameria LS

While no sensitive species were observed during the biological survey of the Krameria LS site, the site does contain suitable habitat for burrowing owls. Additionally, vegetation providing potential nesting sites for nesting birds is located in close proximity to the Krameria LS site. (Refer to the text at the beginning of this section and to Figure 6 of the LSA Report cited above, a copy of which is included in ***Appendix B*** *herein.) Therefore, in order to avoid or reduce potential impacts upon burrowing owl and other nesting bird species, Mitigation Measures BIO-1 and BIO-3 are incorporated into the Project. Mitigation Measures BIO-1 and BIO-3 are summarized at the end of this* ***Issue IV(a)*** *and are set forth in the Mitigation Monitoring and Reporting Program for the Project, which is included in* ***Appendix A*** *herein. With incorporation of Mitigation Measures BIO-1 through BIO-3, construction and operation of the Krameria LS would not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species.*

MLK1 LS

While no sensitive species were observed during the biological survey of the MLK1 LS site, vegetation providing potential nesting sites for nesting birds is located on and adjacent to the site. Therefore, Mitigation Measure BIO-3 is incorporated into the Project in order to avoid or reduce potential impacts on nesting birds. Mitigation Measure BIO-3 is summarized at the end of this ***Issue IV(a)*** *and is set forth in the Mitigation Monitoring and Reporting Program for the Project, which is included in* ***Appendix A*** *herein. With incorporation of Mitigation Measures BIO-3, demolition and removal of the MLK1 LS would not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species.*

Wood Road LS

While no sensitive species were observed during the biological survey of the Wood Road LS site, the site does contain suitable habitat for burrowing owls. Additionally, there is riparian habitat designated as a willow riparian woodland habitat preserve located directly north of the Wood Road LS site. The riparian habitat could be suitable habitat for least Bell's vireo. Further, the riparian habitat, as well as other vegetation in the vicinity provides potential nesting sites for nesting birds. Refer to the text at the beginning of this section and to Figure 6 of the LSA Report cited above, a copy of which is included in ***Appendix B*** *herein. Therefore, Mitigation Measures BIO-1 through BIO-3 are incorporated into the Project. Mitigation Measures BIO-1 and BIO-3 are summarized at the end of this* ***Issue IV(a)*** *and are set forth in the Mitigation Monitoring and Reporting Program for the Project, which is included in* ***Appendix A*** *herein. With incorporation of Mitigation Measures BIO-1 through BIO-3, construction and operation of improvements at the Wood Road LS site would not have a*

substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species.

Mitigation Measure BIO-1: Burrowing Owl

Focused burrow and burrowing owl surveys will be conducted along the Sewer and Force Main Pipelines alignment, at the Krameria LS site, and at the Wood Road LS site. The focused burrow surveys will be performed in accordance with the Burrowing Owl Survey Instructions for the Western Riverside County Multiple Species Habitat Conservation Plan Conservation Area, 2006 (Burrowing Owl Survey Instructions) and will be conducted at all areas shown on as having suitable habitat for burrowing owl, as depicted on Figure 6 of the LSA Report.

Whether or not burrows or owls are found during the focused surveys, preconstruction surveys will be conducted at each of the three sites listed above within 30 days of construction.

If burrowing owls are found at any of the Project sites during any of the surveys, then the City will consult with the California Department of Fish and Wildlife (CDFW) and the United States Fish and Wildlife Service (USFWS) to determine the appropriate actions prior to proceeding with construction on the site that contains or is in the vicinity of burrowing owls.

Mitigation Measure BIO-2: Least Bell's Vireo

In Project areas adjacent to riparian habitat (as depicted on Figure 4 of the LSA Report), if construction will occur during the least Bell's vireo breeding season of March 15 through September 1, a preconstruction survey for least Bell's vireo will be conducted prior to any vegetation clearing or ground-disturbing activities within riparian habitats adjacent to the Project site (i.e., along the Sewer and Force Main Pipelines alignment along Van Buren Boulevard and to the north of the Wood Road LS site).

If the least Bell's vireo preconstruction survey determines that least Bell's vireo are not present on or in the vicinity of the Project site, then construction may commence. If the least Bell's vireo preconstruction survey determines that least Bell's vireo are present on or adjacent to the Project site, then no construction activities will take place adjacent to the least Bell's vireo occupied habitat until the breeding season has concluded or until it has been determined by a qualified biologist that the least Bell's vireo are no longer present.

Mitigation Measure BIO-3: Nesting Birds

A nesting bird preconstruction survey will be conducted by a qualified biologist within three days prior to ground-disturbing activities at each Project site. If nesting birds are found during the preconstruction survey, then a qualified biologist will establish an exclusionary buffer around the nest(s).

The exclusionary buffer will be clearly marked in the field by construction personnel under the guidance of the qualified biologist. No construction or vegetation clearing will be conducted within the exclusionary buffer until the qualified biologist has determined that the young have fledged or the nest is no longer active.

Nesting bird habitat in or near the Project sites will be re-surveyed during the bird breeding season (February 1 through August 31) if there is a lapse in construction activities for longer than seven days.

Issue IV. Biological Resources (continued)

b) Would the project 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?	Potentially Significant Impact ❑	Less Than Significant with Mitigation Incorporated ☒	Less Than Significant Impact ❑	No Impact ❑

Sewer and Force Main Pipelines

*Based on the LSA Report cited in **Issue VI(a)** above, there are several areas along the Sewer and Force Main Pipelines alignment within Van Buren Boulevard that contain drainage features that are potential jurisdictional waters. Most of the drainage features contain riparian habitat that is dominated by a mixture of native (southern willow scrub) and non-native ornamental vegetation. The locations of these drainage features are depicted on Figure 4 of the LSA Report.*

*The Sewer and Force Main Pipelines have been designed to be constructed within the existing paved road; however, to avoid potential adverse impacts to the riparian habitat located along the Sewer and Force Main Pipelines alignment, Mitigation Measure BIO-4 is incorporated into the Project. Mitigation Measure BIO-4 is summarized below, at the end of this **Issue IV(b)**, and is set forth in the Mitigation Monitoring and Reporting Program for the Project. With incorporation of Mitigation Measure BIO-4, construction and operation of the Sewer and Force Main Pipelines would not have a substantial adverse effect on any riparian habitat or other sensitive natural community.*

Krameria LS

*Based on the LSA Report cited in **Issue IV(a)** above, there are no riparian habitats or other sensitive natural communities located on or adjacent to the Krameria LS site. For these reasons, construction and operation of the Krameria LS would not have a substantial adverse effect on any riparian habitat or other sensitive natural community.*

MLK1 LS

*The existing MLK1 LS is located on an existing commercial property along Van Buren Boulevard. Based on the LSA Report cited in **Issue IV(a)** above, there are no riparian habitats or other sensitive natural communities located on or adjacent to the MLK1 LS site. For these reasons, demolition and removal of the MLK1 LS would not have a substantial adverse effect on any riparian habitat or other sensitive natural community.*

Wood Road LS

*The Wood Road LS is an existing facility located in a residential neighborhood. Based on the LSA Report cited in **Issue IV(a)** above, there is riparian habitat located adjacent to the Wood Road LS site, to the north. The riparian habitat has been established as a willow riparian woodland habitat preserve. Improvements at the Wood Road LS site have been designed to remain within the existing Wood Road LS site and to avoid the riparian habitat to the north. To avoid potential impacts to the riparian habitat located north of the Wood Road LS site, Mitigation Measure BIO-4 is incorporated into the Project. Mitigation Measure BIO-4 is summarized below and is set forth in the Mitigation Monitoring and Reporting Program for the Project. With incorporation of Mitigation Measure BIO-4, construction and operation of improvements at the Wood Road LS would not have a substantial adverse effect on any riparian habitat or other sensitive natural community.*

Mitigation Measure BIO-4: Riparian Resources

Prior to any vegetation clearing or construction activities, highly visible barriers (such as orange construction fencing) will be installed along the boundaries of the Project footprint adjacent to riparian resources (southern willow scrub) on Van Buren Boulevard and at the Wood Road LS site. All construction equipment will be operated in a manner to prevent accidental damage to areas outside the Project footprint. No structure of any kind, or incidental storage of equipment or supplies, is allowed within the protected areas. In addition, silt fence barriers will be installed at the Project site boundary in the vicinity of riparian resources to prevent accidental deposition of fill material into areas where riparian resources are adjacent to planned grading activities.

All equipment maintenance, staging, and dispensing of fuel, oil, or any other such activities will occur in developed or designated non-sensitive upland areas. The designated upland areas will be located in such a manner as to prevent any spill runoff from reaching riparian resources.

A qualified biologist will monitor construction for the duration of Project construction activities adjacent to the areas designated as "Southern Willow Scrub/Ornamental" on Figure 4 of the LSA Report. The biological monitor will ensure that all vegetation removal, best management practices, and all avoidance and minimization measures are properly implemented.

Issue IV. Biological Resources (continued)

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Would the project 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?	❑	❑	❑	☒

Sewer and Force Main Pipelines

*Based on the LSA Report cited in **Issue IV(a)** above, there are no wetlands located on or adjacent to the Sewer and Force Main Pipelines alignment. Therefore, construction and operation of the Sewer and Force Main Pipelines would not have a substantial adverse effect on state or federally protected wetlands.*

Krameria LS

*Based on the LSA Report cited in **Issue IV(a)** above, there are no wetlands located on or adjacent to the Krameria LS site. Therefore, construction and operation of the Krameria LS would not have a substantial adverse effect on state or federally protected wetlands.*

MLK1 LS

*Based on the LSA Report cited in **Issue IV(a)** above, there are no wetlands located on or adjacent to the MLK1 LS site. Therefore, demolition and removal of the MLK1 LS would not have a substantial adverse effect on state or federally protected wetlands.*

Wood Road LS

*Based on the LSA Report cited in **Issue IV(a)** above, there are no wetlands located on or adjacent to the Wood Road LS site. Therefore, construction and operation of improvements at the Wood Road LS would not have a substantial adverse effect on state or federally protected wetlands.*

Issue IV. Biological Resources (continued)

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Would the project 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?	❑	❑	❑	☒

Sewer and Force Main Pipelines

The Sewer and Force Main Pipelines will be constructed within existing paved streets in an urban and suburban setting and would not 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.

Krameria LS

The Krameria LS site is located within an existing residential neighborhood in a suburban setting. Construction and operation of the Krameria LS would not 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.

MLK1 LS

The existing MLK1 LS is located within a landscaped area on an existing, developed commercial property in an urban setting. Demolition and removal of the MLK1 LS would not 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.

Wood Road LS

The existing Wood Road LS is located within an existing residential neighborhood in a suburban setting. Construction and operation of improvements at the Wood Road LS site would not 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.

Issue IV. Biological Resources (continued)

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	❑	❑	❑	☒

Sewer and Force Main Pipelines

Construction and operation of the Sewer and Force Main Pipelines will not conflict with any local policies or ordinances protecting biological resources. Refer also to ***Issue V(f)*** *below.*

Krameria LS

Construction and operation of the Krameria LS will not conflict with any local policies or ordinances protecting biological resources. Refer also to ***Issue V(f)*** *below.*

MLK1 LS

Demolition and removal of the MLK1 LS will not conflict with any local policies or ordinances protecting biological resources. Refer also to ***Issue V(f)*** *below.*

Wood Road LS

Construction and operation of improvements at the Wood Road LS will not conflict with any local policies or ordinances protecting biological resources. Refer also to ***Issue V(f)*** *below.*

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
f) Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	❑	❑	❑	☒

Sewer and Force Main Pipelines

The Sewer and Force Main Pipelines are located within the plan area of the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). Based on the LSA Report, the Sewer and Force Main Pipelines are not located within the MSHCP Criteria Area and are not located within Public/Quasi Public lands. The City of Riverside is a signatory to the MSHCP and the Sewer and Force Main Pipelines will comply with the provisions of the MSHCP. For these reasons, the Sewer and Force Main Pipelines will not conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved conservation plan.

Krameria LS

The Krameria LS is located within the plan area of the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). Based on the LSA Report, the Krameria LS site is located within the MSHCP Criteria Area and is not located within Public/Quasi Public lands. The City of Riverside is a signatory to the MSHCP and the Sewer and Force Main Pipelines will comply with the provisions of the MSHCP. For these reasons, the Sewer and Force Main Pipelines will not conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved conservation plan.

MLK1 LS

The Sewer and Force Main Pipelines are located within the plan area of the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). Based on the LSA Report, MLK1 LS site is not located within the MSHCP Criteria Area and is not located within Public/Quasi Public lands. The City of Riverside is a signatory to the MSHCP and demolition and removal of the MLK1 LS will comply with the provisions of the MSHCP. For these reasons, demolition and removal of the MLK1 LS will not conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved conservation plan.

Wood Road LS

The Wood Road LS site is located within the plan area of the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). Based on the LSA Report, the Wood Road LS site is not located within the MSHCP Criteria Area and is not located within Public/Quasi Public lands. The City of Riverside is a signatory to the MSHCP and the improvements at the Wood Road LS will comply with the provisions of the MSHCP. For these reasons, improvements at the Wood Road LS will not conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved conservation plan.

Issue V. Cultural Resources

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	❑	❑	❑	☒

Sewer and Force Main Pipelines

- *Van Buren Boulevard Alignment: A cultural resources assessment was conducted by Power Engineers for the Van Buren Boulevard Road Widening Project, the alignment of which includes*

the alignment of the Sewer and Force Main Pipelines within Van Buren Boulevard. The methods, findings, and recommendations of the cultural resources assessment are set forth in the report titled, Riverside County Transportation Department Van Buren Boulevard Widening Project Phase 1 Cultural Resource Survey for the City of Riverside and the County of Riverside, California, dated February 2, 2017 (Power Engineers Report). A copy of the Power Engineers Report is available for review from the City of Riverside Public Works Department.

Power Engineers found no evidence of historical or archaeological resources along the Van Buren Boulevard alignment for the road widening project, and the Sewer and Force Main Pipelines will be constructed within the existing (prior to road widening) paved street along a portion of the road widening alignment. The Power Engineers Report cited the area on the south side of Van Buren Boulevard, between Alta Cresta Avenue and Little Court, as having a high potential for buried cultural resources; however, construction of the Sewer and Force Main Pipelines will not disturb this area.

Although the Power Engineers Report did not identify any historical resources along the Van Buren Boulevard alignment, there is a historic building located at 17455 Van Buren Boulevard (currently identified as the Robert L. Wilks, Jr. Chapel), just south of the pipelines alignment. While the building will not be disturbed as part of subject Project, it could be sensitive to strong ground vibrations generated by some construction equipment. In order to minimize the potential for risks to the historic building resulting from vibration generated during Project construction, Mitigation Measure NOISE-1 has been incorporated into the Project. NOISE-1 is summarized below and is set forth in the Mitigation Monitoring and Reporting Program for the Project. Refer also to ***Issues I(b) and XIII(b)*** *herein. With incorporation of Mitigation Measure NOISE-1, construction and operation of the Sewer and Force Main Pipelines within Van Buren Boulevard would not cause a substantial adverse change in the significance of a historical resource.*

> ***Mitigation Measure NOISE-1: Vibratory Rollers and Compactors***
> *During construction of the Sewer and Force Main Pipelines, vibratory rollers and vibratory compactors shall not be operated within 125 feet of the historic structure located at 17455 Van Buren Boulevard, Riverside, which is currently known as the Robert L. Wilks, Jr. Chapel.*

- *Washington Street Alignment: A cultural resources assessment was conducted by CRM TECH for the portion of the Sewer and Force Main Pipelines that are located in Washington Street, the methods, findings, and recommendations of which are set forth in the report titled, Phase I Historical/Archaeological Resources Survey Van Buren Boulevard Sewer Installation Project,*

City of Riverside, Riverside County, California, dated September 23, 2019 (CRM TECH Report). A copy of the CRM TECH Report is included in ***Appendix C*** *herein.*

CRM TECH found no evidence of historical or archaeological resources on or adjacent to the Washington Street alignment. Therefore, construction and operation of the Sewer and Force Main Pipelines within Washington Street will not cause a substantial adverse change in the significance of a historical resource.

Krameria LS

A cultural resources assessment was conducted for the Krameria LS site by CRM TECH, the methods, findings, and recommendations of which are set forth in the report titled, Phase I Historical/Archaeological Resources Survey Van Buren Boulevard Sewer Installation Project, City of Riverside, Riverside County, California, dated September 23, 2019 (CRM TECH Report). A copy of the CRM TECH Report is included in ***Appendix C*** *herein.*

CRM TECH found no evidence of historical or archaeological resources on or adjacent to the Krameria LS site. Therefore, construction and operation of the Krameria LS will not cause a substantial adverse change in the significance of a historical resource.

MLK1 LS

A cultural resources assessment was conducted for the MLK1 LS site by CRM TECH, the methods, findings, and recommendations of which are set forth in the report titled, Phase I Historical/Archaeological Resources Survey Van Buren Boulevard Sewer Installation Project, City of Riverside, Riverside County, California, dated September 23, 2019 (CRM TECH Report). A copy of the CRM TECH Report is included in ***Appendix C*** *herein.*

CRM TECH found no evidence of historical or archaeological resources on or adjacent to the MLK1 LS site. Therefore, demolition and removal of the MLK1 LS will not cause a substantial adverse change in the significance of a historical resource.

Wood Road LS

A cultural resources assessment was conducted for the Wood Road LS site by CRM TECH, the methods, findings, and recommendations of which are set forth in the report titled, Phase I Historical/Archaeological Resources Survey Van Buren Boulevard Sewer Installation Project, City of Riverside, Riverside County, California, dated September 23, 2019 (CRM TECH Report). A copy of the CRM TECH Report is included in ***Appendix C*** *herein.*

CRM TECH found no evidence of historical or archaeological resources on or adjacent to the Wood Road LS site. Therefore, improvements at the Wood Road LS will not cause a substantial adverse change in the significance of a historical resource.

Issue V. Cultural Resources (Continued)

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	❑	☒	❑	❑

Sewer and Force Main Pipelines

- *Van Buren Boulevard Alignment: A cultural resources assessment was conducted by Power Engineers for the Van Buren Boulevard Road Widening Project, the alignment of which includes the alignment of the Sewer and Force Main Pipelines within Van Buren Boulevard. The methods, findings, and recommendations of the cultural resources assessment are set forth in the report titled, Riverside County Transportation Department Van Buren Boulevard Widening Project Phase 1 Cultural Resource Survey for the City of Riverside and the County of Riverside, California, dated February 2, 2017 (Power Engineers Report). A copy of the Power Engineers Report is available for review from the City of Riverside Public Works Department.*

  Power Engineers found no evidence of historical or archaeological resources along the Van Buren Boulevard alignment for the road widening project, and the Sewer and Force Main Pipelines will be constructed within the existing (prior to road widening) paved street along a portion of the road widening alignment. The Power Engineers Report cited the area on the south side of Van Buren Boulevard, between Alta Cresta Avenue and Little Court, as having a high potential for buried cultural resources; however, construction of the Sewer and Force Main Pipelines will not disturb this area. In order to avoid or minimize impacts in the event of discovery of a potential archaeological resource during site disturbance, Mitigation Measure CUL-1 will be implemented during construction of the Sewer and Force Main Pipelines along Van Buren Boulevard. CUL-1 is summarized at the end of this section and is set forth in the Mitigation Monitoring and Reporting Program for the Project. With the incorporation of CUL-1, demolition and removal of the MLK1 LS would not cause a substantial adverse change in the significance of an archaeological resource.

- *Washington Street Alignment: A cultural resources assessment was conducted by CRM TECH for the portion of the Sewer and Force Main Pipelines that are located in Washington Street, the*

methods, findings, and recommendations of which are set forth in the report titled, Phase I Historical/Archaeological Resources Survey Van Buren Boulevard Sewer Installation Project, City of Riverside, Riverside County, California, dated September 23, 2019 (CRM TECH Report). A copy of the CRM TECH Report is included in ***Appendix C*** *herein.*

CRM TECH found no evidence of historical or archaeological resources on or adjacent to the Washington Street alignment. However, in order to avoid or minimize impacts in the event of discovery of a potential archaeological resource during site disturbance, Mitigation Measure CUL-1 will be implemented during construction of the Sewer and Force Main Pipelines along Washington Street. CUL-1 is summarized at the end of this section and is set forth in the Mitigation Monitoring and Reporting Program for the Project. With the incorporation of CUL-1, construction and operation of the Sewer and Force Main Pipelines along Washington Street would not cause a substantial adverse change in the significance of an archaeological resource.

Krameria LS

A cultural resources assessment was conducted for the Krameria LS site by CRM TECH, the methods, findings, and recommendations of which are set forth in the report titled, Phase I Historical/Archaeological Resources Survey Van Buren Boulevard Sewer Installation Project, City of Riverside, Riverside County, California, dated September 23, 2019 (CRM TECH Report). A copy of the CRM TECH Report is included in ***Appendix C*** *herein.*

CRM TECH found no evidence of historical or archaeological resources on or adjacent to the Krameria LS site. However, in order to avoid or minimize impacts in the event of discovery of a potential archaeological resource during site disturbance, Mitigation Measure CUL-1 will be implemented during construction of the Krameria LS. CUL-1 is summarized at the end of this section and is set forth in the Mitigation Monitoring and Reporting Program for the Project. With the incorporation of CUL-1, construction and operation of the Krameria LS would not cause a substantial adverse change in the significance of an archaeological resource.

MLK1 LS

A cultural resources assessment was conducted for the MLK1 LS site by CRM TECH, the methods, findings, and recommendations of which are set forth in the report titled, Phase I Historical/Archaeological Resources Survey Van Buren Boulevard Sewer Installation Project, City of Riverside, Riverside County, California, dated September 23, 2019 (CRM TECH Report). A copy of the CRM TECH Report is included in ***Appendix C*** *herein.*

CRM TECH found no evidence of historical or archaeological resources on or adjacent to the MLK1 LS site. In order to avoid or minimize impacts in the event of discovery of a potential archaeological resource during site disturbance, Mitigation Measure CUL-1 will be implemented during demolition and removal of the MLK1 LS. CUL-1 is summarized at the end of this section and is set forth in the Mitigation Monitoring and Reporting Program for the Project. With the incorporation of CUL-1, demolition and removal of the MLK1 LS would not cause a substantial adverse change in the significance of an archaeological resource.

Wood Road LS

A cultural resources assessment was conducted for the Wood Road LS site by CRM TECH, the methods, findings, and recommendations of which are set forth in the report titled, Phase I Historical/Archaeological Resources Survey Van Buren Boulevard Sewer Installation Project, City of Riverside, Riverside County, California, dated September 23, 2019 (CRM TECH Report). A copy of the CRM TECH Report is included in ***Appendix C*** *herein.*

CRM TECH found no evidence of historical or archaeological resources on or adjacent to the Wood Road LS site. However, in order to avoid or minimize impacts in the event of discovery of a potential archaeological resource during site disturbance, Mitigation Measure CUL-1 will be implemented during construction of improvements at the Wood Road LS site. CUL-1 is summarized at the end of this section and is set forth in the Mitigation Monitoring and Reporting Program for the Project. With the incorporation of CUL-1, construction and operation of improvements at the Wood Road LS would not cause a substantial adverse change in the significance of an archaeological resource.

Mitigation Measure CUL-1: Archaeological Resources

A qualified archaeological monitor will be onsite to observe ground disturbance that extends beyond previously-disturbed depths during Project excavation activities. In the event that any potential archaeological resource is uncovered during Project construction, all work in the area will be halted or diverted until a qualified archaeologist, meeting Secretary of the Interior standards, can evaluate the nature and significance of the find. If an archaeological resource uncovered during Project construction is determined to be significant, then the resource will be treated in an appropriate manner as determined by the qualified archaeologist and the City of Riverside Public Works Department. If an uncovered archaeological resource is determined by the qualified archaeologist to be a potential tribal cultural resource, then the resource will be treated in accordance with Mitigation Measure TCR-1.

Issue V. Cultural Resources (Continued)

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Would the project disturb any human remains, including those interred outside of dedicated cemeteries?	❑	❑	❑	☒

Sewer and Force Main Pipelines

There are no known cemeteries or burial grounds located on or adjacent to the Sewer and Force Main Pipelines alignments. In the event that any human remains are encountered during construction of the Sewer and Force Main Pipelines, the County Coroner will be notified immediately, and all work in the area will be halted or diverted until a qualified archaeologist or historian evaluates the significance of the find. The Project will comply with the provisions of Section 15064.5 of the State CEQA Guidelines.

Krameria LS

There are no known cemeteries or burial grounds located on or adjacent to the Krameria LS site. In the event that any human remains are encountered during construction of the Krameria LS, the County Coroner will be notified immediately, and all work in the area will be halted or diverted until a qualified archaeologist or historian evaluates the significance of the find. The Project will comply with the provisions of Section 15064.5 of the State CEQA Guidelines.

MLK1 LS

There are no known cemeteries or burial grounds located on or adjacent to the MLK1 LS site. In the event that any human remains are encountered during demolition and removal of the MLK1 LS, the County Coroner will be notified immediately, and all work in the area will be halted or diverted until a qualified archaeologist or historian evaluates the significance of the find. The Project will comply with the provisions of Section 15064.5 of the State CEQA Guidelines.

Wood Road LS

There are no known cemeteries or burial grounds located on or adjacent to the Wood Road LS site. In the event that any human remains are encountered during construction of improvements at the Wood Road LS, the County Coroner will be notified immediately, and all work in the area will be halted or diverted until a qualified archaeologist or historian evaluates the significance of the find. The Project will comply with the provisions of Section 15064.5 of the State CEQA Guidelines.

Issue VI. Energy

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	❑	❑	❑	☒

Sewer and Force Main Pipelines

The primary energy resource that will be consumed during construction of the Sewer and Force Main Pipelines is fuel needed by the construction contractor for operating construction vehicles and equipment. No energy resources are needed for operation of the Sewer and Force Main Pipelines. For these reasons, construction and operation of the Sewer and Force Main Pipelines will not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during Project construction or operation.

Krameria LS

The primary energy resource that will be consumed during construction of the Krameria LS is fuel needed by the construction contractor for operating construction vehicles and equipment. Electricity (to power pumps and the biofilter odor control system), fuel (for travel by approximately one City vehicle to the site per day), and diesel fuel (for operation of emergency backup generator and emergency backup pump) will be used during ongoing operation. These energy resources will only be used as needed for operation of the Krameria LS and will not be used in a wasteful or inefficient manner. For these reasons, construction and operation of the Krameria LS will not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during Project construction or operation.

MLK1 LS

The primary energy resource that will be consumed during demolition and removal of the MLK1 LS is fuel needed by the construction contractor for operating vehicles and equipment. No energy resources are needed once the MLK1 LS is removed. For these reasons, demolition and removal of the MLK1 LS will not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during Project construction or operation.

Wood Road LS

The primary energy resource that will be consumed during construction of improvements at the existing Wood Road LS is fuel needed by the construction contractor for operating construction vehicles and equipment. No energy resources are needed for operation of the improvements at the

Wood Road LS. For these reasons, construction and operation of the improvements at the Wood Road LS will not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during Project construction or operation.

Issue VI. Energy (Continued)

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	❑	❑	❑	☒

Sewer and Force Main Pipelines

*Construction and operation of the Sewer and Force Main Pipelines will not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Refer also to **Issue VI(a)** above.*

Krameria LS

*Construction and operation of the Krameria LS will not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Refer also to **Issue VI(a)** above.*

MLK1 LS

*Demolition and removal of the MLK1 LS will not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Refer also to **Issue VI(a)** above.*

Wood Road LS

*Construction and operation of improvements at the existing Wood Road LS will not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Refer also to **Issue VI(a)** above.*

Issue VII. Geology and Soils

a) Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	❑	❑	❑	☒
ii) Strong seismic ground shaking?	❑	❑	❑	☒
iii) Seismic-related ground failure, including liquefaction?	❑	❑	❑	☒
iv) Landslides?	❑	❑	❑	☒

i) *Sewer and Force Main Pipelines*

Based on the California Earthquake Hazards Zone Application (also referred to as "EQ Zapp"), available on the California Department of Conservation website and accessed on October 15, 2019, the Sewer and Force Main Pipelines are not located within an earthquake fault zone. Therefore, construction and operation of the pipelines will not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault.

Krameria LS

Based on the report, Geotechnical Exploration Proposed Wood Road and Krameria Lift Station Project, WO# 1703736 - Riverside Public Works Department, Riverside California, dated August 16, 2019 (Geotechnical Report), prepared by Leighton Consulting, Inc., the Krameria LS site is not located within an earthquake fault zone. Therefore, construction and operation of the Krameria LS will not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault. The Geotechnical Report is available for public review from the City of Riverside Public Works Department.

MLK1 LS

Based on the California Earthquake Hazards Zone Application (also referred to as "EQ Zapp"), available on the California Department of Conservation website and accessed on September 12, 2019, the MLK1 LS site is not located within an earthquake fault zone. Therefore, demolition and removal of the MLK1 LS will not directly or indirectly cause

potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault.

Wood Road LS

Based on the report, Geotechnical Exploration Proposed Wood Road and Krameria Lift Station Project, WO# 1703736 - Riverside Public Works Department, Riverside California, dated August 16, 2019 (Geotechnical Report), prepared by Leighton Consulting, Inc., the Wood Road LS site is not located within an earthquake fault zone. Therefore, construction and operation of improvements at the Wood Road LS will not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault.

ii) Sewer and Force Main Pipelines

Being located in seismically-active southern California, the Sewer and Force Main Pipelines are subject to strong seismic ground shaking. Based on the map, Earthquake Shaking Potential for California 2016, prepared by the California Geological Survey (CGS) and the United States Geological Survey (USGS), accessed online at https://www.conservation.ca.gov/cgs/Documents/MS_048.pdf, on September 12, 2019, the Sewer and Force Main Pipelines are located in a region identified as one that is "distant from known active faults and will experience lower levels of shaking less frequently. In most earthquakes, only weaker, masonry buildings would be damaged. However, very infrequent earthquakes could still cause strong shaking here." The Sewer and Force Main Pipelines will be located belowground within existing paved streets and do not include any structures intended for human occupancy. For these reasons, construction and operation of the Sewer and Force Main Pipelines will not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking.

Krameria LS

Based on the report, Geotechnical Exploration Proposed Wood Road and Krameria Lift Station Project, WO# 1703736 - Riverside Public Works Department, Riverside California, dated August 16, 2019 (Geotechnical Report), prepared by Leighton Consulting, Inc., the Krameria LS site, being located in seismically-active southern California, is subject to strong seismic ground shaking. Because the Krameria LS is being designed in accordance with the recommendations of the Geotechnical Report, and the Krameria LS is intended for only occasional human occupation (for operation and maintenance), construction and operation of the Krameria LS will not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking.

MLK1 LS

Being located in seismically-active southern California, the MLK1 LS site is subject to strong seismic ground shaking. Based on the map, Earthquake Shaking Potential for California 2016, prepared by the California Geological Survey(CGS) and the United States Geological Survey (USGS), accessed online at https://www.conservation.ca.gov/cgs/Documents/MS_048.pdf, on September 12, 2019, the MLK1 LS site is located in a region identified as one that is "distant from known active faults and will experience lower levels of shaking less frequently. In most earthquakes, only weaker, masonry buildings would be damaged. However, very infrequent earthquakes could still cause strong shaking here." Because the MLK1 LS is being demolished and removed as part of the Project, it will not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking.

Wood Road LS

Based on the report, Geotechnical Exploration Proposed Wood Road and Krameria Lift Station Project, WO# 1703736 - Riverside Public Works Department, Riverside California, dated August 16, 2019 (Geotechnical Report), prepared by Leighton Consulting, Inc., the Wood Road LS site, being located in seismically-active southern California, is subject to strong seismic ground shaking. Because the improvements at the Wood Road LS are being designed in accordance with the recommendations of the Geotechnical Report, and the improvements at the Wood Road LS are not intended for human occupation, construction and operation of improvements at the Wood Road LS will not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking.

iii) Sewer and Force Main Pipelines

Based on information available from the CGS Warehouse: Regulatory Maps application, available on the California Department of Conservation website, accessed on October 15, 2019, the Sewer and Force Main Pipelines are not located in an area that is known to be subject to liquefaction or other seismic related ground failure. Construction and operation of the Sewer and Force Main pipelines will not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction.

Krameria LS

Based on the report, Geotechnical Exploration Proposed Wood Road and Krameria Lift Station Project, WO# 1703736 - Riverside Public Works Department, Riverside California,

dated August 16, 2019 (Geotechnical Report), prepared by Leighton Consulting, Inc., the potential for hazards such as liquefaction, ground fissuring, and ground rupture is very low for the Krameria LS site. Therefore, construction and operation of the Krameria LS will not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction.

MLK1 LS

Demolition and removal of the existing MLK1 LS will not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction.

Wood Road LS

Based on the report, Geotechnical Exploration Proposed Wood Road and Krameria Lift Station Project, WO# 1703736 - Riverside Public Works Department, Riverside California, dated August 16, 2019 (Geotechnical Report), prepared by Leighton Consulting, Inc., the potential for hazards such as liquefaction, ground fissuring, and ground rupture is very low for the Wood Road LS site. Therefore, construction and operation of improvements at the existing Wood Road LS will not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction.

iv) Sewer and Force Main Pipelines

The Sewer and Force Main Pipelines are located within existing paved public street rights-of-way and will be installed below ground. Therefore, construction and operation of the Sewer and Force Main Pipelines will not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides.

Krameria LS

Based on the report, Geotechnical Exploration Proposed Wood Road and Krameria Lift Station Project, WO# 1703736 - Riverside Public Works Department, Riverside California, dated August 16, 2019 (Geotechnical Report), prepared by Leighton Consulting, Inc., the potential for landslides is very low for the Krameria LS site. Therefore, construction and operation of the Krameria LS will not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides.

MLK1 LS

The MLK1 LS is located in a landscaped area along Van Buren Boulevard, within commercial development. This area is not subject to landslides, and demolition and removal of the MLK1

LS will not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides.

Wood Road LS

Based on the report, Geotechnical Exploration Proposed Wood Road and Krameria Lift Station Project, WO# 1703736 - Riverside Public Works Department, Riverside California, dated August 16, 2019 (Geotechnical Report), prepared by Leighton Consulting, Inc., the potential for landslides is very low for the Wood Road LS site. Therefore, construction and operation of the Krameria LS will not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides.

Issue VII. Geology and Soils (Continued)

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Would the project result in substantial soil erosion or the loss of topsoil?	❑	❑	☒	❑

Sewer and Force Main Pipelines

The Sewer and Force Main Pipelines are located within existing paved streets. Construction of the pipelines will involve trenching, which could expose soils to wind and water; however, contract documents will require the construction contractor to use standard erosion control measures and best management practices to prevent or minimize erosion. Upon completion of construction, the ground surface will be returned to preconstruction conditions. For these reasons, construction and operation of the Sewer and Force Main Pipelines will not result in substantial soil erosion or the loss of topsoil.

Krameria LS

Construction of the Krameria LS will involve grading, which could expose soils to wind and water; however, contract documents will require the construction contractor to use standard erosion control measures and best management practices to prevent or minimize erosion. Any erosion would be minimal, and construction and operation of the Krameria LS will not result in substantial soil erosion or the loss of topsoil.

MLK1 LS

Demolition and removal of the MLK1 LS would expose soils to wind and water; however, contract documents will require the contractor to use standard erosion control measures and best management practices to prevent or minimize erosion. Any erosion would be minimal, and demolition and removal of the MLK1 LS will not result in substantial soil erosion or the loss of topsoil.

Wood Road LS

Construction of improvements at the Wood Road LS will involve excavation and grading activities, which could expose soils to wind and water; however, contract documents will require the construction contractor to use standard erosion control measures and best management practices to prevent or minimize erosion. Any erosion would be minimal, and construction and operation of the improvements at the Wood Road LS will not result in substantial soil erosion or the loss of topsoil.

Issue VII. Geology and Soils (Continued)

c) Would the project 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?	Potentially Significant Impact ❑	Less Than Significant with Mitigation Incorporated ❑	Less Than Significant Impact ❑	No Impact ☒

Sewer and Force Main Pipelines

The Sewer and Force Main Pipelines will be constructed belowground within existing paved streets. Based on "Figure PS-2: Liquefaction Zones" of the Public Safety Element of the City of Riverside General Plan, amended February 2018, the portion of the pipelines alignment within Washington Street has a "low" potential for liquefaction, and the portion within Van Buren Boulevard has a "very low" potential for liquefaction. The Sewer and Force Main Pipelines are not located on a geologic unit or soil that is unstable or that would become unstable as a result of the Project.

Krameria LS

Based on the report, Geotechnical Exploration Proposed Wood Road and Krameria Lift Station Project, WO# 1703736 - Riverside Public Works Department, Riverside California, dated August 16, 2019 (Geotechnical Report), prepared by Leighton Consulting, Inc., the "potential for secondary hazards such as ground rupture, seiches and tsunamis, landsliding, rockfalls, ground fissuring, liquefaction are considered very low" for the Krameria LS site. The Krameria LS is not located on a geologic unit or soil that is unstable or that would become unstable as a result of the Project, and the Krameria LS will be constructed in accordance with the recommendations set forth in the Geotechnical Report. For these reasons, construction and operation of the Krameria LS will not result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.

MLK1 LS

The MLK1 LS is located within a landscaped portion of a commercial property, and demolition and removal of the existing MLK1 LS will not result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.

Wood Road LS

Based on the report, Geotechnical Exploration Proposed Wood Road and Krameria Lift Station Project, WO# 1703736 - Riverside Public Works Department, Riverside California, dated August 16, 2019 (Geotechnical Report), prepared by Leighton Consulting, Inc., the "potential for secondary hazards such as ground rupture, seiches and tsunamis, landsliding, rockfalls, ground fissuring, liquefaction are considered very low" for the Wood Road LS site. The Wood Road LS is not located on a geologic unit or soil that is unstable or that would become unstable as a result of the Project, and improvements at the site will be constructed in accordance with the recommendations set forth in the Geotechnical Report. For these reasons, construction and operation of improvements at the Wood Road LS will not result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse. A copy of the Geotechnical Report is available for public review from the City of Riverside Public Works Department.

Issue VII. Geology and Soils (Continued)

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Would the project 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?	❑	❑	☒	❑

Sewer and Force Main Pipelines

Based on "Figure PS-3: Soils with High Shrink-Swell Potential" of the Public Safety Element of the City of Riverside General Plan, amended February 2018, some areas along the Van Buren Boulevard portion of the Sewer and Force Main Pipelines alignment are located in areas identified as soils with high shrink-swell potential. The pipelines will be installed within existing paved streets and will be designed in accordance with the recommendations of a geotechnical study performed along the alignment. For these reasons, construction and operation of the Sewer and Force Main Pipelines will not crate substantial direct or indirect risks to life or property related to expansive soil.

Krameria LS

Based on the report, Geotechnical Exploration Proposed Wood Road and Krameria Lift Station Project, WO# 1703736 - Riverside Public Works Department, Riverside California, dated August 16, 2019 (Geotechnical Report), prepared by Leighton Consulting, Inc., soils at the Krameria LS site are primarily sand and gravel, with some silt and clay. These soils are not considered expansive. Further, the Krameria LS will be constructed in accordance with the recommendations set forth in the

Geotechnical Report. For these reasons, construction and operation of the Krameria LS will not create substantial direct or indirect risks to life or property related to expansive soil.

MLK1 LS

Upon demolition and removal of the MLK1 LS, the ground surface at the site will be restored to landscaped conditions. Demolition and removal of the MLK1 LS will not create substantial direct or indirect risks to life or property related to expansive soil.

Wood Road LS

Based on the report, Geotechnical Exploration Proposed Wood Road and Krameria Lift Station Project, WO# 1703736 - Riverside Public Works Department, Riverside California, dated August 16, 2019 (Geotechnical Report), prepared by Leighton Consulting, Inc., soils at the Wood Road LS site are primarily sand and gravel, with some silt and clay. These soils are not considered expansive. Further, the improvements at the Wood Road LS will be constructed in accordance with the recommendations set forth in the Geotechnical Report. For these reasons, construction and operation of the improvements at the Wood Road LS site will not create substantial direct or indirect risks to life or property related to expansive soil.

Issue VII. Geology and Soils (Continued)

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Would the project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	❑	❑	❑	☒

Sewer and Force Main Pipelines

The Sewer and Force Main Pipelines component of the Project does not include septic tanks or alternative wastewater disposal systems. The Project is intended to provide sewer service to existing commercial development that currently uses septic systems, as well as a future residential development. There will be no impact.

Krameria LS

The Krameria LS component of the Project does not include septic tanks or alternative wastewater disposal systems. The Project is intended to provide sewer service to existing commercial development that currently uses septic systems, as well as a future residential development. There will be no impact.

MLK1 LS

The MLK1 LS component of the Project includes demolition and removal of an existing facility and does not include septic tanks or alternative wastewater disposal systems. There will be no impact.

Wood Road LS

The Wood Road LS component of the Project does not include septic tanks or alternative wastewater disposal systems. Improvements at the Wood Road LS are intended to provide additional emergency sewage storage for use in the event of a total failure of the existing Wood Road LS. There will be no impact.

Issue VII. Geology and Soils (Continued)

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
f) Would the project directly or indirectly destroy a unique paleontological resource or site or unique geological feature?	❑	❑	☒	❑

Sewer and Force Main Pipelines

Based on "Figure 4.9.3: Paleontological Sensitivity", dated December 16, 2013, of the Riverside County General Plan, the Sewer and Force Main Pipelines are located in an area mapped as having "low" paleontological sensitivity. The Sewer and Force Main Pipelines are located within existing paved streets that do not contain any unique geological features. To prevent an adverse impact upon any previously undiscovered paleontological resource that may be present in subsurface soil deposits, Mitigation Measure PALEO-1 is incorporated into the Mitigation Monitoring and Reporting Program for the Project, a copy of which is included in ***Appendix A*** *herein. Mitigation Measure PALEO-1 is summarized below. With incorporation of PALEO-1, construction and operation of the Sewer and Force Main Pipelines would not directly or indirectly destroy a unique paleontological resource or geological feature.*

Krameria LS

According to data for the Krameria LS site available from the Riverside County Map My County mapping system, accessed August 2, 2019, the Krameria LS site is located in an area of low potential for paleontological sensitivity. The Krameria LS site does not contain any visible unique geological features. To prevent an adverse impact upon any previously undiscovered paleontological resource that may be present in subsurface soil deposits, Mitigation Measure PALEO-1 is incorporated into the Mitigation Monitoring and Reporting Program for the Project, a copy of which is included in ***Appendix A*** *herein. Mitigation Measure PALEO-1 is summarized below. With incorporation of*

PALEO-1, construction and operation of the Krameria LS would not directly or indirectly destroy a unique paleontological resource or geological feature.

MLK1 LS

According to data for the MLK1 LS site available from the Riverside County Map My County mapping system, accessed August 2, 2019, the MLK1 LS site is located in an area of low potential for paleontological sensitivity. Further, the MLK1 LS site does not contain any visible unique geological features. To prevent an adverse impact upon any previously undiscovered paleontological resource that may be present in subsurface soil deposits, Mitigation Measure PALEO-1 is incorporated into the Mitigation Monitoring and Reporting Program for the Project, a copy of which is included in ***Appendix A*** *herein. Mitigation Measure PALEO-1 is summarized below. With incorporation of PALEO-1, demolition and removal of the MLK1 LS would not directly or indirectly destroy a unique paleontological resource or geological feature.*

Wood Road LS

According to data for the Wood Road LS site available from the Riverside County Map My County mapping system, accessed August 2, 2019, the Wood Road LS site is located in an area of low potential for paleontological sensitivity. Further, the Wood Road LS site does not contain any visible unique geological features. To prevent an adverse impact upon any previously undiscovered paleontological resource that may be present in subsurface soil deposits, Mitigation Measure PALEO-1 is incorporated into the Mitigation Monitoring and Reporting Program for the Project, a copy of which is included in ***Appendix A*** *herein. Mitigation Measure PALEO-1 is summarized below. With incorporation of PALEO-1, demolition and removal of the construction and operation of improvements at the Wood Road LS site would not directly or indirectly destroy a unique paleontological resource or geological feature.*

Mitigation Measure PALEO-1: Paleontological Resources

The following measures will be implemented to protect any paleontological resources uncovered during ground disturbance at any of the Project sites:

- *If any potential paleontological resources are uncovered during Project construction, all work in the vicinity of the discovery shall be halted until a qualified paleontologist can evaluate the nature and significance of the find.*
- *If a qualified paleontologist determines that a specimen uncovered during Project construction is potentially significant, then all future ground-disturbing actions associated with the component of the Project on which the find occurred will be monitored by a qualified paleontological monitor.*

- *Specimens recovered from the Project sites by the qualified paleontological monitor will be, in accordance with standard paleontological practice, identified and curated at a repository with permanent retrievable storage that will allow for additional research in the future.*

Issue VIII. Greenhouse Gas Emissions

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	❑	❑	☒	❑

Gases that trap heat in the Earth's atmosphere are referred to as greenhouse gases (GHGs). GHGs that are emitted due to human activities, primarily from the combustion of fossil fuels (e.g. gasoline in motor vehicles), are carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O). The most common GHG that results from human activities is CO_2, followed by CH_4 and N_2O, respectively.

To quantify and combine these three GHGs into a single figure, each gas is converted to "carbon dioxide equivalent" (CO_2e) units. CO_2e is defined by the United States Environmental Protection Agency (USEPA) as, "A metric measure used to compare the emissions from various greenhouse gases based upon their global warming potential (GWP)…The carbon dioxide equivalent for a gas is derived by multiplying the tons of the gas by the associated GWP." The GWPs for carbon dioxide, methane, and nitrous oxide are 1, 21, and 310, respectively.

The Project is located within the South Coast Air Basin (SCAB), which encompasses all of Orange County and the non-desert portions of Los Angeles, San Bernardino, and Riverside Counties. Air quality conditions in the SCAB are under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). SCAQMD has set a significance threshold for GHGs at 10,000 metric tons per year of CO_2e for industrial facilities. At this time, SCAQMD has not published GHG thresholds for other types of facilities; therefore, for the purposes of analyzing the potential impacts of subject Project, we consider GHG emissions in excess of 10,000 metric tons per year of CO_2e to be considered significant.

Quantities of Project GHG emissions were estimated using the California Emissions Estimator Model (CalEEMod, Version 2016.3.2), and copies of the model output reports are included in ***Appendix D*** *herein. Estimated quantities of GHGs and resultant impacts for each Project component are summarized below.*

Sewer and Force Main Pipelines

The Sewer and Force main pipelines will generate GHG emissions during construction activities as a result of operation of construction equipment and vehicles. Estimated quantities of GHGs total approximately 307.9104 metric tons of CO_2e for construction of the gravity sewers and approximately 303.1534 metric tons of CO_2e for construction of the force mains. The gravity sewers and force mains are expected to be constructed consecutively, rather than concurrently, to facilitate effective traffic control and allow the roads to remain open during construction; however, even if constructed concurrently, the total of 611.0638 metric tons of CO_2e that would be generated within one year is far less than the significance threshold of 10,000 metric tons of CO_2e per year described above. GHG emissions resulting from construction of the Sewer and Force Main Pipelines would be emitted on a temporary and short-term basis. Operation of the Sewer and Force Main Pipelines would not generate GHG emissions. For these reasons, construction and operation of the Sewer and Force Main Pipelines will not generate GHG emissions that may, either directly or indirectly, have a significant impact on the environment.

Krameria LS

The Krameria LS will generate GHG emissions as a result of construction and operation. Construction GHG emissions would result from operation of construction equipment and vehicles, with estimated quantities of construction GHG emissions totaling approximately 388.5388 metric tons of CO_2e. These GHG emissions would be emitted on a temporary and short-term basis, and this quantity of GHG emissions is insignificant when compared to the significance threshold of 10,000 metric tons of CO_2e per year described above.

Operation of the Krameria LS would generate GHG emissions resulting from vehicles traveling to and from the Krameria LS site (approximately one City vehicle trip to the site per day), and operating a standby emergency generator and/or a standby emergency pump. The standby emergency generator and standby emergency pump would operate only in the event of a power failure or pump failure or for routine testing and maintenance. Estimated quantities of GHG emissions generated by operation of the Krameria LS total approximately 5.7320 metric tons of CO_2e per year, based on operating the emergency standby equipment for up to 30 days per year. Typical, non-emergency operation of the Krameria LS would generate much lower quantities of GHG emissions; however, operating under emergency conditions would result in quantities of GHG emissions that are well below the significance threshold of 10,000 metric tons of GHG emissions per year.

For the reasons described above, construction and operation of the Krameria LS will not generate GHG emissions that may, either directly or indirectly, have a significant impact on the environment.

MLK1 LS

Demolition and removal of the MLK1 LS will generate GHG emissions as a result of operation of construction equipment and vehicles, with estimated quantities of GHG emissions totaling approximately 45.3648 metric tons of CO_2e. These GHG emissions would be emitted on a temporary and short-term basis, and this quantity of GHG emissions is insignificant when compared to the significance threshold of 10,000 metric tons of CO_2e per year described above. Therefore, demolition and removal of the MLK1 LS will not generate GHG emissions that may, either directly or indirectly, have a significant impact on the environment.

Wood Road LS

Construction of improvements at the existing Wood Road LS will generate GHG emissions as a result of operation of construction equipment and vehicles, with estimated quantities of GHG emissions totaling approximately 207.8671 metric tons of CO_2e. These GHG emissions would be emitted on a temporary and short-term basis, and this quantity of GHG emissions is insignificant when compared to the significance threshold of 10,000 metric tons of CO_2e per year described above. Operation of the improvements at the Wood Road LS would not generate GHG emissions. For these reasons, improvements at the Wood Road LS will not generate GHG emissions that may, either directly or indirectly, have a significant impact on the environment.

Total Project construction GHG emissions for all Project components combined are estimated at 1,252.8345 metric tons of CO_2e, and ongoing operation GHG emissions are estimated at 5.7320 metric tons of CO_2e, under a worst-case scenario in which emergency facilities at the Krameria LS are operated for a substantial period of time. Estimated GHG emissions for both construction and operation are well below the significance threshold of 10,000 metric tons of CO_2e cited above. Therefore, the quantities of GHGs estimated to be generated by the Project will be less than significant and will not have a significant impact on the environment.

Issue VIII. Greenhouse Gas Emissions (Continued)

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emission of greenhouse gases?	❑	❑	❑	☒

The City of Riverside's Economic Prosperity Action Plan and Climate Action Plan, dated January 2016, identifies the City's strategies for reducing greenhouse gas (GHG) emissions. The County of Riverside Climate Action Plan, dated July 2018, was adopted for the purpose of reducing GHG emissions.

Sewer and Force Main Pipelines

Construction of the Sewer and Force Main Pipelines would generate insignificant quantities of greenhouse gases (GHGs) on a short-term, temporary basis. Operation of the Sewer and Force Main Pipelines would not generate GHGs. For these reasons, construction and operation of the Sewer and Force Main Pipelines will not conflict with either of the plans cited above or with any plan, policy, or regulation adopted for the purpose of reducing GHG emissions. Refer also to ***Issue VIII(a)*** *above.*

Krameria LS

Construction and operation of the Krameria LS would result in the generation of insignificant quantities of GHGs, as described in ***Issue VIII(a)*** *above; therefore, construction and operation of the Krameria LS will not conflict with either of the plans cited above or with any plan, policy, or regulation adopted for the purpose of reducing GHG emissions.*

MLK1 LS

Demolition and removal of the MLK1 LS would result in the generation of insignificant quantities of GHGs, on a short-term and temporary basis. There would be no ongoing GHG emissions because the facility will be removed. For these reasons, demolition and removal of the MLK1 LS will not conflict with either of the plans cited above or with any plan, policy, or regulation adopted for the purpose of reducing GHG emissions. Refer also to ***Issue VIII(a)***.

Wood Road LS

Construction of improvements at the Wood Road LS would result in the generation of insignificant quantities of GHGs, and operation of said improvements would not generate GHGs. For these reasons, construction and operation of improvements at the Wood Road LS will not conflict with either of the plans cited above or with any plan, policy, or regulation adopted for the purpose of reducing GHG emissions. Refer also to ***Issue VIII(a)*** *above.*

Issue IX. Hazards and Hazardous Materials

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	❑	❑	☒	❑

Sewer and Force Main Pipelines

Small quantities of fuel, lubricants, and adhesives will be used during construction of the Sewer and Force Main Pipelines. Said use will be short-term and strictly controlled, and waste materials will be properly disposed of. Such materials will not be allowed to enter any drainage. Further, operation of the Sewer and Force Main Pipelines does not involve the generation, transport, use, storage, or disposal of any hazardous materials. Therefore, construction and operation of the Sewer and Force Main Pipelines will not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

Krameria LS

Small quantities of fuel, lubricants, paint, and adhesives will be used during construction of the Krameria LS. Said use will be short-term and strictly controlled, and waste materials will be properly disposed of. Such materials will not be allowed to enter any drainage.

Operation of the Krameria LS includes a calcium nitrate chemical injection system for odor control. The calcium nitrate solution will be transported, stored, and used in accordance with all applicable federal, state, and local regulations. No other chemicals will be used during operation of the Krameria LS.

For these reasons, construction and operation of the Krameria LS will not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

MLK1 LS

Small quantities of fuel and lubricants will be used during demolition and removal of the MLK1 LS. Said use will be short-term and strictly controlled, and waste materials will be properly disposed of. Such materials will not be allowed to enter any drainage. Therefore, demolition and removal of the MLK1 LS will not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

Wood Road LS

Small quantities of fuel and lubricants will be used during construction of the improvements at the Wood Road LS. Said use will be short-term and strictly controlled, and waste materials will be properly disposed of. Such materials will not be allowed to enter any drainage. Therefore, construction of improvements at the Wood Road LS will not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

Issue IX. Hazards and Hazardous Materials (Continued)

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Would the project 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?	❑	❑	❑	☒

Sewer and Force Main Pipelines

Construction and operation of the Sewer and Force Main Pipelines do not have the potential to 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. Refer also to ***Issue IX.a*** *above.*

Krameria LS

Construction and operation of the Krameria LS do not have the potential to 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. Refer also to ***Issue IX.a*** *above.*

MLK1 LS

Demolition and removal of the MLK1 LS do not have the potential to 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. Refer also to ***Issue IX.a*** *above.*

Wood Road LS

Construction and operation of improvements at the existing Wood Road LS do not have the potential to 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. Refer also to ***Issue IX.a*** *above.*

Issue IX. Hazards and Hazardous Materials (Continued)

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	❑	❑	❑	☒

Sewer and Force Main Pipelines

The alignment of the Sewer and Force Main Pipelines is located within one-quarter mile of numerous schools, namely: Martin Luther King High School, Woodcrest Christian School, Somerset Educational Services, Woodcrest Montessori Education Center, and Woodcrest Elementary School. Construction of the Sewer and Force Main Pipelines will be within the public street rights-of-way of Van Buren Boulevard and Washington Street and will not emit hazardous emissions or handle hazardous or acutely hazardous substances or waste.

Krameria LS

The Krameria LS site is located less than one-quarter mile from both Woodcrest Elementary School and Somerset Educational Services. Construction and operation of the Krameria LS will not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste.

MLK1 LS

The Woodcrest Christian School is located approximately 0.1 mile westerly of the existing MLK1 LS. Demolition and removal of the MLK1 LS will not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste.

Wood Road LS

The Wood Road LS is not located within one-quarter mile of an existing or proposed school, and construction and operation of improvements at the Wood Road LS will not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste.

Issue IX. Hazards and Hazardous Materials (Continued)

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	❑	❑	❑	☒

Sewer and Force Main Pipelines

The Sewer and Force Main Pipelines alignments are not located on a site included on the list of hazardous materials sites compiled pursuant to Government Code Section 65962.5; however, one such site is located adjacent to the alignment, southeasterly of the intersection of Washington Street and Van Buren Boulevard. According to maps and data available to the public on EnviroStor, the California Department of Toxic Substances Control (DTSC) database (located online at http://www.envirostor.dtsc.ca.gov/public), the listed site is approximately 5 acres in size, is bordered by commercial and retail development, and may be contaminated with hazardous substances, including chlorinated pesticides. The Sewer and Force Main Pipelines will not have an impact on, nor be impacted by, the listed site and will not create a significant hazard to the public or the environment.

Krameria LS

The Krameria LS site is not located on a site included on the list of hazardous materials sites compiled pursuant to Government Code Section 65962.5; however, one such site is located approximately 300 feet northerly of the Krameria LS site, on land southeasterly of the corner of Washington Street and Van Buren Boulevard. According to maps and data available to the public on EnviroStor, the California Department of Toxic Substances Control (DTSC) database (located online at http://www.envirostor.dtsc.ca.gov/public), the listed site is approximately 5 acres in size, is bordered by commercial and retail development, and may be contaminated with hazardous substances, including chlorinated pesticides. Construction and operation of the Krameria LS will not have an impact on, nor be impacted by, the listed site and will not create a significant hazard to the public or the environment.

MLK1 LS

The MLK1 LS site is not located on or adjacent to a site included on the list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. The nearest such site is the one located north of the Krameria LS site, as described in the preceding paragraph. Said site is located approximately 1.5 miles southwest of the MLK1 LS site. Demolition and removal of the MLK1 LS will

not be impacted by, nor have an impact on, the listed site and will not create a significant hazard to the public or the environment.

Wood Road LS

The Wood Road LS site is not located on or adjacent to a site included on the list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. According to maps and data available to the public on EnviroStor, the California Department of Toxic Substances Control (DTSC) database (located online at http://www.envirostor.dtsc.ca.gov/public), the listed site nearest to the Wood Road LS is known as Universal Propulsion and is located approximately 2.2 miles northwesterly of the Wood Road LS. Universal Propulsion is a cleanup site that had the soil contaminated with barium, nitrates, phosphates, and borates due to illegal dumping. Construction of improvements at the Wood Road LS site will not have an impact on, nor be impacted by, the Universal Propulsion site, and will not create a significant hazard to the public or the environment.

Issue IX. Hazards and Hazardous Materials (Continued)

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 or excessive noise for people residing or working in the project area?	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	❑	❑	❑	☒

Sewer and Force Main Pipelines

Based on the March Air Reserve Base/Inland Port Airport Land Use Compatibility Plan, adopted by Riverside County Airport Land Use Commission on November 13, 2014 (Airport Land Use Plan), the Sewer and Force Main Pipelines alignments are located within the Airport Influence Area Boundary of the March Air Reserve Base/Inland Port Airport. The easterly portion of the pipelines alignments within Van Buren Boulevard (from Wood Road to just east of Chicago Avenue) is located within Compatibility Zone D, and the westerly portion of the alignments within Van Buren Boulevard (just east of Chicago Avenue to King Avenue) and the portion within Washington Street are located within Compatibility Zone E.

Compatibility Zone D, Flight Corridor Buffer, encompasses the periphery of flight corridors and is identified as having a low risk level with regard to safety and airspace protection factors. Zone E, Other Airport Environs, encompasses outer or occasionally used portions of flight corridors and is identified as having a low risk with regard to safety and airspace protection factors.

Construction of the Sewer and Force Main Pipelines will generate increased noise (as a result of construction activities and equipment) and traffic impacts (during construction within existing

streets); however, said impacts will be less than significant and short-term. Operation of the Sewer and Force Main Pipelines will not result in any noise or safety impacts. For these reasons, the Sewer and Force Main Pipelines will not result in a safety hazard or excessive noise for people residing or working in the Project area associated with proximity to an airport.

Krameria LS

Based on the March Air Reserve Base/Inland Port Airport Land Use Compatibility Plan, adopted by Riverside County Airport Land Use Commission on November 13, 2014 (Airport Land Use Plan), the Krameria LS site is located within the Airport Influence Area Boundary of the March Air Reserve Base/Inland Port Airport, and specifically within Compatibility Zone E, Other Airport Environs, which encompasses outer or occasionally used portions of flight corridors. Zone E is identified as having a low risk with regard to safety and airspace protection factors.

Construction of the Krameria LS is expected to result in increased noise in the area as a result of construction activities and equipment; however, said increase will be less than significant and short-term. Facilities being constructed as part of the Krameria LS would not exceed 15 feet in height above the ground surface and do not have the potential to pose a flight hazard. Operation of the Krameria LS would result in minimal noise during ongoing operation, and noise generated during operation is not expected to be perceptible at adjacent properties. For these reasons, the Krameria LS will not result in a safety hazard or excessive noise for people residing or working in the Project area associated with proximity to an airport.

MLK1 LS

Based on the March Air Reserve Base/Inland Port Airport Land Use Compatibility Plan, adopted by Riverside County Airport Land Use Commission on November 13, 2014 (Airport Land Use Plan), the MLK1 LS is located within the Airport Influence Area Boundary of the March Air Reserve Base/Inland Port Airport, and specifically within Zone E, Other Airport Environs, which encompasses outer or occasionally used portions of flight corridors. Zone E has been identified as having a low risk with regard to safety and airspace protection factors.

Demolition of the existing MLK1 LS will result in increased noise in the area during demolition and removal activities; however, said increase would be less than significant and short-term. For these reasons, demolition and removal of the MLK1 LS will not result in a safety hazard or excessive noise for people residing or working in the Project area associated with proximity to an airport.

Wood Road LS

Based on the March Air Reserve Base/Inland Port Airport Land Use Compatibility Plan, adopted by Riverside County Airport Land Use Commission on November 13, 2014 (Airport Land Use Plan), the Wood Road LS site is located within the Airport Influence Area Boundary of the March Air Reserve Base/Inland Port Airport, and specifically within Zone C2, Flight Corridor Zone. Zone C2 encompasses the distant (beyond 5 miles) portion of instrument arrival corridor and closed-circuit flight training activity corridors. Zone C2 has been identified as having a risk level of moderate to low with regard to safety and airspace protection factors.

Improvements at the Wood Road LS will result in increased noise in the area during construction; however, said increase would be less than significant and short-term. The improvements proposed at the Wood Road LS are located at and below ground level and do not generate any substantial noise. For these reasons, improvements at the Wood Road LS will not result in a safety hazard or excessive noise for people residing or working in the Project area associated with proximity to an airport.

Issue IX. Hazards and Hazardous Materials (Continued)

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
f) Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	❑	❑	☒	❑

Sewer and Force Main Pipelines

The Sewer and Force Main Pipelines will involve short-term lane closures during construction; however, roads will remain open and construction contract documents will require that lane closures and traffic control during construction be conducted in a safe and efficient manner by the construction contractor. Construction and operation of the Sewer and Force Main Pipelines, including short-term lane closures, will not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

Krameria LS

Construction and operation of the Krameria LS component of the Project does not include any activities or facilities that will impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

MLK1 LS

Demolition and removal of the MLK1 LS does not include any activities or facilities that will impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

Wood Road LS

Construction and operation of improvements at the existing Wood Road LS does not include any activities or facilities that will impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

Issue IX. Hazards and Hazardous Materials (Continued)

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
g) Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	❑	❑	☒	❑

Sewer and Force Main Pipelines

Based on maps available on the Office of the State Fire Marshal website (osfm.fire.ca.gov), the Sewer and Force Main Pipelines are not located in an area designated as a fire hazard severity zone. The Sewer and Force Main Pipelines will be constructed below ground within existing paved street rights-of-way. There is a slight risk of fire occurring during construction of the pipelines; however, the risk is less than significant and short-term. Additionally, construction contract documents for the Sewer and Force Main Pipelines will require construction contractors to comply with safety standards specified in Title 8 of the California Code of Regulations and that any equipment or machinery that poses a risk of emitting sparks or flame be equipped with an arrestor, thereby further limiting potential impacts. For these reasons, construction and operation of the Sewer and Force Main Pipelines will not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.

Krameria LS

Based on maps available on the Office of the State Fire Marshal website (osfm.fire.ca.gov), the Krameria LS site is not located in an area designated as a fire hazard severity zone. There is a slight risk of fire occurring during construction of the Krameria LS; however, the risk is less than significant and short-term. Additionally, construction contract documents for the Sewer and Force Main Pipelines will require construction contractors to comply with safety standards specified in Title 8 of the California Code of Regulations and that any equipment or machinery that poses a risk of emitting

sparks or flame be equipped with an arrestor, thereby further limiting potential impacts. Operation of the Krameria LS does not involve activities or equipment that pose a significant risk of fire. For these reasons, construction and operation of the Krameria LS will not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.

MLK1 LS

Based on maps available on the Office of the State Fire Marshal website (osfm.fire.ca.gov), the existing MLK1 LS is not located in an area designated as a fire hazard severity zone. The MLK1 LS is located in an existing landscaped area on a commercial property. There is a slight risk of fire occurring during demolition and removal of the MLK1 LS; however, the risk is less than significant and short-term. Additionally, contract documents for demolition and removal of the MLK1 LS will require contractors to comply with safety standards specified in Title 8 of the California Code of Regulations and that any equipment or machinery that poses a risk of emitting sparks or flame be equipped with an arrestor, thereby further limiting potential impacts. For these reasons, demolition and removal of the MLK1 LS will not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.

Wood Road LS

Based on maps available on the Office of the State Fire Marshal website (osfm.fire.ca.gov), the Wood Road LS site is not located in an area designated as a fire hazard severity zone. Improvements at the Wood Road LS will be constructed within the existing fenced site. There is a slight risk of fire occurring during construction of the improvements; however, the risk is less than significant and short-term. Additionally, construction contract documents for the improvements will require construction contractors to comply with safety standards specified in Title 8 of the California Code of Regulations and that any equipment or machinery that poses a risk of emitting sparks or flame be equipped with an arrestor, thereby further limiting potential impacts. Operation of the improvements at the existing Wood Road LS consists of sewage overflow storage and will only occur in the event of a total plant failure. For these reasons, construction and operation of improvements at the Wood Road LS will not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.

Issue X. Hydrology and Water Quality

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	❑	❑	❑	☒

Sewer and Force Main Pipelines

The Project will comply with all applicable water quality standards, waste discharge requirements, and all other requirements of the California Regional Water Quality Control Board, Santa Ana River Region (Regional Board), as applicable. Construction and operation of the Sewer and Force Main Pipelines will not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality.

Krameria LS

The Project will comply with all applicable water quality standards, waste discharge requirements, and all other requirements of the California Regional Water Quality Control Board, Santa Ana River Region (Regional Board), as applicable. Construction and operation of the Krameria LS will not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality.

MLK1 LS

The Project will comply with all applicable water quality standards, waste discharge requirements, and all other requirements of the California Regional Water Quality Control Board, Santa Ana River Region (Regional Board), as applicable. Demolition and removal of the MLK1 LS will not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality.

Wood Road LS

The Project will comply with all applicable water quality standards, waste discharge requirements, and all other requirements of the California Regional Water Quality Control Board, Santa Ana River Region (Regional Board), as applicable. Construction and operation of the improvements at the Wood Road LS will not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality.

Issue X. Hydrology and Water Quality (Continued)

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?	Potentially Significant Impact ❑	Less Than Significant with Mitigation Incorporated ❑	Less Than Significant Impact ❑	No Impact ☒

Sewer and Force Main Pipelines

The Sewer and Force Main Pipelines do not have a water demand and do not have the potential to substantially decrease groundwater supplies or interfere substantially with groundwater recharge. There will be no impact.

Krameria LS

The Krameria LS does not have a water demand and does not have the potential to substantially decrease groundwater supplies or interfere substantially with groundwater recharge. There will be no impact.

MLK1 LS

The MLK1 LS will be demolished and removed as part of the Project, and such demolition and removal would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge. There will be no impact.

Wood Road LS

Improvements proposed at the existing Wood Road LS do not have a water demand and would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge. There will be no impact.

Issue X. Hydrology and Water Quality (Continued)

c) Would the project 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:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
i) Result in substantial erosion or siltation on- or off-site?	❑	❑	☒	❑
ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?	❑	❑	☒	❑
iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	❑	❑	☒	❑
iv) Impede or redirect flood flows?	❑	❑	❑	☒

i) *Sewer and Force Main Pipelines*

The Sewer and Force Main Pipelines will be constructed belowground within existing paved streets and will not result in an increase in impervious surfaces. While the alignments of the Sewer and Force Main Pipelines will cross several drainages that pass below the existing streets via culverts, the pipelines will not alter the course of said drainages and will not alter the drainage pattern of the area. While there is some potential for erosion to occur during construction, the risk would be less than significant and short-term. Construction contractors will be required to use standard erosion control measures and best management practices to avoid or reduce erosion to the extent practicable. For these reasons, construction and operation of the Sewer and Force Main Pipelines will not result in substantial erosion or siltation on- or off-site.

Krameria LS

Construction of the Krameria LS will not substantially alter the existing drainage pattern of the site or area and will not alter the course of a stream or river. Construction of the Krameria LS will result in the addition of approximately 10,450 square feet (SF) of impervious surfaces at the site. Stormwater runoff will flow west to an existing storm drain catch basin within Krameria Avenue, near King Avenue, approximately 1,100 feet west of the intersection of Krameria Avenue and Washington Avenue. While there is some potential for erosion to occur during construction, the risk would be less than significant and short-term. Construction contractors will be required to use standard erosion control measures and best management practices to avoid or reduce erosion to the extent practicable. The entire site will be paved, minimizing the potential for erosion and siltation during ongoing operation.

For these reasons, construction and operation of the Krameria LS will not result in substantial erosion or siltation on- or off-site.

MLK1 LS

Demolition and removal of the MLK1 LS will not increase impervious surfaces, will not substantially alter the existing drainage pattern of the site or area, and will not alter the course of a stream or river. While there is some potential for erosion to occur during construction, the risk would be less than significant and short-term. Further, construction contractors will be required to use standard erosion control measures and best management practices to avoid or reduce erosion to the extent practicable. For these reasons, demolition and removal of the MLK1 LS will not result in substantial erosion or siltation on- or off-site.

Wood Road LS

Construction of improvements at the Wood Road LS site will not substantially alter the existing drainage pattern of the site or area and will not alter the course of a stream or river. Construction of improvements at the Wood Road LS will result in the addition of approximately 100 square feet (SF) of impervious surfaces at the Wood Road LS site, which would not result in quantities of additional runoff that could result in substantial erosion or siltation onsite. While there is some potential for erosion to occur during construction, the risk would be less than significant and short-term. Construction contractors will be required to use standard erosion control measures and best management practices to avoid or reduce erosion to the extent practicable. For these reasons, construction and operation of improvements at the Wood Road LS will not result in substantial erosion or siltation on- or off-site.

ii) Sewer and Force Main Pipelines

The Sewer and Force Main Pipelines will be constructed belowground within existing paved streets and will not result in an increase in impervious surfaces. While the alignments of the Sewer and Force Main Pipelines will cross several drainages that pass below the existing streets via culverts, the pipelines will not alter the existing drainage pattern of the site or area and would not alter the course of a stream or river. For these reasons, construction and operation of the Sewer and Force Main Pipelines will not substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site.

Krameria LS

Construction of the Krameria LS will not substantially alter the existing drainage pattern of the site or area and will not alter the course of a stream or river. Construction of the

Krameria LS will result in the addition of approximately 10,450 square feet (SF) of impervious surfaces at the site. Stormwater runoff will flow west to an existing storm drain catch basin within Krameria Avenue, near King Avenue, approximately 1,100 feet west of the intersection of Krameria Avenue and Washington Street. For these reasons, construction and operation of the Krameria LS will not substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site.

MLK1 LS

Demolition and removal of the MLK1 LS will not increase impervious surfaces, will not substantially alter the drainage pattern of the site or area, and will not alter the course of a stream or river. After demolition and removal of the MLK1 LS, the site will be landscaped to blend with the surrounding landscaped areas. For these reasons, demolition and removal of the MLK1 LS will not substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site.

Wood Road LS

Construction of improvements at the Wood Road LS will not substantially alter the existing drainage pattern of the site or area and will not alter the course of a stream or river. Construction of improvements at the Wood Road LS will result in the addition of approximately 100 square feet (SF) of impervious surfaces at the site. This 100 SF area would result in minimal additional runoff over existing site conditions. For these reasons, construction and operation of the improvements at the Wood Road LS will not substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site.

iii) Sewer and Force Main Pipelines

The Sewer and Force Main Pipelines will be constructed belowground within existing paved streets and will not result in an increase in impervious surfaces. While the alignments of the Sewer and Force Main Pipelines will cross several drainages that pass below the existing streets via culverts, the pipelines will not alter the course of said drainages, will not alter the drainage pattern of the area and will not alter the course of a stream or river. For these reasons, construction and operation of the Sewer and Force Main Pipelines will not create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial sources of polluted runoff.

Krameria LS

Construction of the Krameria LS will not substantially alter the existing drainage pattern of the site or area and will not alter the course of a stream or river. Construction of the Krameria LS will result in the addition of approximately 10,450 square feet (SF) of impervious surfaces at the site. Stormwater runoff will flow west to an existing storm drain catch basin within Krameria Avenue, near King Avenue, approximately 1,100 feet west of the intersection of Krameria Avenue and Washington Avenue. For these reasons, construction and operation of the Krameria LS will not create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.

MLK1 LS

Demolition and removal of the MLK1 LS will not increase impervious surfaces, will not substantially alter the existing drainage pattern of the site or area, and will not alter the course of a stream or river. After demolition and removal of the MLK1 LS, the site will be landscaped to blend with the surrounding landscaped areas. For these reasons, demolition and removal of the MLK1 LS will not create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.

Wood Road LS

Construction of improvements at the Wood Road LS will not substantially alter the existing drainage pattern of the site or area and will not alter the course of a stream or river. Construction of improvements at the Wood Road LS will result in the addition of approximately 100 square feet (SF) of impervious surfaces at the site. This 100 SF area would result in minimal additional runoff over existing site conditions. For these reasons, construction and operation of the improvements at the Wood Road LS will not create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.

iv) Sewer and Force Main Pipelines

The Sewer and Force Main Pipelines will be constructed belowground within existing paved streets and will not result in an increase in impervious surfaces. While the alignments of the Sewer and Force Main Pipelines will cross several drainages that pass below Van Buren Boulevard via culverts, the pipelines will not alter the course of said drainages and will not alter the drainage pattern of the area. Further, the alignment of the Sewer and Force Main Pipelines is not located within a designated flood zone or floodway (refer also to ***Issue X(d)***

herein). For these reasons, construction and operation of the Sewer and Force Main Pipelines will not impede or redirect flood flows.

Krameria LS

Construction of the Krameria LS will not substantially alter the existing drainage pattern of the site or area, and will not alter the course of a stream or river. Construction of the Krameria LS will result in the addition of approximately 10,450 square feet (SF) of impervious surfaces at the site. Stormwater runoff will flow west to an existing storm drain catch basin within Krameria Avenue, near King Avenue, approximately 1,100 feet west of the intersection of Krameria Avenue and Washington Avenue. For these reasons, construction and operation of the Krameria LS will not impede or redirect flood flows.

MLK1 LS

Demolition and removal of the MLK1 LS will not increase impervious surfaces, will not substantially alter the existing drainage pattern of the site or area, and will not alter the course of a stream or river. After demolition and removal of the MLK1 LS, the site will be landscaped to blend with the surrounding landscaped areas. Further, the site is not located within a designated flood zone or floodway. For these reasons, demolition and removal of the MLK1 LS will not impede or redirect flood flows.

Wood Road LS

Construction of improvements at the Wood Road LS will not substantially alter the existing drainage pattern of the site or area, and will not alter the course of a stream or river. Construction of improvements at the Wood Road LS will result in the addition of approximately 100 square feet (SF) of impervious surfaces at the site. The 100 SF area would result in minimal additional runoff over existing conditions. For these reasons, construction and operation of the improvements at the Wood Road LS will not impede or redirect flood flows.

Issue X. Hydrology and Water Quality (Continued)

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
d) In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?	❑	❑	❑	☒

Sewer and Force Main Pipelines

The Sewer and Force Main Pipelines are not located within a flood hazard, tsunami, or seiche zone. According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map, Map Number 06065C0740G, effective date August 28, 2008, the Sewer and Force Main Pipelines are not located within a flood hazard area or a floodway area. Based on the California Official Tsunami Inundation Maps available on the California Department of Conservation website at conservation.ca.gov/cgs/tsunami/maps, there are no tsunami inundation areas mapped within Riverside County, and the nearest such area is in Orange County, along areas bordering the Pacific Ocean. The nearest large body of water is Lake Mathews. At a distance of approximately four miles southwesterly of the southwestern extension of the pipelines, a seiche at Lake Mathews would not impact the pipelines with enough water, if any, to inundate them. As described above, the Sewer and Force Main Pipelines are not located within flood hazard or tsunami inundation areas or in areas subject to inundation by seiche.

Krameria LS

The Krameria LS site is not located within a flood hazard, tsunami, or seiche zone. According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map, Map Number 06065C0740G, effective date August 28, 2008, the Krameria LS site is not located within a flood hazard area or a floodway area. Based on the California Official Tsunami Inundation Maps available on the California Department of Conservation website at conservation.ca.gov/cgs/tsunami/maps, there are no tsunami inundation areas mapped within Riverside County, and the nearest such area is in Orange County, along areas bordering the Pacific Ocean. The nearest large body of water is Lake Mathews. At a distance of approximately four miles southwesterly of the Krameria LS site, a seiche at Lake Mathews would not impact the Krameria LS with enough water, if any, to cause inundation. As described above, the Krameria LS site is not located within flood hazard or tsunami inundation areas or in areas subject to inundation by seiche.

MLK1 LS

The MLK1 LS site is not located within an area known to be at risk of inundation due to flood hazard, tsunami, or seiche, based on the citations listed above for the Krameria LS. Further, the Project includes demolition and removal of the MLK1 LS, so the facility will no longer be present at the site.

Wood Road LS

The Wood Road LS site is not located within a flood hazard, tsunami, or seiche zone. According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map, Map Number 06065C0740G, effective date August 28, 2008, the Wood Road LS site is not located within a flood hazard area or a floodway area. Based on the California Official Tsunami Inundation Maps available on the California Department of Conservation website at conservation.ca.gov/cgs/tsunami/maps, there are no tsunami inundation areas mapped within Riverside County, and the nearest such area is in Orange County, along areas bordering the Pacific Ocean. The nearest large body of water is Lake Mathews. At a distance of approximately seven miles southwesterly of the Wood Road LS site, it is highly unlikely that a seiche at Lake Mathews would result in any water reaching the Wood Road LS site. As described above, the Wood Road LS site is not located within flood hazard or tsunami inundation areas or in areas subject to inundation by seiche.

Issue X. Hydrology and Water Quality (Continued)

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	❑	❑	❑	☒

Sewer and Force Main Pipelines

The water quality control plan applicable to the area in which the Sewer and Force Main Pipelines are located is the Water Quality Control Plan for the Santa Ana River Basin (Adopted 1995 and updated in 2008, 2011, 2016, and 2019). The Sewer and Force Main Pipelines do not include features that will conflict with or obstruct water quality policies or objectives, and will not conflict with or obstruct implementation of the water quality control plan cited above.

The Sewer and Force Main Pipelines are not located within a groundwater sustainability formation area. The nearest such area is the "Riverside-Arlington CSA Formation Area", which is located to the north and west of the Project area. The Sewer and Force Main Pipelines do not have a water demand and will not conflict with or obstruct any sustainable groundwater management plan.

Krameria LS

The water quality control plan applicable to the area in which the Krameria LS is located is the Water Quality Control Plan for the Santa Ana River Basin (Adopted 1995 and updated in 2008, 2011, 2016, and 2019). The Krameria LS does not include features that will conflict with or obstruct water quality policies or objectives, and will not conflict with or obstruct implementation of the water quality control plan cited above.

The Krameria LS site is not located within a groundwater sustainability formation area. The nearest such area is the "Riverside-Arlington CSA Formation Area", which is located to the north and west of the Project area. Potable water will be used at the Krameria LS to supply an emergency eye wash, the packaged biofilter odor control system, and a hose bib. Quantities of water used by the Krameria LS are expected to be far less than those used by a typical single-family residence in the area. The Krameria LS has a minimal water demand and will not conflict with or obstruct any sustainable groundwater management plan.

MLK1 LS

Demolition and removal of the MLK1 LS will not conflict with or obstruct implementation of a water quality control plan or a sustainable groundwater management plan.

Wood Road LS

The water quality control plan applicable to the area in which the Wood Road LS is located is the Water Quality Control Plan for the Santa Ana River Basin (Adopted 1995 and updated in 2008, 2011, 2016, and 2019). The Wood Road LS does not include features that will conflict with or obstruct water quality policies or objectives, and will not conflict with or obstruct implementation of the water quality control plan cited above.

The Wood Road LS site is not located within a groundwater sustainability formation area. The nearest such area is the "Riverside-Arlington CSA Formation Area", which is located to the north and west of the Project area. Improvements at the Wood Road LS do not have a water demand and will not conflict with or obstruct any sustainable groundwater management plan.

Issue XI. Land Use and Planning

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project physically divide an established community?	❑	❑	❑	☒

Sewer and Force Main Pipelines

The Sewer and Force Main Pipelines will be constructed belowground within existing public street rights-of-way and therefore do not have the potential to physically divide an established community.

Krameria LS

The Krameria LS will be constructed within an existing fenced property and therefore does not have the potential to physically divide an established community.

MLK1 LS

The MLK1 LS is located within an existing commercial property along Van Buren Boulevard; therefore, demolition and removal of the MLK1 LS does not have the potential to physically divide an established community.

Wood Road LS

The Wood Road LS is located within an existing fenced site in a residential neighborhood; therefore, construction and operation of improvements at the Wood Road LS does not have the potential to physically divide an established community.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	❑	❑	❑	☒

Sewer and Force Main Pipelines

Construction and operation of the Sewer and Force Main Pipelines will take place within existing public street rights-of-way and will not conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

Krameria LS

Construction and operation of the Krameria LS will take place on an existing vacant, fenced site owned by Western Municipal Water District and will not conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

MLK1 LS

Demolition and removal of the MLK1 LS will not conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

Wood Road LS

Construction and operation of improvements at the existing Wood Road LS will not conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

Issue XII. Mineral Resources

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	❑	❑	❑	☒

Sewer and Force Main Pipelines

There are no known mineral resources located along the alignments of the Sewer and Force Main Pipelines; therefore, construction and operation of the Sewer and Force Main Pipelines will not 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.

Krameria LS

There are no known mineral resources located within the Krameria LS site; therefore, construction and operation of the Krameria LS will not 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.

MLK1 LS

There are no known mineral resources located within the MLK1 LS site; therefore, demolition and removal of the MLK1 LS will not 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.

Wood Road LS

There are no known mineral resources located within the Wood Road LS site; therefore, construction and operation of improvements at the Wood Road LS will not 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.

Issue XII. Mineral Resources (Continued)

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	❑	❑	❑	☒

Sewer and Force Main Pipelines

Based on the Multipurpose Open Space Element of the County of Riverside General Plan, dated December 8, 2015, a majority of the City of Riverside, including the area where the Sewer and Force Main Pipelines will be constructed, is classified as Mineral Resource Zone MRZ-3. MRZ-3 is defined as "Areas where the available geologic information indicates that mineral deposits are likely to exist, however, the significance of the deposit is undetermined." Therefore, construction and operation of the Sewer and Force Main Pipelines will not 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.

Krameria LS

Based on the Multipurpose Open Space Element of the County of Riverside General Plan, dated December 8, 2015, a majority of the City of Riverside, including the Krameria LS site, is classified as Mineral Resource Zone MRZ-3. MRZ-3 is defined as "Areas where the available geologic information indicates that mineral deposits are likely to exist, however, the significance of the deposit is undetermined." Therefore, construction and operation of the Krameria LS will not 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.

MLK1 LS

Based on the Multipurpose Open Space Element of the County of Riverside General Plan, dated December 8, 2015, a majority of the City of Riverside, including the MLK1 LS site, is classified as Mineral Resource Zone MRZ-3. MRZ-3 is defined as "Areas where the available geologic information indicates that mineral deposits are likely to exist, however, the significance of the deposit is undetermined." Therefore, demolition and removal of the MLK1 LS will not 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.

Wood Road LS

Based on the Multipurpose Open Space Element of the County of Riverside General Plan, dated December 8, 2015, a majority of the City of Riverside, including the Wood Road LS site, is classified as Mineral Resource Zone MRZ-3. MRZ-3 is defined as "Areas where the available geologic information indicates that mineral deposits are likely to exist, however, the significance of the deposit is undetermined." Therefore, construction and operation of improvements at the Wood Road LS will not 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.

Issue XIII. Noise

a) Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	❑	❑	☒	❑

Sewer and Force Main Pipelines

Noise generated during construction of the Sewer and Force Main Pipelines would be that resulting from construction equipment operating along the alignment and from workers' vehicles while commuting to and from the construction site. Construction noise will comply with the County of Riverside Noise Ordinance (Ordinance No. 847) and Title 7 - Noise Control of the City of Riverside Code of Ordinances, as applicable, as the alignment of the pipelines extends within both the City and unincorporated areas of the County of Riverside. The City's construction contract documents will require contractors to equip all machinery and equipment with appropriate noise control devices (e.g. mufflers), thereby further limiting potential impacts. Project construction noise is anticipated to be less than significant, temporary, and short-term. The Sewer and Force Main Pipelines will not generate noise during ongoing operation. For these reasons, construction and operation of the Sewer and Force Main Pipelines will not result in generation of a substantial temporary or permanent increase in ambient noise levels in excess of standards established in the local general plan or noise ordinance.

Krameria LS

Noise generated during construction of the Krameria LS would be that resulting from construction equipment operating at the Krameria LS site and from workers' vehicles commuting to and from the

construction site. Construction noise will comply with the County of Riverside Noise Ordinance (Ordinance No. 847). The City's construction contract documents will require contractors to equip all machinery and equipment with appropriate noise control devices (e.g. mufflers), thereby further limiting potential impacts. Construction noise at the Krameria LS site is anticipated to be less than significant and short-term.

Operation of the Krameria LS does not include facilities or equipment that would emit substantial perceptible noise beyond the site boundaries. Operation is expected to include one City vehicle trip to the site daily, and noise from said vehicle trip will blend with other roadway noise in the vicinity. The submersible pumping units that are a part of the Krameria LS facilities will be located belowground within the wet well, will be submerged, and will not generate any perceptible noise outside the facility.

The emergency generator and the engine-driven backup pump are housed within a sound-attenuated enclosure and will only be operated on a short-term basis during routine testing and maintenance or during a plant failure. A compressor that is included in the Project has an estimated sound level of 72 A-weighted decibels (dB(A)), which is the same level as that of a typical household vacuum cleaner. Given the fact that the Krameria LS site is located adjacent to a busy intersection, any noise from operation of the Krameria LS that is perceptible at adjoining properties would be less than significant and would comply with County Ordinance No. 847.

For these reasons, construction and operation of the Krameria LS will not result in generation of a substantial temporary or permanent increase in ambient noise levels in excess of standards established in the local general plan or noise ordinance.

MLK1 LS

Noise generated during demolition and removal of the MLK1 LS would be that resulting from construction equipment operating at the MLK1 LS site and from workers' vehicles commuting to and from the site. Noise generated at the MLK1 LS site will comply with Title 7 - Noise Control of the City of Riverside Code of Ordinances. The City's contract documents will require contractors to equip all machinery and equipment with appropriate noise control devices (e.g. mufflers), thereby further limiting potential impacts. Noise generated during demolition and removal of the MLK1 LS is anticipated to be less than significant and very short-term (estimated at two weeks or less). There would be no noise resulting from ongoing operation because the facility is being removed. For these reasons, demolition and removal of the MLK1 LS will not result in generation of a substantial temporary or permanent increase in ambient noise levels in excess of standards established in the local general plan or noise ordinance.

Wood Road LS

Noise generated during construction of improvements at the Wood Road LS would be that resulting from construction equipment operating at the Wood Road LS site and from workers' vehicles commuting to and from the construction site. Construction noise will comply with Title 7 - Noise Control of the City of Riverside Code of Ordinances. The City's construction contract documents will require contractors to equip all machinery and equipment with appropriate noise control devices (e.g. mufflers), thereby further limiting potential impacts. Construction noise at the Wood Road LS site is anticipated to be less than significant and short-term. Operation of the improvements at the Wood Road LS is expected to take place only during complete plant failure and is not expected to generate noise. For these reasons, construction and operation of the improvements at the Wood Road LS will not result in generation of a substantial temporary or permanent increase in ambient noise levels in excess of standards established in the local general plan or noise ordinance.

Issue XIII. Noise (Continued)

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Would the project result in generation of excessive groundborne vibration or groundborne noise levels?	❑	☒	❑	❑

Sewer and Force Main Pipelines

Construction of the Sewer and Force Main Pipelines is expected to generate some groundborne vibration and groundborne noise as a result of operating construction equipment. A majority of the groundborne noise and vibration generated during construction is expected to be imperceptible or only perceptible for a short period of time in the vicinity of any single structure. However, based on a study of noise and vibration impacts of the Van Buren Boulevard Widening Project, titled Van Buren Boulevard Widening Project — Noise Technical Memorandum, prepared by Michael Baker International, dated March 8, 2018 (Noise Memorandum), a vibratory roller has the potential to result in significant groundborne vibration within 15 feet of operation. Although construction would not take place within 15 feet of any single structure for an extended period of time, and groundborne vibrations from construction activities rarely reach levels that damage structures, the Noise Memorandum recommended that vibratory roller equipment not be operated within 125 feet of the historic building located at 17455 Van Buren Boulevard (currently identified as the Robert L. Wilks, Jr. Chapel). In order to minimize potential risk to said historic building during Project construction, and because the Sewer and Force Mains Pipelines alignment includes the portion of Van Buren Boulevard in front of the church building, mitigation is incorporated into the Project in order to avoid

or reduce potential impacts on the church building. Mitigation Measure NOISE-1 is summarized below and is set forth in the Mitigation Monitoring and Reporting Program for the Project.

Operation of the Sewer and Force Main Pipelines would not result in any groundborne vibration or groundborne noise.

For the reasons described above, and with incorporation of Mitigation Measure NOISE-1, the Sewer and Force Main Pipelines will not result in generation of excessive groundborne vibration or groundborne noise levels.

Mitigation Measure NOISE-1: Vibratory Rollers

During construction of the Sewer and Force Main Pipelines, vibratory rollers and vibratory compactors shall not be operated within 125 feet of the historic structure located at 17455 Van Buren Boulevard, Riverside, which is currently known as the Robert L. Wilks, Jr. Chapel.

Krameria LS

The Krameria LS site is a vacant property that directly adjoins residential properties to the north and east residential property to the south across Krameria Avenue, and Woodcrest Elementary School across Washington Street to the west. While some groundborne vibration and groundborne noise may be perceptible at nearby residences during construction, said vibration and noise would be less than significant and short-term. Operation of the Krameria LS would not generate groundborne noise or groundborne vibration. For these reasons, construction and operation of the Krameria LS will not result in generation of excessive groundborne vibration or groundborne noise levels.

MLK1 LS

The MLK1 LS is located in a landscaped area on the same property as a commercial business. Demolition and removal of the MLK1 LS may result in some perceptible groundborne vibration and groundborne noise at nearby businesses; however, said groundborne vibration and noise are expected to be less than significant and very short-term. Therefore, demolition and removal of the MLK1 LS will not result in generation of excessive groundborne vibration or groundborne noise levels.

Wood Road LS

The residential structure nearest the site of the improvements at the Wood Road Lift Station is located approximately 100 feet southwesterly of the site. While some groundborne vibration and groundborne noise may be perceptible at the nearby residence during construction, said vibration and noise would be less than significant and short-term. Improvements at the Wood Road Lift Station site would not generate groundborne vibration or groundborne noise during operation. For these reasons,

construction and operation of improvements at the Wood Road LS will not result in generation of excessive groundborne vibration or groundborne noise levels.

Issue XIII. Noise (Continued)

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?	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	❑	❑	☒	❑

The March Inland Port Airport (MIPA), a joint public use airport, is located at the March Air Reserve Base and is the public use airport located nearest to each of the Project components. According to maps included in the March Air Reserve Base/Inland Port Airport Land Use Compatibility Plan, adopted by Riverside County Airport Land Use Commission on November 13, 2014 (Airport Land Use Plan), all of the Project components are located within the Airport Influence Area of the MIPA. Potential impacts are discussed below for each Project component.

Sewer and Force Main Pipelines

*The easternmost extension of the Sewer and Force Main Pipelines alignment is located approximately 3.5 miles westerly of the runway at the MIPA. According to "Map MA-1: Compatibility Map", included in the Airport Land Use Plan, the portion of the pipelines alignment from Wood Road west to Alta Cresta Avenue is located along the border of Compatibility Zones D and E, while the remaining portions of the alignment further west are within Compatibility Zone E. Compatibility Zone D has a noise impact of "Moderate to Low", with "more concern with respect to individual loud events than with cumulative noise contours". Compatibility Zone E has a noise impact of "Low", with "occasional overflights intrusive to some outdoor activities". As described in **Issue XIII(a)** above, noise generated during construction of the Sewer and Force Main Pipelines would be less than significant and short-term. No noise would be generated by operation of the Sewer and Force Main Pipelines. For these reasons, the Sewer and Force Main Pipelines would not expose people residing or working in the Project area to excessive noise levels related to airport noise. Refer also to **Issue IX(e)** herein.*

Krameria LS

*The Krameria LS site is located approximately 5.75 miles westerly of the runway at the MIPA. According to "Map MA-1: Compatibility Map", included in the Airport Land Use Plan, the Krameria LS site is located within Compatibility Zone E. Compatibility Zone E has a noise impact of "Low", with "occasional overflights intrusive to some outdoor activities". As described in **Issue XIII(a)** above, noise generated during construction of the Krameria LS would be less than significant and*

short-term. Noise generated by operation of the Krameria LS includes that resulting from operation of a compressor (with an estimated noise level of 72 dB(A), similar to that of a typical household vacuum cleaner), and the occasional operation of an emergency standby generator and an engine-driven backup pump (both located in a sound-attenuated enclosure and operated only during a plant failure or for routine testing and maintenance). The submersible pumping units that are a part of the Krameria LS facilities will be located belowground within the wet well, will be submerged, and will not generate any perceptible noise outside the facility.

Noise would also be generated by one City vehicle trip to the Krameria LS site per day; however, said noise will blend with existing road traffic at the intersection. For these reasons, construction and operation of the Krameria LS will not expose people residing or working in the Project area to excessive noise levels related to airport noise. Refer also to ***Issue IX(e)*** *herein.*

MLK1 LS

The MLK1 LS site is located approximately 4 miles westerly of the runway at the MIPA. According to "Map MA-1: Compatibility Map", included in the Airport Land Use Plan, the MLK1 LS site is located within Compatibility Zone E. Compatibility Zone E has a noise impact of "Low", with "occasional overflights intrusive to some outdoor activities". As described in ***Issue XIII(a)*** *above, noise generated during demolition and removal of the MLK1 LS would be less than significant and very short-term. For these reasons, demolition and removal of the MLK1 LS will not expose people residing or working in the Project area to excessive noise levels related to airport noise. Refer also to* ***Issue IX(e)*** *herein.*

Wood Road LS

The Wood Road LS site is located approximately 3.25 miles northwesterly of the runway at the MIPA. According to "Map MA-1: Compatibility Map", included in the Airport Land Use Plan, the Wood Road LS site is located within Compatibility Zone C2. Compatibility Zone C2 has a noise impact of "Moderate", and "single-event noise may be disruptive to noise-sensitive land use activities". As described in ***Issue XIII(a)*** *above, noise generated during construction of improvements at the Wood Road LS would be less than significant and short-term, and operation of the improvements at the Wood Road LS is not expected to generate noise. For these reasons, construction and operation of improvements at the Wood Road LS will not expose people residing or working in the Project area to excessive noise levels related to airport noise. Refer also to* ***Issue IX(e)*** *herein.*

Issue XIV. Population and Housing

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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 road or other infrastructure)?	❑	❑	❑	☒

Sewer and Force Main Pipelines

The Sewer and Force Main Pipelines are intended to provide sewer service to existing commercial development along Van Buren Boulevard and to a proposed residential development to the north (Tract 36897). Based on the Lake Mathews/Woodcrest Area Plan (last revised by County of Riverside on December 6, 2016 and part of the Riverside County General Plan), the proposed residential development and adjoining areas are shown as having a land use designation of "Rural Community - Very Low Density Residential" (RC-VLDR).

While the Sewer and Force Main Pipelines will provide sewer service for the proposed residential development, said pipelines would not induce unplanned population growth, as the land area for the proposed development is already designated for residential use by the Riverside County General Plan. For these reasons, the Sewer and Force Main Pipelines will not induce substantial unplanned population growth, either directly or indirectly.

Krameria LS

The Krameria LS is intended to provide sewer service to existing commercial development along Van Buren Boulevard and to a proposed residential development to the north (Tract 36897). Based on the Lake Mathews/Woodcrest Area Plan (last revised by County of Riverside on December 6, 2016 and part of the Riverside County General Plan), the proposed residential development and adjoining areas are shown as having a land use designation of "Rural Community - Very Low Density Residential" (RC-VLDR).

While the Krameria LS will provide sewer service for the proposed residential development, said lift station would not induce unplanned population growth, as the land area for the proposed development is already designated for residential use by the Riverside County General Plan. For these reasons, the Krameria LS will not induce substantial unplanned population growth, either directly or indirectly.

MLK1 LS

Demolition and removal of the MLK1 LS does not have the potential to induce substantial unplanned population growth, either directly or indirectly.

Wood Road LS

Improvements at the Wood Road LS consist of construction of an emergency storage tank to provide 80 minutes of emergency sewage storage at the existing Wood Road LS. These facilities will provide emergency sewage storage in the event of a complete plant failure and do not have the potential to induce substantial unplanned population growth, either directly or indirectly.

Issue XIV. Population and Housing (Continued)

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	❑	❑	❑	☒

Sewer and Force Main Pipelines

The Sewer and Force Main Pipelines will be located in public street rights-of-way and will not displace any people or housing.

Krameria LS

The Krameria LS site is currently vacant, and construction and operation of the Krameria LS will not displace any people or housing.

MLK1 LS

The MLK1 LS is located on existing commercial property, and demolition and removal of the MLK1 LS will not displace any people or housing.

Wood Road LS

The Wood Road LS site is located in an existing residential neighborhood, and construction and operation of improvements at the existing Wood Road LS will not displace any people or housing.

Issue 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:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
i) Fire protection?	❑	❑	❑	☒
ii) Police protection?	❑	❑	❑	☒
iii) Schools?	❑	❑	❑	☒
iv) Parks?	❑	❑	❑	☒
v) Other public facilities?	❑	❑	❑	☒

i) *Sewer and Force Main Pipelines*

The Sewer and Force Main Pipelines will be located belowground within existing paved streets and will not require, or adversely impact, fire protection resources.

Krameria LS

The Krameria LS does not require additional fire protection resources beyond those for other structures in the area. The Krameria LS will not adversely impact fire protection resources.

MLK1 LS

Demolition and removal of the MLK1 LS does not require additional or unusual fire protection resources and will not adversely impact fire protection resources.

Wood Road LS

Improvements at the Wood Road LS will only be operated in the event of a plant failure and do not include any features or facilities that will require additional or unusual fire protection resources. Improvements at the Wood Road LS will not adversely impact fire protection resources.

ii) *Sewer and Force Main Pipelines*

The Sewer and Force Main Pipelines will be located belowground within existing paved streets, do not include facilities for human occupation, and will not adversely impact police protection resources.

Krameria LS

The Krameria LS does not include facilities for human occupation beyond short-term operation and maintenance and will not adversely impact police protection services.

MLK1 LS

Demolition and removal of the MLK1 LS will not adversely impact police protection resources.

Wood Road LS

Improvements at the Wood Road LS do not include facilities for human occupation and will not adversely impact police protection resources.

iii) *Sewer and Force Main Pipelines*

Construction and operation of the Sewer and Force Main Pipelines does not have the potential to result in an increase or decrease in population in the area and therefore will not adversely impact schools.

Krameria LS

Construction and operation of the Krameria LS does not have the potential to result in an increase or decrease in population in the area and therefore will not adversely impact schools.

MLK1 LS

Demolition and removal of the MLK1 LS does not have the potential to result in an increase or decrease in population in the area and therefore will not adversely impact schools.

Wood Road LS

Construction and operation of the improvements at the Wood Road LS does not have the potential to result in an increase or decrease in population in the area and therefore will not adversely impact schools.

iv) *Sewer and Force Main Pipelines*

Construction and operation of the Sewer and Force Main Pipelines does not have the potential to increase or decrease the area's population and therefore will not result in a greater or lesser demand for parks.

Krameria LS

Construction and operation of the Krameria LS does not have the potential to increase or decrease the area's population and therefore will not result in a greater or lesser demand for parks.

MLK1 LS

Demolition and removal of the MLK1 LS does not have the potential to increase or decrease the area's population and therefore will not result in a greater or lesser demand for parks.

Wood Road LS

Construction and operation of improvements at the Wood Road LS does not have the potential to increase or decrease the area's population, and therefore will not result in a greater or lesser demand for parks.

v) *Sewer and Force Main Pipelines*

Construction and operation of the Sewer and Force Main Pipelines will not adversely affect other public facilities.

Krameria LS

Construction and operation of the Krameria LS will not adversely affect other public facilities.

MLK1 LS

Demolition and removal of the MLK1 LS will not adversely affect other public facilities.

Wood Road LS

Construction and operation of improvements at the Wood Road LS will not adversely affect other public facilities.

Issue XVI. Recreation

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	❑	❑	❑	☒

Sewer and Force Main Pipelines

Construction and operation of the Sewer and Force Main Pipelines does not have the potential to increase the use of existing neighborhood or regional parks or other recreational facilities.

Krameria LS

Construction and operation of the Krameria LS does not have the potential to increase the use of existing neighborhood or regional parks or other recreational facilities.

MLK1 LS

Demolition and removal of the MLK1 LS does not have the potential to increase the use of existing neighborhood or regional parks or other recreational facilities.

Wood Road LS

Construction and operation of improvements at the Wood Road LS does not have the potential to increase the use of existing neighborhood or regional parks or other recreational facilities.

Issue XVI. Recreation (Continued)

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	❑	❑	❑	☒

Sewer and Force Main Pipelines

Construction and operation of the Sewer and Force Main Pipelines does not include recreational facilities and will not require the construction or expansion of any recreational facilities.

Krameria LS

Construction and operation of the Krameria LS does not include recreational facilities and will not require the construction or expansion of any recreational facilities.

MLK1 LS

Demolition and removal of the MLK1 LS does not include recreational facilities and will not require the construction or expansion of any recreational facilities.

Wood Road LS

Construction and operation of improvements at the Wood Road LS does not include recreational facilities and will not require the construction or expansion of any recreational facilities.

Issue XVII. Transportation

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	❑	❑	☒	❑

There are several documents adopted by the County and City of Riverside that pertain to the circulation system, including the "Circulation and Community Mobility Element" (amended November 2012 of the City of Riverside General Plan, the City of Riverside Bicycle Master Plan (adopted May 22, 2007), and the "Circulation Element" (revised December 12, 2017) of the Riverside County General Plan.

Sewer and Force Main Pipelines

Temporary impacts to traffic are expected during construction of the Sewer and Force Main Pipelines, including lane closures, workers' vehicles traveling to and from the construction site, and operation of construction vehicles and equipment. Said impacts will be less than significant, short-term, and would be managed by an approved traffic control plan implemented by the construction contractor during construction. Operation of the Sewer and Force Main Pipelines will have no impact on traffic or transportation. For these reasons, construction and operation of the Sewer and Force Main Pipelines will not conflict with a program, plan, ordinance, or policy addressing the circulation system, including those cited above.

Krameria LS

Minor, temporary impacts to traffic are expected to occur during construction of the Krameria LS due to workers' vehicles and construction vehicles and equipment; however, said impacts will be less than significant and short-term. Operation of the Krameria LS will generate approximately one round-trip vehicle trip to the site per day, which would not substantially impact traffic or transportation. For these reasons, construction and operation of the Krameria LS will not conflict with a program, plan, ordinance, or policy addressing the circulation systems, including those cited above.

MLK1 LS

While demolition and removal of the MLK1 LS may result in some minor temporary traffic impacts as a result of workers' vehicles and construction vehicles and equipment, said impacts will be less than significant and short-term. Demolition and removal of the MLK1 LS will not conflict with a program, plan, ordinance, or policy addressing the circulation system, including those cited above.

Wood Road LS

Construction of improvements at the Wood Road are expected to result in minor temporary impacts to traffic due to workers' vehicles and construction vehicles and equipment; however, said increase will be less than significant and short-term. Operation of said improvements will not impact traffic or transportation. Construction and operation of improvements at the Wood Road LS will not conflict with a program, plan, ordinance, or policy addressing the circulation system, including those cited above.

Issue XVII. Transportation (Continued)

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	❑	❑	☒	❑

Sewer and Force Main Pipelines

Construction of the Sewer and Force Main Pipelines is expected to result in approximately six workers' vehicles traveling to and from the alignment per day. Because of the Project's location in and adjacent to Riverside, a city with a population of greater than 300,000, and surrounded by other smaller cities, it is expected that workers will be commuting from the local area. For the purposes of this analysis, we have assumed that workers will commute a total of 20 miles per day each, round-trip, which results in a total of 120 vehicle miles traveled (VMT) per day. This amount of daily VMT will only occur during Project construction and is not significant considering the urban location. Operation of the Sewer and Force Main Pipelines would not generate any VMT. For these reasons, construction and operation of the Sewer and Force Main Pipelines will not conflict or be inconsistent with CEQA Guidelines section 15064.3(b).

Krameria LS

Construction of the Krameria LS is expected to result in approximately eight workers' vehicles traveling to and from the site per day. Because of the Project's location in and adjacent to Riverside, a city with a population of greater than 300,000, and surrounded by other smaller cities, it is expected that workers will be commuting from the local area. For the purposes of this analysis, we have assumed that workers will commute a total of 20 miles per day each, round-trip, which results in a total of 160 VMT per day. This amount of daily VMT will only occur during Project construction and is not significant considering the urban location. Operation of the Krameria LS will generate approximately one City vehicle trip per day, which is estimated to generate approximately 20 VMT

daily. For these reasons, construction and operation of the Krameria LS will not conflict with or be inconsistent with CEQA Guidelines section 15064.3(b).

MLK1 LS

Demolition and removal of the MLK1 LS is expected to result in approximately four workers' vehicles traveling to and from the site per day. Because of the Project's location in and adjacent to Riverside, a city with a population of greater than 300,000, and surrounded by other smaller cities, it is expected that workers will be commuting from the local area. For the purposes of this analysis, we have assumed that workers will commute a total of 20 miles per day each, round-trip, which results in a total of 80 VMT per day. This amount of daily VMT will only occur during the demolition and removal and is not significant considering the location along an arterial roadway in an urban environment. For these reasons, demolition and removal of the MLK1 LS will not conflict with or be inconsistent with CEQA Guidelines section 15064.3(b).

Wood Road LS

Construction of improvements at the Wood Road LS is expected to result in approximately four workers' vehicles traveling to and from the site per day. Because of the Project's location in and adjacent to Riverside, a city with a population of greater than 300,000, and surrounded by other smaller cities, it is expected that workers will be commuting from the local area. For the purposes of this analysis, we have assumed that workers will commute a total of 20 miles per day each, round-trip, which results in a total of 80 VMT per day. This amount of daily VMT will only occur during the construction and is not significant considering the urban location. Operation of the improvements at the Wood Road LS would only occur during a failure of the existing Wood Road LS facilities, and would result in an insignificant number of vehicle trips during that time. For these reasons, construction and operation of improvements at the Wood Road LS will not conflict with or be inconsistent with CEQA Guidelines section 15064.3(b).

Issue XVII. Transportation (Continued)

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)?	Potentially Significant Impact ❑	Less Than Significant with Mitigation Incorporated ❑	Less Than Significant Impact ❑	No Impact ☒

Sewer and Force Main Pipelines

The Sewer and Force Main Pipelines will be constructed belowground within existing paved streets, and the streets will be returned to preconstruction conditions after construction. Therefore, construction and operation of the Sewer and Force Main Pipelines will not substantially increase hazards due to a geometric design feature or incompatible uses.

Krameria LS

The Krameria LS will be constructed on a vacant site within an existing residential neighborhood. Therefore, construction and operation of the Krameria LS will not substantially increase hazards due to a geometric design feature or incompatible uses.

MLK1 LS

Demolition and removal of the existing MLK1 LS will not impact street design or result in incompatible uses. After removal of the MLK1 LS, the ground surface will be restored to landscaped conditions. Therefore, demolition and removal of the MLK1 LS will not substantially increase hazards due to a geometric design feature or incompatible uses.

Wood Road LS

Improvements at the Wood Road LS are located on the existing Wood Road LS site, would not impact street design, and would not result in incompatible uses. Construction and operation of improvements at the Wood Road LS will not substantially increase hazards due to a geometric design feature or incompatible uses.

Issue XVII. Transportation (Continued)

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Would the project result in inadequate emergency access?	❑	❑	☒	❑

Sewer and Force Main Pipelines

Because the Sewer and Force Main Pipelines will be constructed within existing paved streets, lane closures will be required during construction; however, full street closures of Van Buren Boulevard and Washington Street are not expected. Although traffic delays are expected during construction, the construction contractor will be required to maintain safe and effective traffic control and street access during construction, in accordance with an approved traffic control plan. For these reasons, construction and operation of the Sewer and Force Main Pipelines will not result in inadequate emergency access.

Krameria LS

The Krameria LS will be constructed within an existing vacant site in a residential neighborhood. Although some minor traffic delays may result from the use of construction vehicles and equipment, the construction contractor will be required to maintain safe and effective traffic control and street access at the intersection of Krameria Avenue and Washington Street during construction, in accordance with an approved traffic control plan. Operation of the Krameria LS will result in only one City vehicle trip to the site daily. For these reasons, construction and operation of the Krameria LS will not result in inadequate emergency access.

MLK1 LS

The MLK1 LS is located within an existing commercial property along Van Buren Boulevard. Although some minor traffic delays may result from the presence of construction vehicles and equipment, the construction contractor will be required to maintain safe and effective traffic control and street access along the portion of Van Buren Boulevard fronting the MLK1 LS site during demolition and removal activities, in accordance with an approved traffic control plan. For these reasons demolition and removal of the MLK1 LS will not result in inadequate emergency access.

Wood Road LS

The improvements at the Wood Road LS will be constructed within the existing Wood Road LS site in a residential neighborhood. Although some minor traffic delays may result from the use of construction vehicles and equipment, the construction contractor will be required to maintain safe and effective

traffic control and street access at the intersection of Wood Road and Zamora Way during construction, in accordance with an approved traffic control plan. For these reasons, construction and operation of the improvements at the Wood Road LS will not result in inadequate emergency access.

Issue XVIII. Tribal Cultural Resources

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project cause a substantial adverse change in the significance of a tribal cultural resources, 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:				
i) 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)?	❑	❑	☒	❑
ii) 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.	❑	❑	☒	❑

i) *Sewer and Force Main Pipelines*

There are no known resources along the Sewer and Force Main Pipelines alignment that are 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). The City has notified and consulted with local Native American tribes about the Project, as described in ***Issue XVIII(a)(ii)*** *below. For these reasons, construction and operation of the Sewer and Force Main Pipelines will not cause a substantial adverse change in the significance of a tribal cultural resource 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). Refer also to* ***Issue V(a)*** *herein.*

Krameria LS

There are no known resources on the Krameria LS site that are 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). The City has notified and consulted with local Native American tribes about the Project, as described in ***Issue XVIII(b)*** *below. For these reasons, construction and operation of the Krameria LS will not cause a substantial adverse change in the significance of a tribal cultural resource 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). Refer also to* ***Issue V(a)*** *herein.*

MLK1 LS

There are no known resources on the MLK1 LS site that are 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). The City has notified and consulted with local Native American tribes about the Project, as described in ***Issue XVIII(a)(ii)*** *below. For these reasons, demolition and removal of the existing MLK1 LS will not cause a substantial adverse change in the significance of a tribal cultural resource 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). Refer also to* ***Issue V(a)*** *herein.*

Wood Road LS

There are no known resources on the Wood Road LS site that are 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). The City has notified and consulted with local Native American tribes about the Project, as described in ***Issue XVIII(a)(ii)*** *below. For these reasons, construction and operation of improvements at the Wood Road LS will not cause a substantial adverse change in the significance of a tribal cultural resource 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). Refer also to* ***Issue V(a)*** *herein.*

ii) *The City sent formal notification of the Project to nine local Native American tribes on July 3, 2019. The City received responses from five tribes: Agua Caliente Band of Cahuilla Indians (ACBCI) on July 9, 2019; Soboba Band of Luiseño Indians (Soboba) on July 20, 2019; Morongo Band of Mission Indians (Morongo) on July 31, 2019; and Rincon Band of Luiseño Indians (Rincon) and Pechanga Band of Luiseño Indians (Pechanga) on August 2, 2019. ACBCI requested additional project information and did not request consultation; all of the other tribes listed above requested formal consultation on the Project.*

The City has sent, via email on October 9, 2019, copies of the cultural resources assessments for the Project sites to each of the tribes listed above and has initiated formal consultation with the tribes requesting consultation on the Project. Based on consultation with Morongo, the City has agreed to have archaeological and tribal monitors present during ground disturbance that extends beyond previously-disturbed depths during Project excavation activities.

Sewer and Force Main Pipelines

There are no known resources located along the Sewer and Force Main Pipelines alignment that meet the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In order to avoid or reduce impacts to previously-undiscovered tribal cultural resources that may be present along the Sewer and Force Main Pipelines alignment, the City will provide access to a tribal monitor to observe ground disturbance that extends beyond previously-disturbed depths during Project excavation activities. Additionally, an archaeological monitor will be present, in accordance with Mitigation Measure CUL-1, which is described in ***Issue V(b)*** *herein and is set forth in the Mitigation Monitoring and Reporting Program for the Project.*

In the event that any potential tribal cultural resource is discovered during construction of the Sewer and Force Main Pipelines, the City will contact a qualified archaeologist, meeting Secretary of the Interior standards to assess the find. The City will also notify the five tribes listed above and will consult in good faith with said tribes on the disposition and treatment of any artifacts or other cultural materials encountered during construction of the Sewer and Force Main Pipelines. These measures are reflected in Mitigation Measure TCR-1, which is summarized below (at the end of this ***Issue XVIII(a)(ii)*** *below) and is set forth in the Mitigation Monitoring and Reporting Program for the Project. With incorporation of Mitigation Measure TCR-1, construction and operation of the Sewer and Force Main Pipelines would not cause a substantial adverse change in the significance of a tribal cultural resource, including such a resource considered significant to a California Native American Tribe.*

Krameria LS

There are no known resources located on the Krameria LS site that meet the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In order to avoid or reduce impacts to previously-undiscovered tribal cultural resources that may be present on the Krameria LS site, the City will provide access to a tribal monitor to observe ground disturbance that extends beyond previously-disturbed depths during Project excavation

activities. Additionally, an archaeological monitor will be present, in accordance with Mitigation Measure CUL-1, which is described in ***Issue V(b)*** *herein and is set forth in the Mitigation Monitoring and Reporting Program for the Project.*

In the event that any potential tribal cultural resource is discovered during construction of the Krameria LS, the City will contact a qualified archaeologist, meeting Secretary of the Interior standards to assess the find. The City will also notify the five tribes listed above and will consult in good faith with said tribes on the disposition and treatment of any artifacts or other cultural materials encountered during construction of the Krameria LS. These measures are reflected in Mitigation Measure TCR-1, which is summarized at the end of this ***Issue XVIII(a)(ii)*** *below and is set forth in the Mitigation Monitoring and Reporting Program for the Project. With incorporation of Mitigation Measure TCR-1, construction and operation of the Krameria LS would not cause a substantial adverse change in the significance of a tribal cultural resource, including such a resource considered significant to a California Native American Tribe.*

MLK1 LS

There are no known resources located on the MLK1 LS site that meet the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In order to avoid or reduce impacts to previously-undiscovered tribal cultural resources that may be present at the MLK1 LS site, the City will provide access to a tribal monitor to observe ground disturbance that extends beyond previously-disturbed depths during Project excavation activities. Additionally, an archaeological monitor will be present, in accordance with Mitigation Measure CUL-1, which is described in ***Issue V(b)*** *herein and is set forth in the Mitigation Monitoring and Reporting Program for the Project.*

In the event that any potential tribal cultural resource is discovered during demolition and removal of the MLK1 LS, the City will contact a qualified archaeologist, meeting Secretary of the Interior standards to assess the find. The City will also notify the five tribes listed above and will consult in good faith with said tribes on the disposition and treatment of any artifacts or other cultural materials encountered during demolition and removal of the MLK1 LS. These measures are reflected in Mitigation Measure TCR-1, which is summarized at the end of this ***Issue XVIII(a)(ii)*** *below and is set forth in the Mitigation Monitoring and Reporting Program for the Project. With incorporation of Mitigation Measure TCR-1, demolition and removal of the MLK1 LS would not cause a substantial adverse change in the significance of a tribal cultural resource, including such a resource considered significant to a California Native American Tribe.*

Wood Road LS

There are no known resources located on the Wood Road LS site that meet the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1.In order to avoid or reduce impacts to previously-undiscovered tribal cultural resources that may be present at the Wood Road LS site, the City will provide access to a tribal monitor to observe ground disturbance that extends beyond previously-disturbed depths during Project excavation activities. Additionally, an archaeological monitor will be present, in accordance with Mitigation Measure CUL-1, which is described in ***Issue V(b)*** *herein and is set forth in the Mitigation Monitoring and Reporting Program for the Project.*

In the event that any potential tribal cultural resource is discovered during construction of improvements at the Wood Road LS, the City will contact a qualified archaeologist, meeting Secretary of the Interior standards to assess the find. The City will also notify the five tribes listed above and will consult in good faith with said tribes on the disposition and treatment of any artifacts or other cultural materials encountered during construction of improvements at the Wood Road LS. These measures are reflected in Mitigation Measure TCR-1, which is summarized at the end of this ***Issue XVIII(a)(ii)*** *below and is set forth in the Mitigation Monitoring and Reporting Program for the Project. With incorporation of Mitigation Measure TCR-1, construction and operation of improvements at the Wood Road LS would not cause a substantial adverse change in the significance of a tribal cultural resource, including such a resource considered significant to a California Native American Tribe.*

Mitigation Measure TCR-1: Tribal Cultural Resources

There are no known tribal cultural resources on any of the Project sites (Sewer and Force Main Pipelines, Krameria LS, MLK1 LS, and Wood Road LS) that are 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). However, in order to avoid or reduce impacts to previously-undiscovered tribal cultural resources that may be present at any of the Project sites, the City will provide access to a tribal monitor to observe ground disturbance that extends beyond previously-disturbed depths during Project excavation activities.

In the event that any potential tribal cultural resource is discovered during ground disturbing activities pursuant to the Project, the City will contact a qualified archaeologist, meeting Secretary of the Interior standards, to assess the find. Additionally, the City will notify the five tribes that had responded to the City's

notification of the Project (Agua Caliente Band of Cahuilla Indians (ACBCI), Soboba Band of Luiseño Indians (Soboba), Morongo Band of Mission Indians (Morongo), Rincon Band of Luiseño Indians (Rincon), Pechanga Band of Luiseño Indians (Pechanga). The City will consult in good faith with said tribes on the disposition and treatment of any artifacts or other cultural materials encountered during activities pursuant to the Project.

Issue XIX. Utilities and Service Systems

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project 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 relocation or construction of which could cause significant environmental effects?	❑	❑	❑	☒

Sewer and Force Main Pipelines

Construction and operation of the Sewer and Force Main Pipelines will not require or result in the relocation or construction of new or expanded utilities facilities.

Krameria LS

Construction and operation of the Krameria LS will not require or result in the relocation or construction of new or expanded utilities facilities.

MLK1 LS

Demolition and removal of the MLK1 LS will not require or result in the relocation or construction of new or expanded utilities facilities.

Wood Road LS

Construction and operation of improvements at the existing Wood Road LS will not require or result in the relocation or construction of new or expanded utilities facilities.

Issue XIX. Utilities and Service Systems (Continued)

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	❑	❑	❑	☒

Sewer and Force Main Pipelines

The Sewer and Force Main Pipelines do not have a water demand.

Krameria LS

The Krameria LS has a minimal water demand. Potable water will be used to supply an emergency eye wash, the packaged biofilter odor control system, and a hose bib. Quantities of water used by the Krameria LS are expected to be well under those used by a typical single-family residence in the area. Sufficient water supplies are available from the City of Riverside's existing sources to serve the Krameria LS and reasonably foreseeable future development during normal, dry, and multiple-dry years.

MLK1 LS

The MLK1 LS will be demolished and removed and does not have a water demand.

Wood Road LS

Improvements at the Wood Road LS do not have a water demand.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	❑	❑	❑	☒

Sewer and Force Main Pipelines

The Sewer and Force Main Pipelines are intended for the collection and transmission of wastewater, and said pipelines will not generate wastewater.

Krameria LS

The Krameria LS is intended to lift wastewater as it flows to the wastewater treatment plant. The Krameria LS will not generate wastewater.

MLK1 LS

The MLK1 LS will be demolished and removed, and it does not generate wastewater.

Wood Road LS

Improvements at the Wood Road LS will not generate wastewater.

Issue XIX. Utilities and Service Systems (Continued)

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Would the project 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?	❑	❑	☒	❑

Sewer and Force Main Pipelines

Construction of the Sewer and Force Main Pipelines may generate small quantities of solid waste; however, said quantities will be minimal, will be accommodated by a local landfill, will not exceed state or local standards, will not exceed the capacity of local infrastructure, and will not otherwise impair the attainment of solid waste reduction goals. Operation of the Sewer and Force Main Pipelines will not generate solid waste.

Krameria LS

Construction of the Krameria LS may generate small quantities of solid waste; however, said quantities will be minimal, will be accommodated by a local landfill, will not exceed state or local standards, will not exceed the capacity of local infrastructure, and will not otherwise impair the attainment of solid waste reduction goals. Operation of the Krameria LS will not generate solid waste.

MLK1 LS

Demolition and removal of the MLK1 LS will generate some solid waste, as the removed facilities will be discarded. Discarding the MLK1 LS will be a one-time occurrence, will be accommodated by a local landfill, will not exceed state or local standards, will not exceed the capacity of local infrastructure, and will not otherwise impair the attainment of solid waste reduction goals.

Wood Road LS

Construction of improvements at the Wood Road LS may generate small quantities of solid waste; however, said quantities will be minimal, will be accommodated by a local landfill, will not exceed state or local standards, will not exceed the capacity of local infrastructure, and will not otherwise

impair the attainment of solid waste reduction goals. Operation of improvements at the Wood Road LS will not generate solid waste.

Issue XIX. Utilities and Service Systems (Continued)

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	❑	❑	❑	☒

Sewer and Force Main Pipelines

Construction and operation of the Sewer and Force Main Pipelines will comply with all federal, state, and local statutes and regulations related to solid waste. Refer also to ***Issue XIX(d)*** *above.*

Krameria LS

Construction and operation of the Krameria LS will comply with all federal, state, and local statutes and regulations related to solid waste. Refer also to ***Issue XIX(d)*** *above.*

MLK1 LS

Demolition and removal of the MLK1 LS will comply with all federal, state, and local statutes and regulations related to solid waste. Refer also to ***Issue XIX(d)*** *above.*

Wood Road LS

Construction and operation of improvements at the Wood Road LS will comply with all federal, state, and local statutes and regulations related to solid waste. Refer also to ***Issue XIX(d)*** *above.*

Issue XX. Wildfire

If the Project is located in or near state responsibility areas or lands classified as very high fire hazard severity zones:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?	❑	❑	☒	❑

Sewer and Force Main Pipelines

Based on maps available on the California Board of Forestry and Fire Protection State Responsibility Area Viewer, the Sewer and Force Main Pipelines are not located within a state responsibility area

(SRA). The nearest SRA is located approximately 0.25 mile southerly of the southerly extent of the pipelines alignment within Washington Street. Based on maps available on the Office of the State Fire Marshal website (osfm.fire.ca.gov), the Sewer and Force Main Pipelines are not located in an area designated as a fire hazard severity zone.

Some lane closures and traffic delays are expected along portions of Van Buren Boulevard and Washington Street during construction of the Sewer and Force Main Pipelines; however, roads will remain open, and the lane closures and traffic delays will be temporary and short-term. For these reasons, construction and operation of the Sewer and Force Main Pipelines will not substantially impair an adopted emergency response plan or emergency evacuation plan.

Krameria LS

Based on maps available on the California Board of Forestry and Fire Protection State Responsibility Area Viewer, the Krameria LS site is not located within a state responsibility area (SRA). The nearest SRA is located approximately 0.25 mile southerly of the Krameria LS. Based on maps available on the Office of the State Fire Marshal website (osfm.fire.ca.gov), the Krameria LS site not located in an area designated as a fire hazard severity zone.

Some traffic delays may occur along nearby portions of Krameria Avenue and Washington Street during construction of the Krameria LS; however, roads will remain open, and any traffic delays will be temporary and short-term. For these reasons, construction and operation of the Krameria LS will not substantially impair an adopted emergency response plan or emergency evacuation plan.

MLK1 LS

Based on maps available on the California Board of Forestry and Fire Protection State Responsibility Area Viewer, the MLK1 LS site is not located within a state responsibility area (SRA). The nearest SRA is located approximately one mile southerly of the MLK1 LS. Based on maps available on the Office of the State Fire Marshal website (osfm.fire.ca.gov), the MLK1 LS site not located in an area designated as a fire hazard severity zone.

Some traffic delays may occur along nearby portions of Van Buren Boulevard during demolition and removal of the MLK1 LS; however, roads will remain open, and any traffic delays will be temporary and short-term. For these reasons, demolition and removal of the MLK1 LS will not substantially impair an adopted emergency response plan or emergency evacuation plan.

Wood Road LS

Based on maps available on the California Board of Forestry and Fire Protection State Responsibility Area Viewer, the Wood Road LS site is not located within a state responsibility area (SRA). The

nearest SRA is located approximately 2.5 miles southwesterly of the Wood Road LS. Another SRA is located approximately 3 miles to northeasterly of the Wood Road LS. Based on maps available on the Office of the State Fire Marshal website (osfm.fire.ca.gov), the Wood Road LS site not located in an area designated as a fire hazard severity zone.

Some traffic delays may occur along nearby portions of Wood Road and Zamora Way during construction of improvements at the Wood Road LS; however, roads will remain open, and any traffic delays will be temporary and short-term. For these reasons, construction and operation of improvements at the Wood Road LS will not substantially impair an adopted emergency response plan or emergency evacuation plan.

Issue XX. Wildfire (Continued)

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Due to slope, prevailing winds, or other factors, would the project exacerbate wildfire risks and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	❑	❑	❑	☒

Sewer and Force Main Pipelines

The Sewer and Force Main Pipelines do not include habitable structures, and there would be no project occupants. Further, the construction and operation of the Sewer and Force Main Pipelines will not exacerbate wildfire risks.

Krameria LS

The Krameria LS does not include structures intended for habitation beyond short-term occupancy for operation and maintenance purposes. Further, construction and operation of the Krameria LS will not exacerbate wildfire risks.

MLK1 LS

The MLK1 LS will be removed from the site. Demolition and removal of the MLK1 LS will not exacerbate wildfire risks.

Wood Road LS

Facilities included in the improvements at the Wood Road LS do not include any habitable structures. Further, construction and operation of the improvements at the Wood Road LS will not exacerbate wildfire risks.

Issue XX. Wildfire (Continued)

c) Would the project 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?	Potentially Significant Impact ❑	Less Than Significant with Mitigation Incorporated ❑	Less Than Significant Impact ☒	No Impact ❑

Sewer and Force Main Pipelines

The Sewer and Force Main Pipelines do not require the installation or maintenance of associated infrastructure that will exacerbate fire risk or result in temporary or ongoing impacts to the environment related to fire risk.

Krameria LS

The Krameria LS requires an electrical connection to power the lift station facilities; however, said connection will not exacerbate fire risk or result in temporary or ongoing impacts to the environment related to fire risk.

MLK1 LS

The MLK1 LS will be demolished and removed as part of the Project, and said demolition and removal does not require the installation or maintenance of associated infrastructure that will exacerbate fire risk or result in temporary or ongoing impacts to the environment related to fire risk.

Wood Road LS

The improvements at the Wood Road LS do not require the installation or maintenance of associated infrastructure that will exacerbate fire risk or result in temporary or ongoing impacts to the environment related to fire risk.

d) Would the project expose people or structures to significant risks, including downslope or downstream flooding or landslide, as a result of runoff, post-fire slope instability, or drainage changes?	Potentially Significant Impact ❑	Less Than Significant with Mitigation Incorporated ❑	Less Than Significant Impact ❑	No Impact ☒

Sewer and Force Main Pipelines

The Sewer and Force Main Pipelines will be constructed within existing paved streets, and the disturbed surfaces will then be returned to preconstruction conditions. Therefore, construction and operation of the Sewer and Force Main Pipelines will not expose people or structures to significant risks as a result of runoff, post-fire slope instability, or drainage changes.

Krameria LS

The Krameria LS will be constructed within an existing vacant site, and stormwater runoff will flow to an existing storm drain catch basin, as described in ***Issue X(c)*** *herein. Further, based on the Geotechnical Report, cited in* ***Issue VII(a)(iv)*** *herein, the Krameria LS site has a very low potential for landslides. For these reasons, construction and operation of the Krameria LS will not expose people or structures to significant risks as a result of runoff, post-fire slope instability, or drainage changes.*

MLK1 LS

The MLK1 LS will be demolished and removed as part of the Project, and said demolition and removal will not expose people or structures to significant risks as a result of runoff, post-fire slope instability, or drainage changes.

Wood Road LS

Improvements at the Wood Road LS will be mostly below ground and would result in the addition of approximately 100 square feet (SF) of impervious surfaces at the site. The 100 SF area would result in minimal additional runoff over existing conditions. Further, based on the report, Geotechnical Exploration Proposed Wood Road and Krameria Lift Station Project, WO# 1703736 - Riverside Public Works Department, Riverside California, dated August 16, 2019 (Geotechnical Report), prepared by Leighton Consulting, Inc., the potential for landslides is very low for the Wood Road LS site. For these reasons, construction and operation of the improvements at the Wood Road LS will not expose people or structures to significant risks as a result of runoff, post-fire slope instability, or drainage changes. A copy of the Geotechnical Report is available for review from the City of Riverside Public Works Department.

Issue 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?	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	❑	☒	❑	❑

- ***Biological Resources***

  Sewer and Force Main Pipelines

  *As described in **Issue IV** herein, no sensitive species were observed during a biological survey of the Sewer and Force Main Pipelines alignment; however, suitable habitat for burrowing owl and nesting birds was observed, as well as potentially suitable habitat for least Bell's vireo. Additionally, there is riparian habitat in some areas along the pipelines alignment. Therefore, Mitigation Measures BIO-1 through BIO-4 are incorporated into the Project and are set forth in the Mitigation Monitoring and Reporting Program included in **Appendix A** herein. With incorporation of Mitigation Measures BIO-1 through BIO-4, construction and operation of the Sewer and Force Main Pipelines would not 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, or substantially reduce the number or restrict the range of a rare or endangered plant or animal.*

  Krameria LS

  *As described in **Issue IV** herein, no sensitive species were observed during a biological survey of the Krameria LS site; however, suitable habitat for burrowing owl and nesting birds was observed. Therefore, Mitigation Measures BIO-1 and BIO-3 are incorporated into the Project and are set forth in the Mitigation Monitoring and Reporting Program included in **Appendix A** herein. With incorporation of Mitigation Measures BIO-1 through BIO-3, construction and operation of the Krameria LS would not 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, or substantially reduce the number or restrict the range of a rare or endangered plant or animal.*

  MLK1 LS

  *As described in **Issue IV** herein, no sensitive species were observed during a biological survey of the MLK1 LS site; however, suitable habitat for nesting birds was observed. Therefore,*

Mitigation Measure BIO-3 is incorporated into the Project and is set forth in the Mitigation Monitoring and Reporting Program included in ***Appendix A*** *herein. With incorporation of Mitigation Measure BIO-3, demolition and removal of the MLK1 LS would not 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, or substantially reduce the number or restrict the range of a rare or endangered plant or animal.*

Wood Road LS

As described in ***Issue IV*** *herein, no sensitive species were observed during a biological survey of the Wood Road LS site; however, suitable habitat for burrowing owl and nesting birds was observed, as well as potentially suitable habitat for least Bell's vireo. Additionally, there is riparian habitat designated as a willow riparian woodland habitat preserve located directly to the north of the Wood Road LS site. Therefore, Mitigation Measures BIO-1 through BIO-4 are incorporated into the Project and are set forth in the Mitigation Monitoring and Reporting Program included in* ***Appendix A*** *herein. With incorporation of Mitigation Measures BIO-1 through BIO-4, construction and operation of the improvements at the Wood Road LS would not 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, or substantially reduce the number or restrict the range of a rare or endangered plant or animal.*

- ***Archaeological and Historical Resources***

Sewer and Force Main Pipelines

As described in ***Issue V*** *herein, historical/archaeological resources assessments were conducted along the alignment of the Sewer and Force Main Pipelines. Based on those assessments, there is one known historic building and no known archaeological resources. The historic building will be protected from adverse impacts by incorporation of Mitigation Measure NOISE-1 to avoid exposing the building to strong ground vibrations during construction. Mitigation Measure CUL-1 summarizes the actions to be taken in the event that a potential cultural resource is uncovered during construction. Mitigation Measures NOISE-1 and CUL-1 are incorporated into the Project and are set forth in the Mitigation Monitoring and Reporting Program in* ***Appendix A*** *herein. With incorporation of Mitigation Measures NOISE-1 and CUL-1, construction and operation of the Sewer and Force Main pipelines would not eliminate important examples of major periods of California history or prehistory.*

Krameria LS

*As described in **Issue V** herein, a historical/archaeological resources assessment was conducted at the Krameria LS site. Based on the assessment, there are no historical or archaeological resources visible or recorded on the Krameria LS site. Mitigation Measure CUL-1 summarizes the actions to be taken in the event that a potential cultural resource is uncovered during construction. Mitigation Measure CUL-1 is incorporated into the Project and is set forth in the Mitigation Monitoring and Reporting Program in **Appendix A** herein. With incorporation of Mitigation Measure CUL-1, construction and operation of the Krameria LS would not eliminate important examples of major periods of California history or prehistory.*

MLK1 LS

*As described in **Issue V** herein, a historical/archaeological resources assessment was conducted at the MLK1 LS site. Based on the assessment, there are no historical or archaeological facilities visible or recorded on the MLK1 LS site. Mitigation Measure CUL-1 summarizes the actions to be taken in the event that a potential cultural resource is uncovered during demolition and removal of the MLK1 LS. Mitigation Measure CUL-1 is incorporated into the Project and is set forth in the Mitigation Monitoring and Reporting Program in **Appendix A** herein. With incorporation of Mitigation Measure CUL-1, demolition and removal of the MLK1 LS would not eliminate important examples of major periods of California history or prehistory.*

Wood Road LS

*As described in **Issue V** herein, a historical/archaeological resources assessment was conducted at the Wood Road LS site. Based on the assessment, there are no historical or archaeological facilities visible or recorded on the Wood Road LS site. Mitigation Measure CUL-1 summarizes the actions to be taken in the event that a potential cultural resource is uncovered during construction of improvements at the Wood Road LS. Mitigation Measure CUL-1 is incorporated into the Project and is set forth in the Mitigation Monitoring and Reporting Program in **Appendix A** herein. With incorporation of Mitigation Measure CUL-1, construction and operation of improvements at the Wood Road LS would not eliminate important examples of major periods of California history or prehistory.*

- ***Paleontological Resources***

Sewer and Force Main Pipelines

*As described in **Issue VII(f)** herein, the Sewer and Force Main Pipelines are located in an area mapped as having "low" paleontological sensitivity. The Sewer and Force Main Pipelines are located within existing paved streets that do not contain any unique geological features. To*

prevent an adverse impact upon any previously undiscovered paleontological resource that may be present in subsurface soil deposits, Mitigation Measure PALEO-1 is incorporated into the Mitigation Monitoring and Reporting Program for the Project, a copy of which is included in ***Appendix A*** *herein. With incorporation of PALEO-1, construction and operation of the Sewer and Force Main Pipelines will not eliminate important examples of the major periods of California prehistory.*

Krameria LS

As described in ***Issue VII(f)*** *herein, the Krameria LS site is located in an area of low potential for paleontological sensitivity. To prevent an adverse impact upon any previously undiscovered paleontological resource that may be present in subsurface soil deposits, Mitigation Measure PALEO-1 is incorporated into the Mitigation Monitoring and Reporting Program for the Project, a copy of which is included in* ***Appendix A*** *herein. With incorporation of PALEO-1, construction and operation of the Krameria LS will not eliminate important examples of the major periods of California prehistory.*

MLK1 LS

As described in ***Issue VII(f)*** *herein, the MLK1 LS site is located in an area of low potential for paleontological sensitivity. To prevent an adverse impact upon any previously undiscovered paleontological resource that may be present in subsurface soil deposits, Mitigation Measure PALEO-1 is incorporated into the Mitigation Monitoring and Reporting Program for the Project, a copy of which is included in* ***Appendix A*** *herein. With incorporation of PALEO-1, demolition and removal of the MLK1 LS will not eliminate important examples of the major periods of California prehistory.*

Wood Road LS

As described in ***Issue VII(f)*** *herein, the Wood Road LS site is located in an area of low potential for paleontological sensitivity. To prevent an adverse impact upon any previously undiscovered paleontological resource that may be present in subsurface soil deposits, Mitigation Measure PALEO-1 is incorporated into the Mitigation Monitoring and Reporting Program for the Project, a copy of which is included in* ***Appendix A*** *herein. With incorporation of PALEO-1, construction and operation of improvements at the Wood Road LS site will not eliminate important examples of the major periods of California prehistory.*

Issue XXI. Mandatory Findings of Significance (Continued)

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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.)	❑	❑	❑	☒

Sewer and Force Main Pipelines

None of the impacts or potential impacts of the Sewer and Force Main Pipelines are cumulatively considerable.

Krameria LS

None of the impacts or potential impacts of construction and operation of the Krameria LS are cumulatively considerable.

MLK1 LS

None of the impacts or potential impacts of demolition and removal of the MLK1 LS are cumulatively considerable.

Wood Road LS

None of the impacts or potential impacts of construction and operation of improvements at the Wood Road LS are cumulatively considerable.

Issue XXI. Mandatory Findings of Significance (Continued)

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	❑	❑	❑	☒

Sewer and Force Main Pipelines

As described herein, none of the environmental effects of the Sewer and Force Main Pipelines would cause substantial adverse effects on human beings, either directly or indirectly.

Krameria LS

As described herein, none of the environmental effects of the Krameria LS would cause substantial adverse effects on human beings, either directly or indirectly.

MLK1 LS

As described herein, none of the environmental effects of the demolition and removal of the MLK1 LS would cause substantial adverse effects on human beings, either directly or indirectly.

Wood Road LS

As described herein, none of the environmental effects of the improvements at the Wood Road LS would cause substantial adverse effects on human beings, either directly or indirectly.

PART 3
REFERENCES AND SOURCES

PART 3 - REFERENCES AND SOURCES

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- California Code of Regulations, Title 14, Division 6, Chapter 3; Guidelines for Implementation of the California Environmental Quality Act, Section 15000 *et seq;* as amended December 28, 2018
- California Department of Conservation Tsunami Program Website, conservation.ca.gov/cgs/tsunami/maps, accessed September 2019
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- Riverside County Map My County v8.1 application, gis.countyofriverside.us/Html5Viewer/?viewer=MMC_Public, accessed August 2019
- Riverside County Transportation Department Van Buren Boulevard Widening Project Phase I Cultural Resource Study for the City of Riverside and the County of Riverside, California, Power Engineers, February 2, 2017
- Santa Ana River Regional Water Quality Control Board Website, waterboards.ca.gov/santaana, accessed October 2019
- South Coast Air Quality Management District Website, www.aqmd.gov
- Sustainable Groundwater Management Act (SGMA) Groundwater Management Website, water.ca.gov/Programs/Groundwater-Management/SGMA-Groundwater-Management
- United States Environmental Protection Agency Website for National Ambient Air Quality Standards, www.epa.gov/criteria-air-pollutants
- Western Regional Climate Center Website, www.wrcc.dri.edu

FIGURES



KRIEGER & STEWART
Engineering Consultants
3602 University Avenue • Riverside, CA 92501
www.kriegerandstewart.com • 951 • 684 • 6900

CITY OF RIVERSIDE PUBLIC WORKS DEPARTMENT

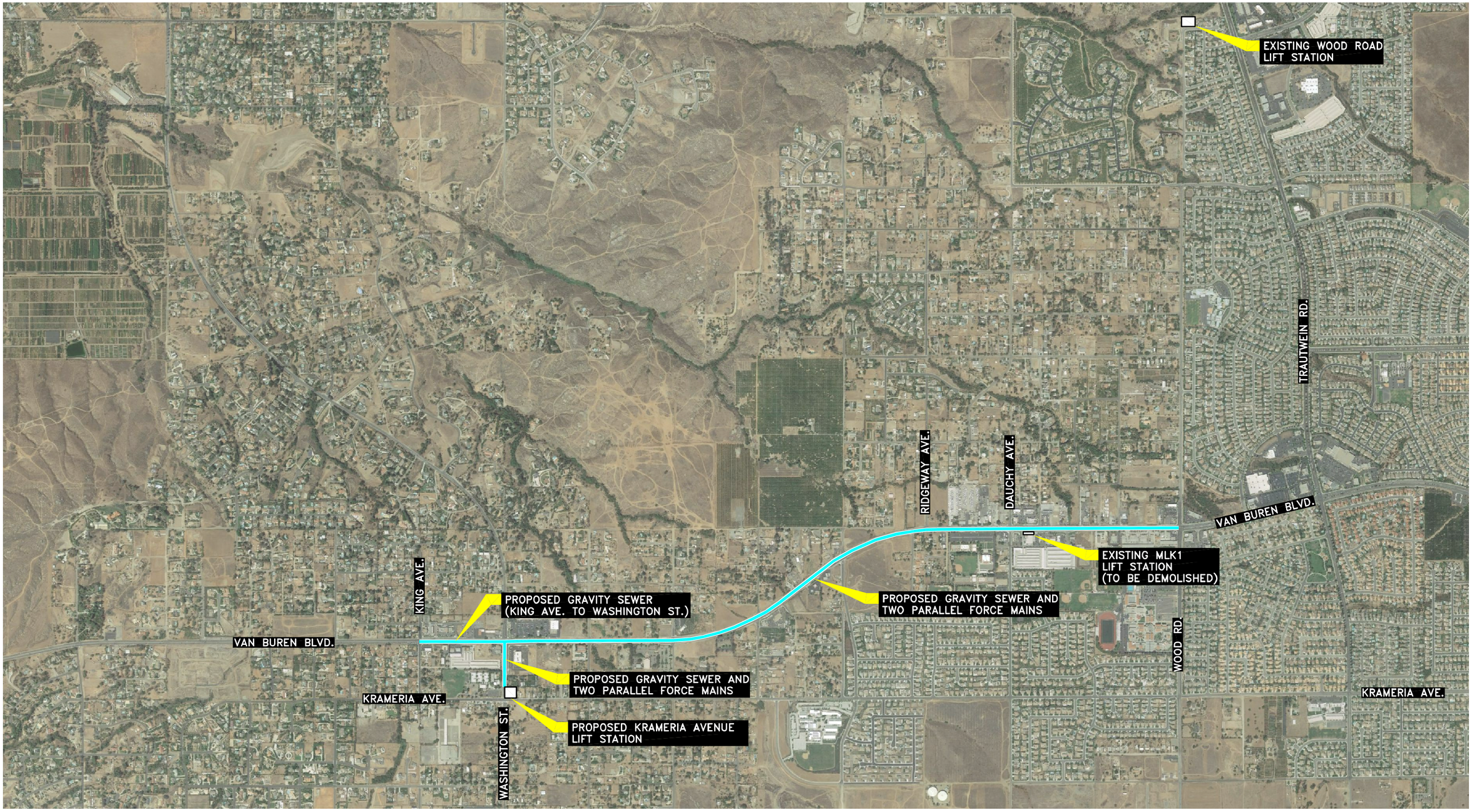
VAN BUREN BOULEVARD SEWER INSTALLATION PROJECT

PROJECT VICINITY

FIGURE 1 OF 5

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VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

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VAN BUREN BOULEVARD SEWER INSTALLATION PROJECT

PROJECT LOCATION OVERVIEW

SCALE: 1"=1500'± DATE: 10/24/19 DRAWN BY: MFB CHECKED BY: VEM W.O.: 476-22.2

FIGURE 2 OF 5



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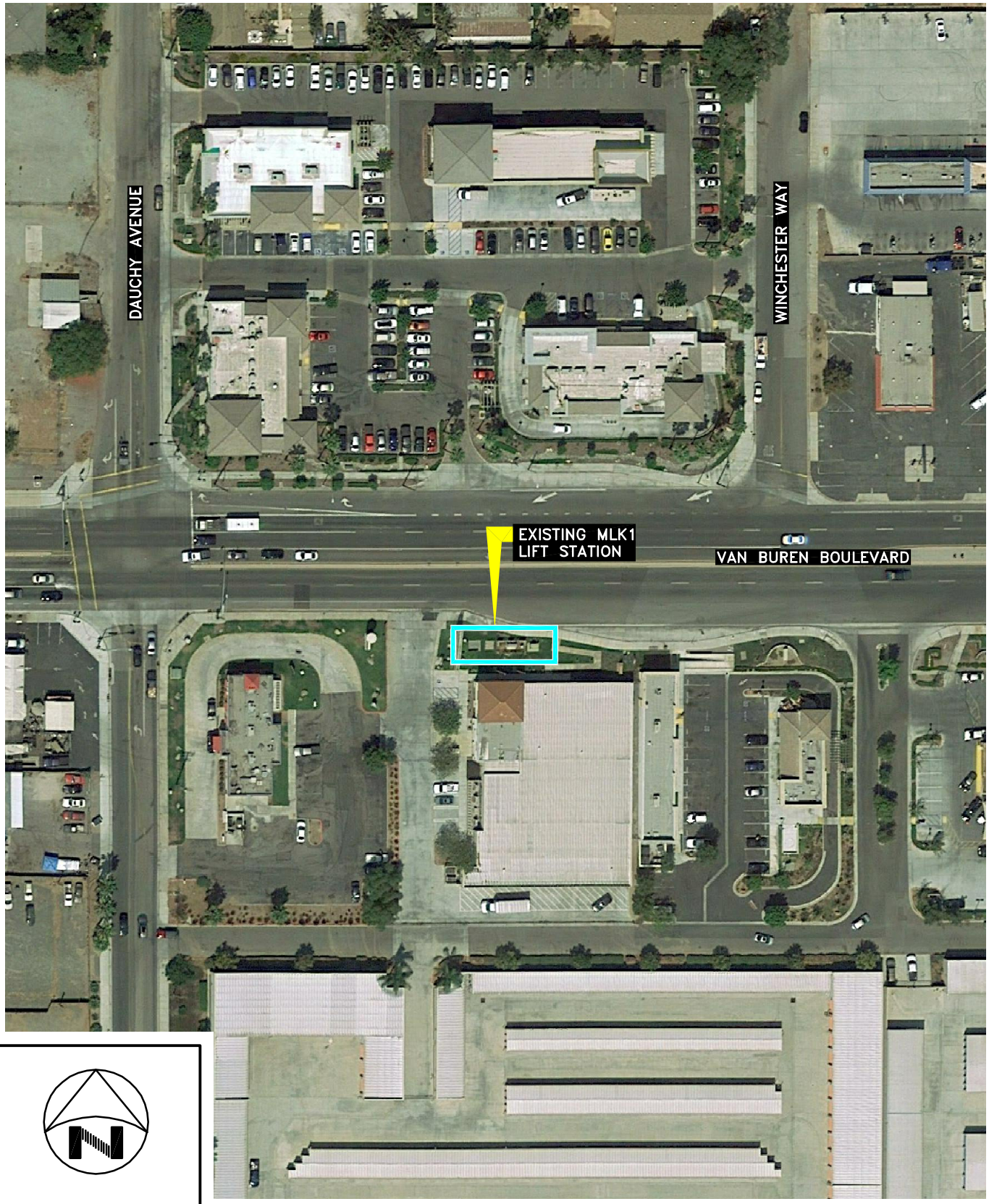
VAN BUREN BOULEVARD SEWER INSTALLATION PROJECT

KRAMERIA LIFT STATION SITE

FIGURE 3 OF 5

SCALE: 1"=60'± DATE: 10/24/19 DRAWN BY: MFB CHECKED BY: VEM W.O.: 476-22.2

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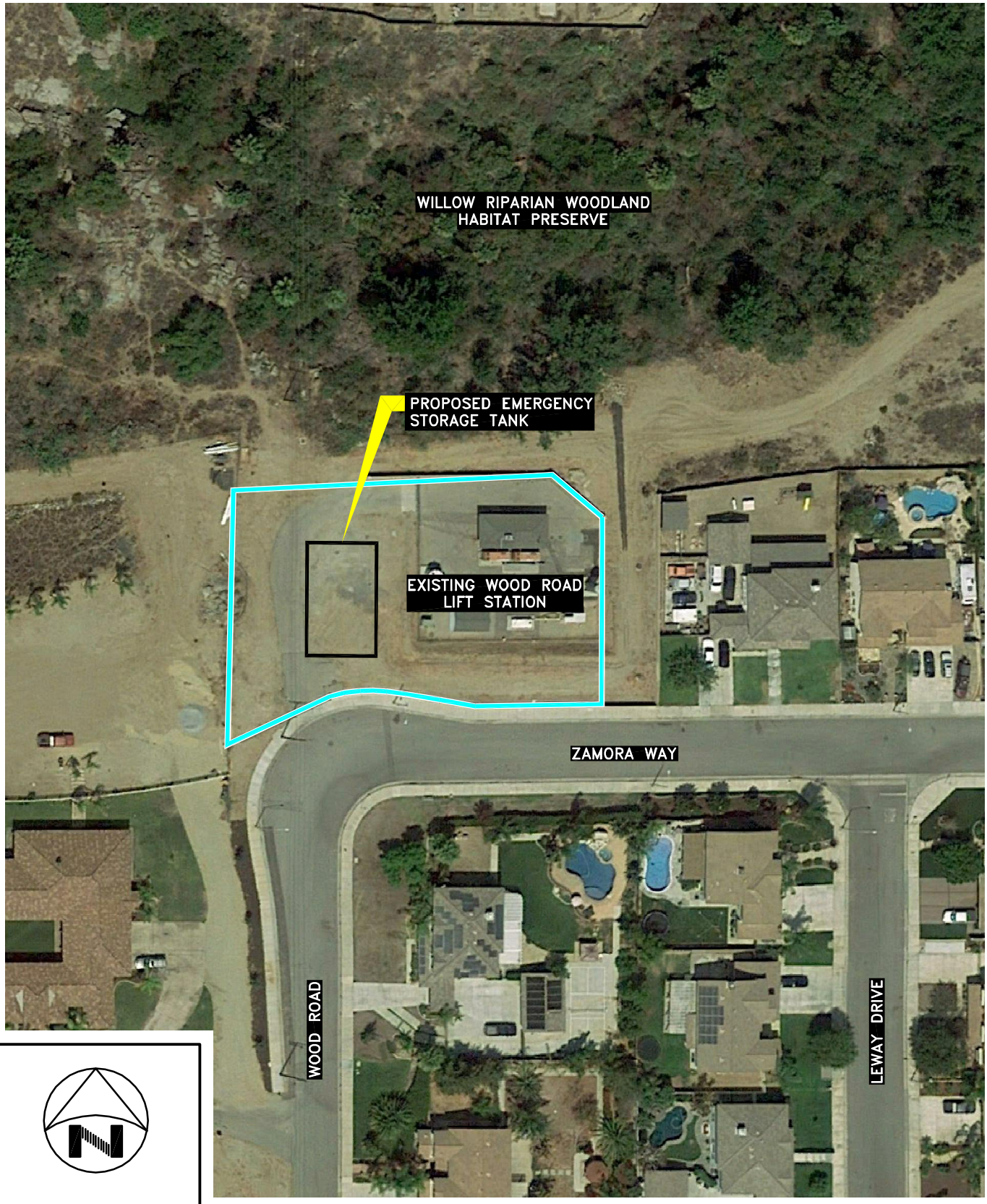
VAN BUREN BOULEVARD SEWER INSTALLATION PROJECT

MLK1 LIFT STATION SITE

FIGURE
4
OF 5

SCALE: 1"=100'± DATE: 10/24/19 DRAWN BY: MFB CHECKED BY: VEM W.O.: 476-22.2

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CITY OF RIVERSIDE PUBLIC WORKS DEPARTMENT

VAN BUREN BOULEVARD SEWER INSTALLATION PROJECT

WOOD ROAD LIFT STATION SITE

FIGURE 5 OF 5

SCALE: 1"=80'± DATE: 10/24/19 DRAWN BY: MFB CHECKED BY: VEM W.O.: 476-22.2

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APPENDIX A

DRAFT MITIGATED NEGATIVE DECLARATION
AND
MITIGATION MONITORING AND REPORTING PROGRAM

DRAFT

MITIGATED NEGATIVE DECLARATION

1. Name or description of project:	The Van Buren Boulevard Sewer Installation Project (the Project) consists of construction and operation of facilities (sewer pipeline, Krameria sewage lift station, and force main) to provide sewer service to properties along Van Buren Boulevard and to a proposed residential development located north of Van Buren Boulevard, on property northwesterly of the intersection of Iris Avenue and Chicago Avenue. The Project also includes construction of an emergency storage tank at the City's existing Wood Road Lift Station, as well as demolition and removal of the City's existing MLK1 Lift Station. The Project is described in additional detail in the Initial Study, a copy of which is available for review at the location described below.
2. Project Location – Identify street address and cross streets or attach a map showing project site (preferably a USGS 15' or 7 1/2' topographical map identified by quadrangle name):	The sewer and force main pipelines are located within Van Buren Boulevard (from King Street to Wood Road) and within Washington Street (from Van Buren Boulevard to Krameria Avenue). The Krameria Lift Station is located on a parcel northeasterly of the intersection of Washington Street and Krameria Avenue. The Wood Road Lift Station is located at 7802 Wood Road, and the MLK1 Lift Station is located at 18601 Van Buren Boulevard. All Project facilities are located in the City of Riverside and nearby unincorporated areas in Riverside County, California.
3. Entity or Person undertaking project:	City of Riverside Public Works Department

The Lead Agency, having reviewed the Initial Study of this proposed project, having reviewed the written comments received prior to the public meeting of the Lead Agency, and having reviewed the recommendation of the Lead Agency's Staff, does hereby find and declare that the proposed project will not have a significant effect on the environment. A brief statement of the reasons supporting the Lead Agency's findings are as follows:

Construction and operation of the Project will not result in significant adverse impacts upon any threatened or endangered species of plants or animals, nor will it result in damage to or destruction of any significant examples of California history or prehistory. Potential impacts to threatened or endangered species and their habitat, historical/archaeological resources, and tribal cultural resources will be prevented by adhering to the terms of a Mitigation Monitoring and Reporting Program (see Exhibit A, attached, which is incorporated herein by reference) during construction of the Project.

The Lead Agency hereby finds that the Mitigated Negative Declaration reflects its independent judgment. A copy of the Initial Study may be viewed at the offices of City of Riverside Public Works Department at the address listed below, and is available for viewing online by visiting www.riversideca.gov/ceqa and scrolling to "Public Works Department Documents".

The location and custodian of the documents and any other material which constitute the record of proceedings upon which the Lead Agency based its decision to adopt this Mitigated Negative Declaration are as follows:

City of Riverside
Public Works Department
3900 Main Street, 4th Floor
Riverside, CA 92522
(951) 826-5311

Date Received
for Filing: _____

_____
Staff

DRAFT MITIGATED NEGATIVE DECLARATION

EXHIBIT A

CITY OF RIVERSIDE
VAN BUREN BOULEVARD SEWER INSTALLATION PROJECT
MITIGATION MONITORING AND REPORTING PROGRAM (MMRP)

Project Component	No.	Task and Description	Responsible Party for Monitoring	Completed		Remarks
				Initials	Date	
BIOLOGICAL RESOURCES						
• Sewer and Force Main Pipelines • Krameria LS • Wood Road LS	BIO-1	Burrowing Owl: Focused burrow and burrowing owl surveys will be conducted along the Sewer and Force Main Pipelines alignment, at the Krameria LS site, and at the Wood Road LS site. The focused burrow surveys will be performed in accordance with the Burrowing Owl Survey Instructions for the Western Riverside County Multiple Species Habitat Conservation Plan Conservation Area, 2006 (Burrowing Owl Survey Instructions) and will be conducted at all areas shown on as having suitable habitat for burrowing owl, as depicted on **Figure 6 (copy attached)** from the Biological Resources Assessment (LSA, 2019). Whether or not burrows or owls are found during the focused surveys, preconstruction surveys will be conducted at each of the three sites listed above within 30 days of construction. If burrowing owls are found at any of the Project sites during any of the surveys, then the City will consult with the California Department of Fish and Wildlife (CDFW) and the United States Fish and Wildlife Service (USFWS) to determine the appropriate actions prior to proceeding with construction on the site that contains or is in the vicinity of burrowing owls.				

Project Component	No.	Task and Description	Responsible Party for Monitoring	Completed		Remarks
				Initials	Date	
• Sewer and Force Main Pipelines • Wood Road LS	BIO-2	Least Bell's Vireo: In Project areas adjacent to riparian habitat, as depicted on **Figure 4 (copy attached)** from the Biological Resources Assessment Report (LSA, 2019), if construction will occur during the least Bell's vireo breeding season of March 15 through September 1, a preconstruction survey for least Bell's vireo will be conducted prior to any vegetation clearing or ground-disturbing activities within riparian habitats adjacent to the Project site (i.e., along the Sewer and Force Main Pipelines alignment along Van Buren Boulevard and to the north of the Wood Road LS site). If the least Bell's vireo preconstruction survey determines that least Bell's vireo are not present on or in the vicinity of the Project site, then construction may commence. If the least Bell's vireo preconstruction survey determines that least Bell's vireo are present on or adjacent to the Project site, then no construction activities will take place adjacent to the least Bell's vireo occupied habitat until the breeding season has concluded or until it has been determined by a qualified biologist that the least Bell's vireo are no longer present.				
• Sewer and Force Main Pipelines • Krameria LS • MLK1 LS • Wood Road LS	BIO-3	Nesting Birds: A nesting bird preconstruction survey will be conducted by a qualified biologist within three days prior to ground-disturbing activities at each Project site. If nesting birds are found during the preconstruction survey, then a qualified biologist will establish an exclusionary buffer around the nest(s). The exclusionary buffer will be clearly marked in the field by construction personnel under the guidance of the qualified biologist. No construction or vegetation clearing will be conducted within the exclusionary buffer until the qualified biologist has determined that the young have fledged or the nest is no longer active. Nesting bird habitat in or near the Project sites will be re-surveyed during the bird breeding season (February 1 through August 31) if there is a lapse in construction activities for longer than seven days.				

Project Component	No.	Task and Description	Responsible Party for Monitoring	Completed		Remarks
				Initials	Date	
• Sewer and Force Main Pipelines • Wood Road LS	BIO-4	Riparian Resources: Prior to any vegetation clearing or construction activities, highly visible barriers (such as orange construction fencing) will be installed along the boundaries of the Project footprint adjacent to riparian resources (southern willow scrub) on Van Buren Boulevard and at the Wood Road LS site, as depicted on **Figure 4 (copy attached)** from the Biological Resources Assessment Report (LSA, 2019). All construction equipment will be operated in a manner to prevent accidental damage to areas outside the Project footprint. No structure of any kind, or incidental storage of equipment or supplies, is allowed within the protected areas. In addition, silt fence barriers will be installed at the Project site boundary in the vicinity of riparian resources to prevent accidental deposition of fill material into areas where riparian resources are adjacent to planned grading activities. All equipment maintenance, staging, and dispensing of fuel, oil, or any other such activities will occur in developed or designated non-sensitive upland areas. The designated upland areas will be located in such a manner as to prevent any spill runoff from reaching riparian resources. A qualified biologist will monitor construction activities for the duration of Project construction adjacent to the areas designated as "Southern Willow Scrub/Ornamental" on **Figure 4 (copy attached)** from the Biological Resources Assessment Report (LSA, 2019). The biological monitor will ensure that all vegetation removal, best management practices, and all avoidance and minimization measures are properly implemented.				

Project Component	No.	Task and Description	Responsible Party for Monitoring	Completed		Remarks
				Initials	Date	
CULTURAL RESOURCES						
• Sewer and Force Main Pipelines • Krameria LS • MLK1 LS • Wood Road LS	CUL-1	A qualified archaeological monitor will be onsite to observe ground disturbance that extends beyond previously-disturbed depths during Project excavation activities. In the event that any potential archaeological resource is uncovered during Project construction, all work in the area will be halted or diverted until a qualified archaeologist, meeting Secretary of the Interior standards, can evaluate the nature and significance of the find. If an archaeological resource uncovered during Project construction is determined to be significant, then the resource will be treated in an appropriate manner as determined by the qualified archaeologist and the City of Riverside Public Works Department. If an uncovered archaeological resource is determined by the qualified archaeologist to be a potential tribal cultural resource, then the resource will be treated in accordance with Mitigation Measure TCR-1.				
NOISE						
• Sewer and Force Main Pipelines	NOISE-1	Vibratory Rollers and Compactors: During construction of the Sewer and Force Main Pipelines, vibratory rollers and vibratory compactors shall not be operated within 125 feet of the historic structure located at 17455 Van Buren Boulevard, Riverside, which is currently known as the Robert L. Wilks, Jr. Chapel.				
PALEONTOLOGICAL RESOURCES						
• Sewer and Force Main Pipelines • Krameria LS • MLK1 LS • Wood Road LS	PALEO-1	The following measures will be implemented to protect any paleontological resources uncovered during ground disturbance at any of the Project sites: • If any potential paleontological resources are uncovered during Project construction, all work in the vicinity of the discovery shall be halted until a qualified paleontologist can evaluate the nature and significance of the find. • If a qualified paleontologist determines that a specimen uncovered during Project construction is potentially significant, then all future ground-disturbing actions associated with the component of the Project on which the find occurred will be monitored by a qualified paleontological monitor.				

Project Component	No.	Task and Description	Responsible Party for Monitoring	Completed		Remarks
				Initials	Date	
	PALEO-1 continued	• Specimens recovered from the Project sites by the qualified paleontological monitor will be, in accordance with standard paleontological practice, identified and curated at a repository with permanent retrievable storage that will allow for additional research in the future.				
TRIBAL CULTURAL RESOURCES						
• Sewer and Force Main Pipelines • Krameria LS • MLK1 LS • Wood Road LS	TCR-1	There are no known tribal cultural resources on any of the Project sites (Sewer and Force Main Pipelines, Krameria LS, MLK1 LS, and Wood Road LS) that are 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). However, in order to avoid or reduce impacts to previously-undiscovered tribal cultural resources that may be present on any of the Project sites, the City will provide access to a tribal monitor to observe ground disturbance that extends beyond previously-disturbed depths during Project excavation activities. In the event that any potential tribal cultural resource is discovered during ground disturbing activities pursuant to the Project, the City will contact a qualified archaeologist, meeting Secretary of the Interior standards, to assess the find. Additionally, the City will notify the five tribes that had responded to the City's notification of the Project (Agua Caliente Band of Cahuilla Indians (ACBCI), Soboba Band of Luiseño Indians (Soboba), Morongo Band of Mission Indians (Morongo), Rincon Band of Luiseño Indians (Rincon), Pechanga Band of Luiseño Indians (Pechanga). The City will consult in good faith with said tribes on the disposition and treatment of any artifacts or other cultural materials encountered during activities pursuant to the Project.				

Attachments: Figure 4 (Sheets 1 through 3 of 3) from LSA Biological Assessment Report
Figure 6 (Sheets 1 through 3 of 3) from LSA Biological Assessment Report

DOOLEY PL
RANCHERO RD
IRIS AV
STALLION PL
INDIAN CREEK TR
OLIVE AV
PORTER AV
TROQUATO LN
TAVA LN
SAGE AV
STEVENS LN
PALAMINO PL
SANDY TER
BOBBITT AV
FRED ST
ARABIAN AV
VAN BUREN BLVD
HAYGEN ST
CATON CT
KING AV
WASHINGTON ST
GARDNER AV
GAMBLE AV
KRAMERIA AV
1
2
3
4
7
8

LSA

LEGEND

- Biological Study Area
- Site Photographs
- Developed/Disturbed (135.67 acres)
- Ruderal (26.75 acres)
- Southern Willow Scrub/Ornamental (4.78 acres)
- Potential Jurisdictional Waters/Riparian-Riverine Resources

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SOURCE: Google Maps (2019); City of Riverside (2019)

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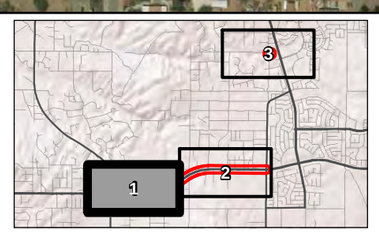
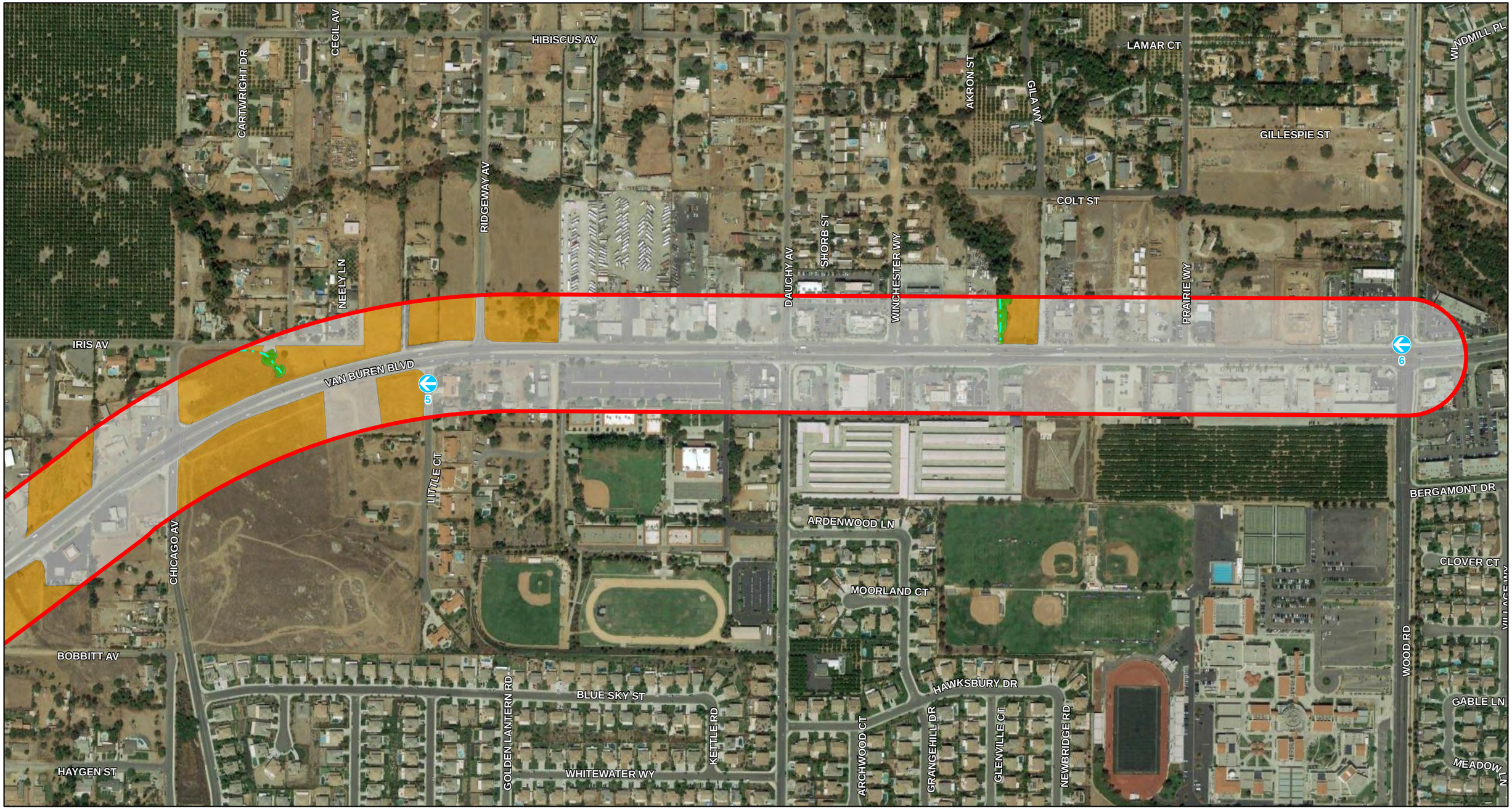


FIGURE 4

Sheet 1 of 3

Van Buren Boulevard Sewer Installation Project

Vegetation, Land Use and Potential Jurisdictional Waters/Riparian-Riverine Resources

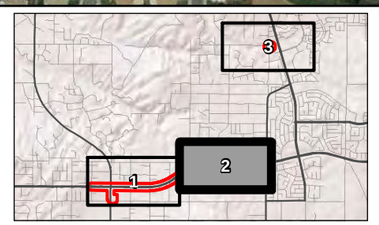


LSA

LEGEND

- Biological Study Area
- Site Photographs
- Developed/Disturbed (135.67 acres)
- Ruderal (26.75 acres)
- Southern Willow Scrub/Ornamental (4.78 acres)
- Potential Jurisdictional Waters/Riparian-Riverine Resources

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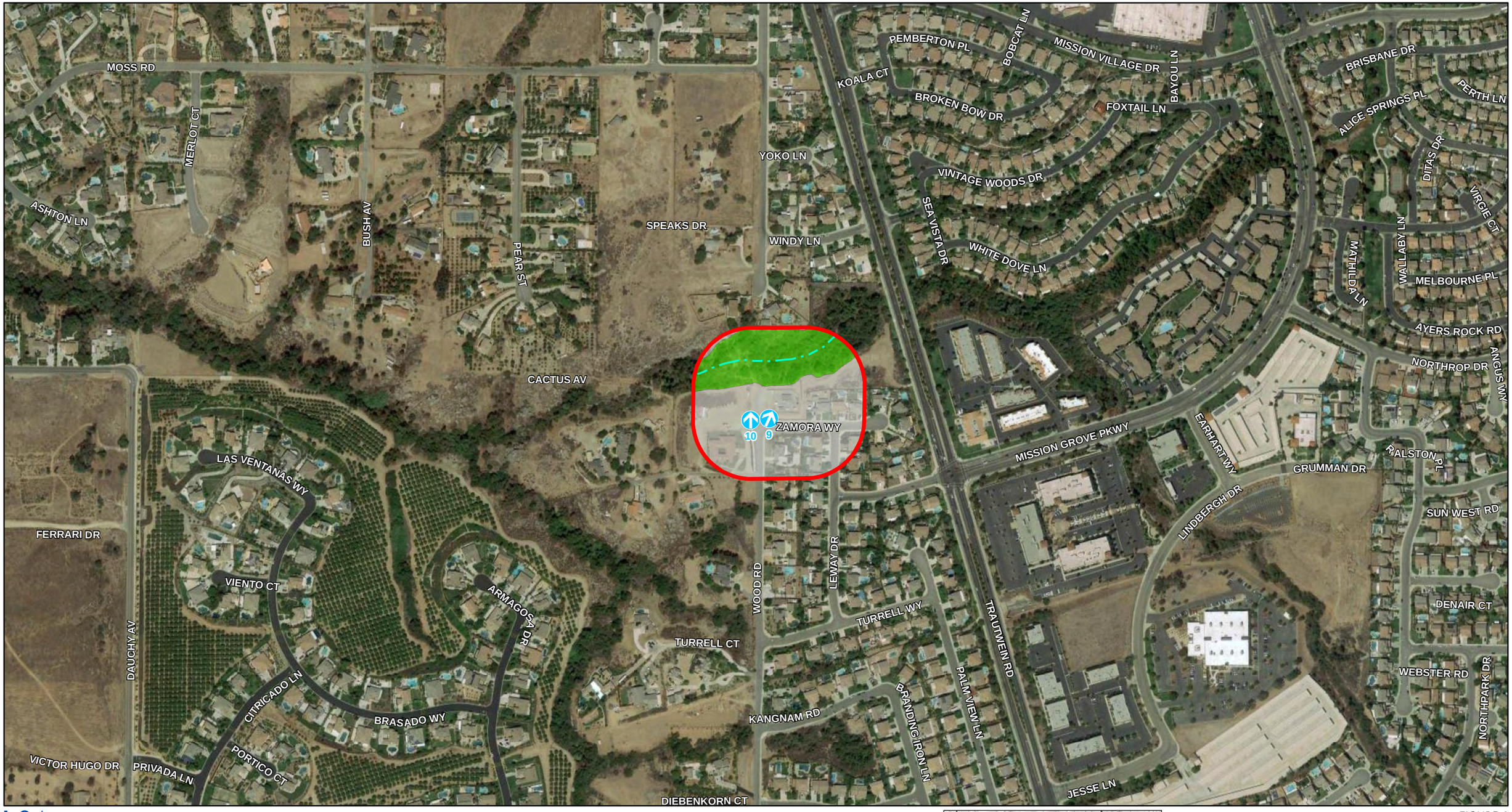
SOURCE: Google Maps (2019); City of Riverside (2019)

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FIGURE 4
Sheet 2 of 3

Van Buren Boulevard Sewer Installation Project

Vegetation, Land Use and Potential Jurisdictional Waters/Riparian-Riverine Resources



LSA

LEGEND

- Biological Study Area
- Site Photographs
- Developed/Disturbed (135.67 acres)
- Ruderal (26.75 acres)
- Southern Willow Scrub/Ornamental (4.78 acres)
- Potential Jurisdictional Waters/Riparian-Riverine Resources

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FEET

SOURCE: Google Maps (2019); City of Riverside (2019)

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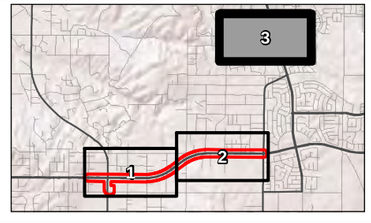


FIGURE 4

Sheet 3 of 3

Van Buren Boulevard Sewer Installation Project

Vegetation, Land Use and Potential Jurisdictional Waters/Riparian-Riverine Resources

DOOLEY PL
RANCHERO RD
IRIS AV
STALLION PL
INDIAN CREEK TR
OLIVE AV
PORTER AV
TROQUATO LN
TAVA LN
SAGE AV
STEVENS LN
PALAMINO PL
SANDY TER
BOBBITT AV
FRED ST
ARABIAN AV
VAN BUREN BLVD
HAYGEN ST
CATON CT
KING AV
WASHINGTON ST
GARDNER AV
GAMBLE AV
KRAMERIA AV

LSA

LEGEND

Biological Study Area

Burrowing Owl Suitable Habitat

N

0 200 400
FEET

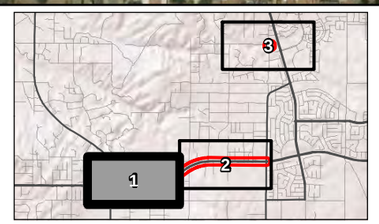


FIGURE 6

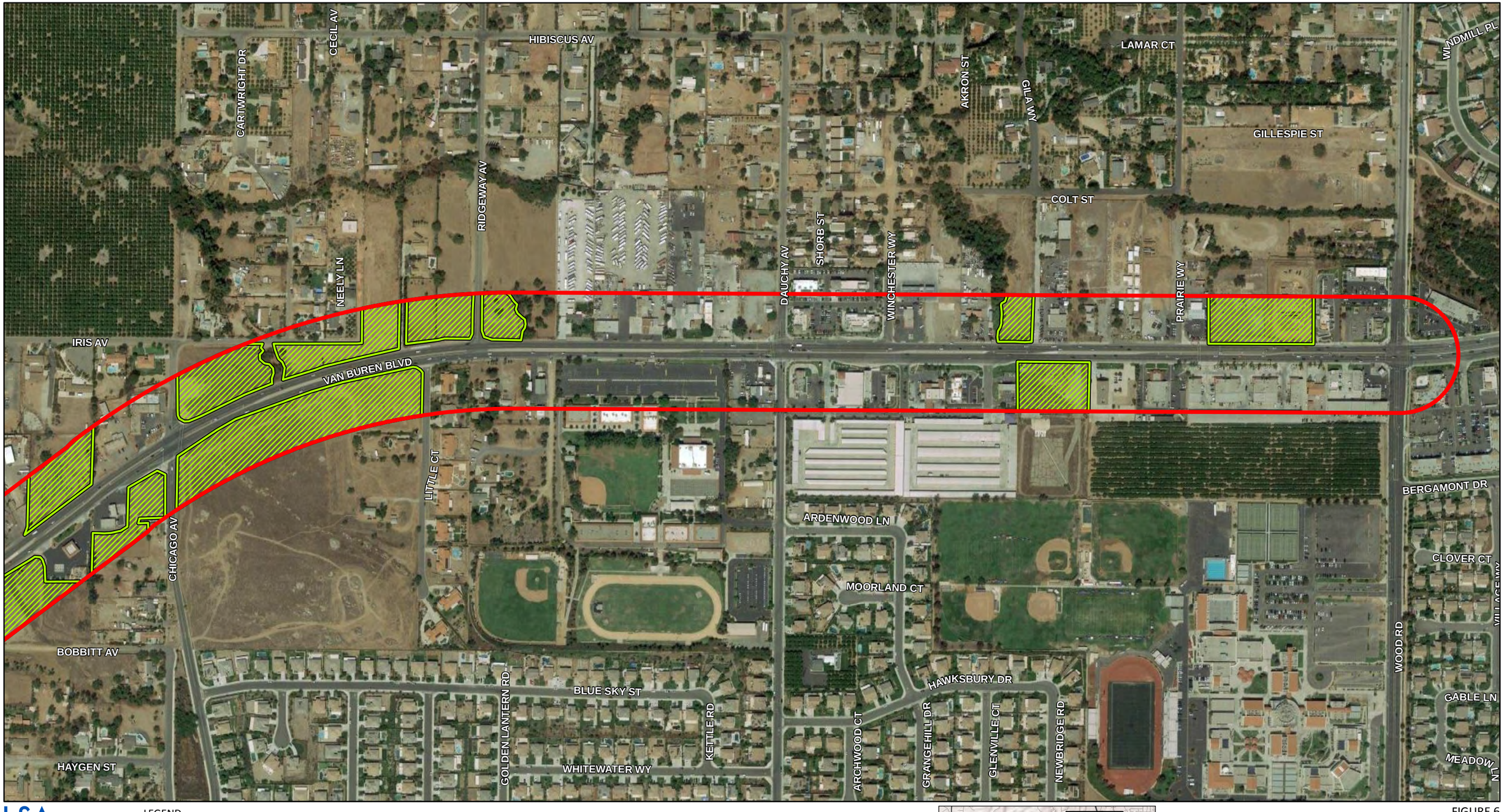
Sheet 1 of 3

Van Buren Boulevard Sewer Installation Project

Burrowing Owl Suitable Habitat

SOURCE: Google Maps (2019); City of Riverside (2019)

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LSA

LEGEND

- Biological Study Area
- Burrowing Owl Suitable Habitat

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SOURCE: Google Maps (2019); City of Riverside (2019)

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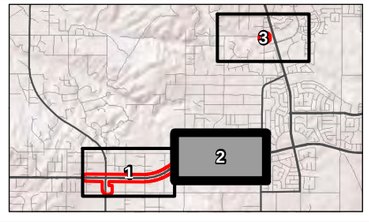
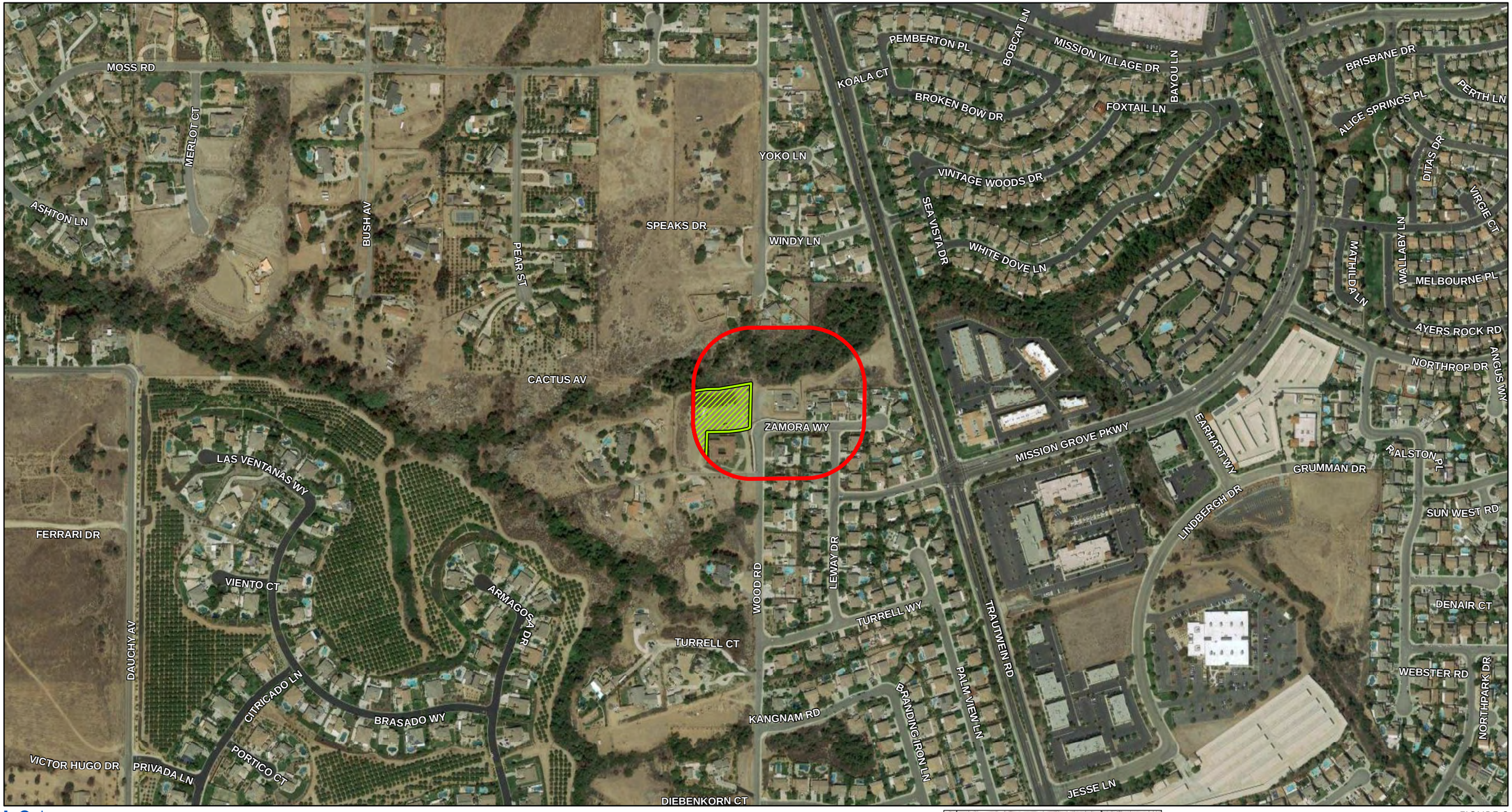


FIGURE 6

Sheet 2 of 3

Van Buren Boulevard Sewer Installation Project

Burrowing Owl Suitable Habitat



LSA

LEGEND

- Biological Study Area
- Burrowing Owl Suitable Habitat

N

0 200 400
FEET

SOURCE: Google Maps (2019); City of Riverside (2019)

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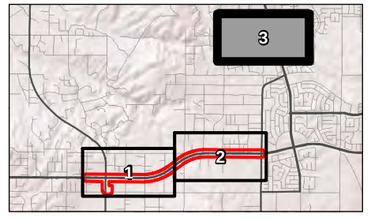


FIGURE 6

Sheet 3 of 3

Van Buren Boulevard Sewer Installation Project

Burrowing Owl Suitable Habitat

APPENDIX B

BIOLOGICAL RESOURCES ASSESSMENT

WESTERN RIVERSIDE COUNTY MULTIPLE SPECIES HABITAT CONSERVATION PLAN CONSISTENCY ANALYSIS AND BIOLOGY REPORT

VAN BUREN BOULEVARD SEWER INSTALLATION PROJECT

CITY OF RIVERSIDE

RIVERSIDE COUNTY, CALIFORNIA

MSHCP PERMITTEE: CITY OF RIVERSIDE

Prepared for:

Krieger & Stewart, Inc.
3602 University Avenue
Riverside, California 92501
(951) 684-6900

Prepared by:

Denise Woodard
LSA Associates, Inc.
1500 Iowa Avenue, Suite 200
Riverside, California 92507
(951) 781-9310

LSA Project No. KRS1901

October 2019

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1.0 EXECUTIVE SUMMARY

LSA was retained by Krieger & Stewart, Inc. to conduct a Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) consistency analysis and general biological study for the Van Buren Boulevard Sewer Installation Project located in the City of Riverside, Riverside County, California. The study was conducted to address compliance with the MSHCP and the California Environmental Quality Act.

The project study area is not within the MSHCP Criteria Area or Public/Quasi-Public Lands.

The project study area contains MSHCP riverine/riparian resources that will be avoided with the incorporation of avoidance measures. No vernal pools resources or fairy shrimp habitat occur in the study area. Therefore, the project will have no effects to these resources.

The project area is within the MSHCP burrowing owl (*Athene cunicularia hypugaea*) survey area. A habitat assessment found suitable habitat for the burrowing owl is present. A focused burrow survey will be required to determine if suitable burrowing owl burrows are present. If suitable burrows are determined to be present, a focused burrowing owl survey would be required. In addition, a 30-day pre-construction survey will be required to ensure impacts to the burrowing owl are avoided during construction.

The project study area is not within the MSHCP Narrow Endemic Plant Species Area or any other survey species areas. Therefore, no surveys for other MSHCP survey species will be required. In addition, "species not adequately conserved" by the MSHCP were not found within the project area.

The project will not be subject to MSHCP Urban/Wildlands interface requirements because the project area is not within or adjacent to an identified Conservation Area.

Potential jurisdictional features subject to the jurisdiction of U.S. Army Corps of Engineers under Section 404 of the Federal Clean Water Act (CWA), the California Department of Fish and Wildlife under Section 1600 et seq. of the California Fish and Game Code, and Regional Water Quality Control Board under Section 401 of the CWA are present in the project study area. Avoidance measures will be incorporated to avoid impacts to potential jurisdictional waters.

The project study area contains habitat for nesting birds protected under the Migratory Bird Treaty Act and the California Fish and Game Code. Pre-construction surveys will be required to avoid potential effects to nesting birds.

2.0 INTRODUCTION

LSA was retained by Krieger & Stewart, Inc. to conduct a Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) consistency analysis and general biological study for the Van Buren Boulevard Sewer Installation Project (project) located in Sections 25 and 26, Township 3 South, Range 5 West, and Sections 19, 20, 29, and 30, Township 3 South, Range 4 West in the City of Riverside and unincorporated areas of Riverside County, California as depicted on the United States Geological Survey (USGS) *Riverside East, California* 7.5-minute topographic quadrangle map (Appendix A, Figure 1). All figures are provided in Appendix A.

The study was conducted to address compliance with the MSHCP and the California Environmental Quality Act (CEQA). The study included a site visit on August 8, 2019, by LSA Biologist Denise Woodard.

2.1 PROJECT AREA

The project will be constructed in the Van Buren Boulevard, Washington Street, and Wood Road rights-of-way. The Krameria Pump Station is associated with Assessor's Parcel Number (APN) 270-040-051, the Wood Road Pump Station is associated with APN 276-311-016, and an existing pump station to be demolished is located on a portion of APN 266-040-051. The project study area generally extends 250 feet on either side of the roadway rights-of-way, and is a 250-foot diameter around the pump stations' boundaries. The project study area is approximately 168.2 acres.

2.2 PROJECT DESCRIPTION

The Van Buren Boulevard Sewer Installation Project consists of construction and operation of facilities (sewer pipeline, sewage lift station, and force main) as required to provide sewer service to properties along Van Buren Boulevard, from the intersection of King Avenue (to the west) to the intersection of Wood Road (to the east). The project includes the following components:

- Proposed Sewer and Force Main Pipelines (ranging from 6 inches to 12 inches in diameter):
    - Construction of approximately 10,900 linear feet (LF) of new gravity sewer main in Van Buren Boulevard, from Wood Road to Washington Street;
    - Construction of approximately 900 LF of new gravity sewer main in Washington Street, from Van Buren Boulevard to the new Krameria Avenue Lift Station (Krameria LS);
    - Construction of approximately 1,300 LF of new gravity sewer in Van Buren Boulevard, from King Avenue to Washington Street;
    - Construction of approximately 900 LF each of two new parallel sewer force mains in Washington Street, from the new Krameria Avenue LS to Van Buren Boulevard; and
    - Construction of approximately 10,900 LF each of two new parallel sewer force mains in Van Buren Boulevard, from Washington Street to Wood Road.
- Proposed Krameria Lift Station. Construction of the new Krameria LS, with an ultimate design capacity of 835 gallons per minute, consisting of the following:

- Two 125-horsepower (hp) submersible pumping units (one duty and one standby);
- Ten-foot diameter wet well;
- Emergency storage vault;
- Sunshade structure housing electrical switchgear and control panels for pumps, automatic transfer switch, and main electrical service disconnect;
- 200-kilowatt emergency standby generator housed within a sound-attenuated enclosure;
- Packaged biofilter odor control system (for wet well odor control);
- Bioxide® chemical injection system (for force main odor control); and
- Engine-driven backup pump housed within a sound-attenuated enclosure.

- Existing Martin Luther King 1 Lift Station:
  - Demolition and removal of the existing City-owned Martin Luther King 1 Lift Station (MLK1 LS).
- Existing Wood Road Lift Station:
  - Construction of an emergency storage basin to provide 85 minutes of emergency sewage storage at the City's existing Wood Road Lift Station (Wood Road LS).

Figure 2 depicts the project conceptual site plan.

2.3 GENERAL SETTING

The project study area is primarily located on Van Buren Boulevard between King Avenue on the west and Wood Road on the east. The proposed Krameria Pump Station is located on the northeast corner of Washington Street, and the Wood Road Pump Station is located northerly of the intersection of Wood Road and Zamore Way. The study area is primarily developed by existing roadway infrastructure and commercial and residential development. Scattered vacant lots are present within the study area as well as several drainage features. The areas surrounding the study area have similar land uses. The topography along Van Buren Boulevard slopes gently to the west and ranges from 1,650 feet at the intersection Van Buren Boulevard and Wood Road to 1,490 feet at the intersection of Van Buren Boulevard and King Avenue. The elevation at the Wood Road Pump Station is approximately 1,545 feet. The soils in the study area, as mapped by the Natural Resource Conservation Service, Online Web Soil Survey (https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm), consist primarily of sandy loams as depicted in Figure 3.

3.0 RESERVE ASSEMBLY ANALYSIS

3.1 CELL AND CRITERIA ANALYSIS

The MSHCP provides for the assembly of a Conservation Area consisting of Core Areas and Linkages for the conservation of covered species. The Conservation Area is to be assembled from portions of the MSHCP Criteria Area, which consist of quarter-section (i.e., approximately 160-acre) Criteria Cells, each with specific criteria for the species conservation within that cell.

The study area is not within the MSHCP Criteria Area; therefore, no cell or criteria analysis is required.

3.2 PUBLIC/QUASI-PUBLIC LANDS ANALYSIS

The study area is not within or adjacent to Public/Quasi-Public lands.

4.0 VEGETATION

The vegetation/land use within the study area includes developed/disturbed areas, ruderal vegetation and southern willow scrub/ornamental vegetation along some of the drainage features. The predominant land cover is developed/disturbed areas (135.67 acres). This land use type lacks native vegetation and is dominated by urban development, associated hardscape and roadways, and ornamental non-native trees, shrubs, or lawns. The ruderal vegetation (26.75 acres) is associated with vacant lands that are less disturbed by development. Dominant ruderal plant species identified include telegraph weed (*Heterotheca grandiflora*), shortpod mustard (*Hirschfeldia incana*), dove weed (*Croton setigerus*), and red brome (*Bromus madritensis* ssp. *rubens*). The southern willow scrub/ornamental vegetation (4.78 acres) occurs along some of the drainage features in the study area. The density of southern willow scrub to ornamental vegetation varies depending on the level of disturbance within a particular drainage feature. The drainage features along Van Buren Boulevard tend to be dominated by non-native, ornamental plant species while the drainage feature near the Wood Road Pump Station has a higher percentage of native southern willow scrub plant species. Dominant southern willow scrub/ornamental vegetation identified includes blue elderberry (*Sambucus nigra* ssp. *caerulea*), Peruvian pepper tree (*Schinus molle*), Fremont cottonwood (*Populus fremontii*), arroyo willow (*Salix lasiolepis*), tree tobacco (*Nicotiana glauca*), and California fan palm (*Washingtonia filifera*). Figure 4 shows vegetation and land use, and Figure 5 provides site photographs.

5.0 PROTECTION OF SPECIES ASSOCIATED WITH RIPARIAN/RIVERINE AREAS AND VERNAL POOLS (MSHCP SECTION 6.1.2)

Section 6.1.2 of the MSHCP requires assessment of impacts to riparian habitats, riverine areas, and vernal pools, including focused surveys for sensitive riparian bird and fairy shrimp species when suitable habitat is present. The intent of the assessment requirement is to provide for the protection of resources used by MSHCP-covered species, as well as existing and future downstream conservation areas. Riverine/riparian areas and vernal pools are defined in Section 6.1.2 of the MSHCP as follows:

> *Riparian/Riverine Areas are lands which contain Habitat dominated by trees, shrubs, persistent emergents, or emergent mosses and lichens, which occur close to or which depend upon soil moisture from a nearby fresh water source; or areas with fresh water flow during all or a portion of the year.*
>
> *Vernal pools are seasonal wetlands that occur in depression areas that have wetlands indicators of all three parameters (soils, vegetation and hydrology) during the wetter portion of the growing season but normally lack wetlands indicators of hydrology and/or vegetation during the drier portion of the growing season. Obligate hydrophytes and facultative wetlands plant species are normally dominant during the wetter portion of the growing season, while upland species (annuals) may be dominant during the drier portion of the growing season. The determination that an area exhibits vernal pool characteristics, and the definition of the watershed supporting vernal pool hydrology, must be made on a case-by-case basis. Such determinations should consider the length of the time the area exhibits upland and wetland characteristics and the manner in which the area fits into the overall ecological system as a wetland. Evidence concerning the persistence of an area's wetness can be obtained from its history, vegetation, soils, and drainage characteristics, uses to which it has been subjected, and weather and hydrologic records.*
>
> Fairy Shrimp. *For Riverside, vernal pool and Santa Rosa fairy shrimp, mapping of stock ponds, ephemeral pools and other features shall also be undertaken as determined appropriate by a qualified biologist.*
>
> *With the exception of wetlands created for the purpose of providing wetlands Habitat or resulting from human actions to create open waters or from the alteration of natural stream courses, areas demonstrating characteristics as described above which are artificially created are not included in these definitions.*

5.1 RIPARIAN/RIVERINE AREAS

5.1.1 Methods

The study area was assessed for riparian/riverine areas at the time of the August 8, 2019, site visit. The assessment included identification and mapping of plant communities within the project area as well as any riparian/riverine features.

5.1.2 Existing Conditions and Results

Riparian/Riverine

Several drainage features are present within the study area, as shown in Figure 4. These features contain riparian/riverine resources protected under the MSHCP. Most of these drainage features contain riparian habitat dominated by a mixture of native (southern willow scrub) and non-native, ornamental vegetation as detailed in Section 4.0. Many of these drainage features intersect and drain under Van Buren Boulevard via culverts.

5.1.3 Impacts

Project construction activities will be confined to paved limits of Van Buren Boulevard and Washington Street, and riparian/riverine areas adjacent to the Wood Road Pump Station will be avoided. Therefore, the project will have no effects to MSHCP riparian/riverine resources. The following avoidance and minimization measures will be implemented to ensure avoidance of project effects to riparian/riverine resources:

- Prior to clearing or construction, highly visible barriers (e.g., orange construction fencing) will be installed along the boundaries of the project footprint adjacent to riparian/riverine resources. All construction equipment should be operated in a manner to prevent accidental damage to areas outside the project footprint. No structure of any kind, or incidental storage of equipment or supplies, will be allowed within these protected zones. In addition, silt fence barriers will be installed at the project boundary to prevent accidental deposition of fill material in areas where riparian/riverine resources are adjacent to planned grading activities.
- All equipment maintenance, staging, and dispensing of fuel, oil, or any other such activities will occur in developed or designated non-sensitive upland habitat areas. The designated upland areas will be located in such a manner as to prevent any spill runoff from riparian/riverine resources.
- A biologist will monitor construction for the duration of the project construction to ensure that vegetation removal, best management practices (BMPs), and all avoidance and minimization measures are properly constructed and followed.

5.1.4 Mitigation

No mitigation is required with the implementation of the avoidance and minimization measures identified above.

5.2 VERNAL POOLS

5.2.1 Methods

The study area was assessed for vernal pools at the time of the August 8, 2019, site visit. The assessment included a search for depressions, indicators of wetland hydrology, suitable soils, and hydrophytic (water-loving) vegetation. The assessment also included a review of seasonally appropriate aerial photographs (Google Earth: 12/2003, 1/2004, 12/2005, 1/2006, 3/2011, 4/2014, 2/2016, 3/2017, 2/2018, and 12/2018).

5.2.2 Existing Conditions and Results

No ponded areas or features resembling vernal pools were observed during the site visit, nor were any seen in aerial photographs. The soils mapped and observed within the project area are primarily sandy loams, which are unlikely to support ponding sufficient for vernal pool formation. No mapped clay soils are present within the study area. Therefore, no vernal pools will be affected by the project.

5.3 FAIRY SHRIMP

5.3.1 Methods

The study area was assessed for fairy shrimp habitat at the same time and using the same methods as the assessment for vernal pools. The MSHCP calls for habitat assessments for three sensitive species of fairy shrimp: Santa Rosa Plateau fairy shrimp (*Linderiella santarosae*), Riverside fairy shrimp (*Streptocephalus woottoni*), and vernal pool fairy shrimp (*Branchinecta lynchi*). Santa Rosa Plateau fairy shrimp occurs only on the Santa Rosa Plateau of extreme southwest Riverside County. A fourth sensitive species of Southern California, San Diego fairy shrimp (*Branchinecta sandiegonensis*) is found primarily in coastal areas of Orange and San Diego Counties. It has been found as far inland as the Wildomar area of southwest Riverside County, but is not expected in the project area. These sensitive fairy shrimp species inhabit vernal pools as well as stock ponds, large road ruts, or other similar habitats that pond water long enough to allow growth and reproduction. To provide fairy shrimp habitat, a feature must regularly pond water for at least 18 days for vernal pool fairy shrimp (Eriksen and Belk 1999) and two months for Riverside fairy shrimp (USFWS 2012).

5.3.2 Existing Conditions and Results

As noted above, there are no vernal pools on the project site. Given the sandy loam soils and that no inundation on the site was seen in seasonally appropriate aerial photographs, the sandy loam soils are unlikely to support ponding for long enough to provide suitable habitat conditions. Therefore, the site does not have habitat suitable for sensitive fairy shrimp species and no fairy shrimp will be affected by the project.

5.4 RIPARIAN BIRDS

5.4.1 Methods

Habitat suitability for riparian birds, including least Bell's vireo (LBVI; *Vireo bellii pusillus*), southwestern willow flycatcher (SWFL; *Empidonax traillii extimus*), and yellow-billed cuckoo (YBCU; *Coccyzus americanus*) was assessed in conjunction with the assessment for riverine/riparian areas. In addition, database records for the *Riverside East, California* USGS 7.5-minute series quadrangle and surrounding quadrangles were searched using the California Department of Fish and Wildlife (CDFW) California Natural Diversity Data Base (CNDDB) *Rarefind 5* online application (https://www.wildlife.ca.gov/Data/CNDDB/Maps-and-Data).

5.4.2 Existing Conditions and Results

The LBVI, SWFL, and YBCU generally require riparian forest habitat composed of willow and cottonwood species with a dense understory. The riparian habitat in the study area, especially along

the Van Buren Boulevard alignment, has been degraded by surrounding development and land use practices resulting in narrow bands of habitat with extensive intrusions of non-native plant species. The riparian habitat adjacent to the Wood Road Pump Station is of higher quality, with less non-native plant intrusion, and has connectivity to larger blocks of habitat.

There are no CNDDB records for the LBVI, SWFL or YBCU within the study area, or records of the SWFL and YBCU in the project vicinity. The riparian habitat in the study area is not considered extensive enough to support SWFL and YBCU.

There are, however, CNDDB records of the LBVI in the project vicinity. The southern willow scrub/ ornamental riparian vegetation along Van Buren Boulevard would not likely support the LBVI due degraded habitat conditions. The riparian habitat adjacent to the Wood Road Pump Station is considered to be suitable habitat for the LBVI.

5.4.3 Impacts

The SWFL and YBCU are considered absent from the study area based on the lack of suitable riparian habitat and the lack of CNDDB records in the project vicinity. Therefore, the project will have no effects to these to two riparian bird species.

The project will avoid direct impacts to riparian habitat in the study area as detailed in Section 5.1. Although the project will avoid direct impacts to riparian habitat in the study area, the project may have indirect effects to riparian habitats that may support the LBVI during its breeding season (March 15 to September 1). If project construction is to occur during the LBVI breeding season, the following measures, in addition to those identified in Section 5.1, will be implemented:

- A pre-construction survey for the LBVI during its breeding season (March 15 to September 1) will be conducted prior to any project vegetation clearing or ground-disturbing activities within riparian habitats adjacent to the project limits within the study area.
- If the pre-construction survey determines the LBVI to be present, no constructions activities will occur adjacent to LBVI occupied habitats during the LBVI breeding season, or until it has been determined, by a qualified biologist, that the LBVI are no longer present.

5.4.4 Mitigation

No mitigation is required with the implementation of the avoidance and minimization measures identified above.

6.0 PROTECTION OF NARROW ENDEMIC PLANT SPECIES (MSHCP SECTION 6.1.3)

Section 6.1.3 of the MSHCP requires focused surveys for specified sensitive plant species if the project is located within a Narrow Endemic Plant Species Area (NEPSSA) and suitable habitat is present. The project is not located within a NEPSSA survey area; therefore, a NEPSSA focused survey is not required. The project will have no effects to NEPSSA plant species.

7.0 ADDITIONAL SURVEY NEEDS AND PROCEDURES (MSHCP SECTION 6.3.2)

MSHCP Section 6.3.2 requires surveys for additional plants, amphibians, small mammals, and burrowing owl for projects located within mapped survey areas.

7.1 CRITERIA AREA PLANT SPECIES

The project study area is not within a mapped survey area for Criteria Area Species Survey Area (CASSA) plant species.

7.2 AMPHIBIANS

The project study area is not within a mapped survey area for amphibian species.

7.3 BURROWING OWL

Potions of the study area are within the MSHCP burrowing owl survey area. Burrowing owls are found in open, dry grasslands, agricultural and range lands, and desert habitats often associated with burrowing animals. They can also inhabit grass, forb, and shrub stages of pinyon and ponderosa pine habitats. They nest in abandoned burrows of ground squirrels or other animals, in pipes, under piles of rock or debris, and in other similar features.

7.3.1 Methods

A burrowing owl habitat assessment was conducted in accordance with Step I, Part A of the *Burrowing Owl Survey Instructions for the Western Riverside County Multiple Species Habitat Conservation Plan Area* (Riverside County Environmental Programs Department, March 29, 2006). The habitat assessment was conducted at the time of the August 8, 2019, site visit.

The assessment included an evaluation of soil texture, vegetative cover, topography, and the presence of mammal burrows, rock/debris piles, or other areas suitable for nest construction.

7.3.2 Existing Conditions and Results

Suitable habitat was determined to be present in the study area for the burrowing owl. Suitable habitat consists of areas vegetated by ruderal vegetation and disturbed areas, as shown in Figure 6.

7.3.3 Impacts and Mitigation

Although no evidence of the burrowing owl was found, due to the presence of suitable burrowing owl habitat, a focused burrow survey during the breeding season (March 1 through August 31) would be required, in accordance with Step II, Part A of the burrowing owl survey instructions. If suitable burrows are found, a survey for burrowing owls would be required in compliance with Step II, Part B of the survey instructions. In addition, a 30-day pre-construction survey would be required for compliance with the survey instructions.

7.3.4 Mitigation

If burrowing owls are determined to be present, the project proponent would need to inform and coordinate with the City of Riverside and the Wildlife Agencies immediately. A Burrowing Owl Protection and Relocation Plan may be necessary prior to initiating ground disturbance.

7.4 MAMMALS

The project study area is not within a mapped survey area for mammals.

8.0 INFORMATION ON OTHER SPECIES

8.1 DELHI SANDS FLOWER-LOVING FLY

The MSHCP requires surveys for Delhi sands flower-loving fly in most areas of mapped Delhi series soils where suitable habitat exists (MSHCP Section 9).

The project study area is not within an area of mapped Delhi soils and soil observed throughout the site is loamy sand, which is inconsistent with Delhi soils; therefore, no survey or additional analysis is required for this species.

8.2 SPECIES NOT ADEQUATELY CONSERVED

Some species, identified in Table 9-3 of the MSHCP (Riverside County Transportation and Land Management Agency 2003), that will eventually have full coverage under the MSHCP are not considered adequately conserved until requirements of MSHCP Table 9-3 are met.

LSA reviewed MSHCP Table 9-3 species. No Table 9-3 species or other special-status species were observed during the site visit. Given the habitat quality, none of these species is expected to occur within the project area. Therefore, the project is not anticipated to affect these species.

9.0 GUIDELINES PERTAINING TO THE URBAN/WILDLANDS INTERFACE (MSHCP SECTION 6.1.4)

To preserve the integrity of areas described as existing or future MSHCP Conservation Areas, the guidelines contained in Section 6.1.4 (Urban Wildlands Interface Guidelines) are to be implemented for projects that are adjacent to either existing conservation or land described for conservation in the MSHCP Criteria Area.

The project study area is not adjacent to conserved lands or lands in the Criteria Area that are described for conservation. Therefore, the Urban Wildlands Interface Guidelines do not apply to this project.

10.0 POTENTIAL JURISDICTIONAL WATERS AND STREAMBEDS

10.1 REGULATORY BACKGROUND

The U.S. Army Corps of Engineers (USACE), under Section 404 of the Federal Clean Water Act (CWA), regulates discharges of dredged or fill material into "waters of the United States." These waters include wetlands and non-wetland bodies of water that meet specific criteria, including a connection to interstate commerce. This connection may be direct (through a tributary system linking a stream channel with traditional navigable waters used in interstate or foreign commerce) or it may be indirect (through a connection identified in USACE regulations). The USACE typically regulates as non-wetland waters of the U.S. any body of water displaying an "ordinary high water mark" (OHWM). In order to be considered a "jurisdictional wetland" under Section 404, an area must possess hydrophytic vegetation, hydric soils, and wetland hydrology. The CDFW, under Sections 1600 et seq. of the California Fish and Game Code, regulates alterations to lakes, rivers, and streams. A stream is defined by the presence of a channel bed and banks and at least an occasional flow of water. The Regional Water Quality Control Board (RWQCB) is responsible for the administration of Section 401 of the CWA, through water quality certification of any activity that may result in a discharge to jurisdictional waters of the U.S. The RWQCB may also regulate discharges to "waters of the State," including wetlands, under the California Porter-Cologne Water Quality Control Act.

10.2 METHODS

The study area was assessed for potential jurisdiction waters at the time of the August 8, 2019, site visit.

10.3 EXISTING CONDITIONS AND RESULTS

Several drainage features (Figure 4) are present within the study area that may be subject to the regulatory authority of the USACE under Section 404 of the CWA, the RWQCB under Section 401 of the CWA, and the CDFW under Section 1600 et seq. of the California Fish and Game Code. The project will avoid these features. The following avoidance measures, which are consistent with those identified in Section 5.1.3 for riparian/riverine resources, will be implemented to avoid impacts to drainage features and associated riparian habitats:

- Prior to clearing or construction, highly visible barriers (e.g., orange construction fencing) will be installed along the boundaries of the project footprint adjacent to riparian/riverine resources. All construction equipment should be operated in a manner to prevent accidental damage to areas outside the project footprint. No structure of any kind, or incidental storage of equipment or supplies, will be allowed within these protected zones. In addition, silt fence barriers will be installed at the project boundary to prevent accidental deposition of fill material in areas where riparian/riverine resources are adjacent to planned grading activities.
- All equipment maintenance, staging, and dispensing of fuel, oil, or any other such activities will occur in developed or designated non-sensitive upland habitat areas. The designated upland

areas will be located in such a manner as to prevent any spill runoff from riparian/riverine resources.

- A biologist will monitor construction for the duration of the project construction to ensure that vegetation removal, BMPs, and all avoidance and minimization measures are properly constructed and followed.

11.0 NESTING BIRDS

During the bird breeding season (typically February 1 through August 31), large trees on or adjacent to the study area may be used by hawks, ravens, or other large birds for nesting. Trees, shrubs, and other vegetation may provide nest sites for smaller birds, and burrowing owls may nest in ground squirrel burrows, pipes, or similar features. Nesting bird species, with potential to occur are protected by California Fish and Game Code Sections 3503, 3503.5, and 3800, and by the Migratory Bird Treaty Act (MBTA) (16 USC 703–711). These laws regulate the take, possession, or destruction of the nest or eggs of any migratory bird or bird of prey. However, the U.S. Fish and Wildlife Service has recently determined that the MBTA should apply only to "… affirmative actions that have as their purpose the taking or killing of migratory birds, their nests, or their eggs" and will not be applied to incidental take of migratory birds pursuant to otherwise lawful activities. To avoid potential effects, during the breeding season, to swallows, fully protected raptors, special-status bird species, and other nesting birds protected by the California Fish and Game Code, and for compliance with MSHCP Incidental Take Permit Condition 5, the following measures will be implemented:

- A nesting bird pre-construction survey will be conducted by a qualified biologist three days prior to ground-disturbing activities. Should nesting birds be found, an exclusionary buffer will be established by the qualified biologist. The buffer may be up to 500 feet in diameter, depending on the species of nesting bird found. This buffer will be clearly marked in the field by construction personnel under guidance of the qualified biologist and construction or clearing will not be conducted within this zone until the qualified biologist determines that the young have fledged or the nest is no longer active. Nesting bird habitat within the study area will be resurveyed during bird breeding season if there is a lapse in construction activities longer than seven days.

12.0 REFERENCES

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Eriksen, C., and D. Belk. 1999. *Fairy Shrimps of California's Puddles, Pools, and Playas.* Mad River Press, Inc., Eureka, California.

Riverside County Environmental Programs Department. March 29, 2016. *Burrowing Owl Survey Instructions for the Western Riverside County Multiple Species Habitat Conservation Plan Area*.

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U.S. Department of Agriculture, Natural Resource Conservation Service, Soil Survey Staff. 2019. Web Soil Survey. Website: https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm (accessed September 18, 2019).

U.S. Fish and Wildlife Service (USFWS). 2012. Endangered and Threatened Wildlife and Plants; Revised Critical Habitat for the Riverside Fairy Shrimp; Final Rule. Federal Register 77: 72070-72140 (December 4, 2012).

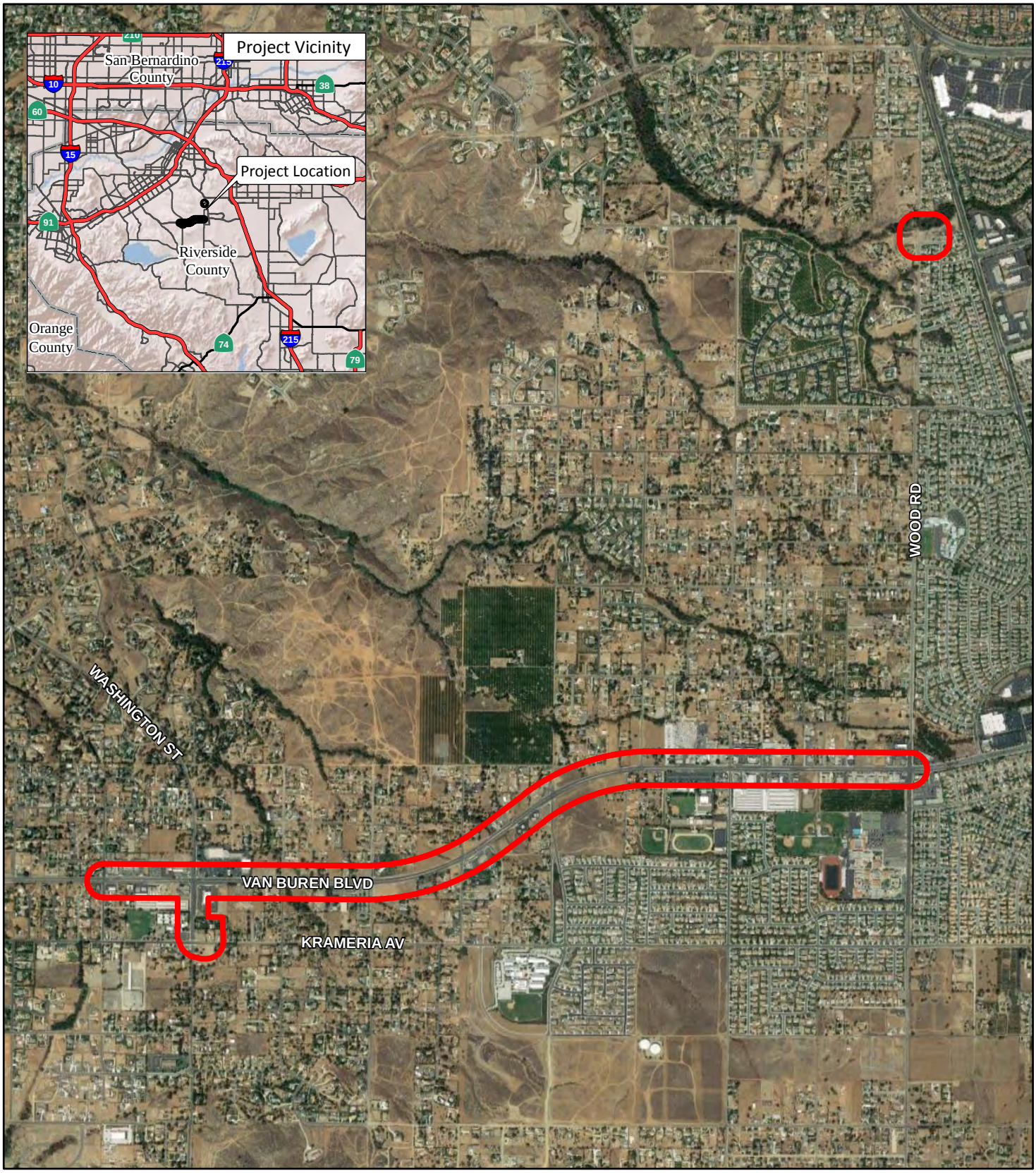
13.0 CERTIFICATION STATEMENT

I hereby certify that the statements furnished in this report present the data and information required for this biological evaluation and the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

Date: October 21, 2019 Signature: 

APPENDIX A

FIGURES



LSA

LEGEND

Biological Study Area

FIGURE 1

N

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FEET

SOURCE: Google Maps (2019); City of Riverside (2019)

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Van Buren Boulevard Sewer Installation Project

Regional and Project Location

DOOLEY PL
RANCHERO RD
IRIS AV
STALLION PL
INDIAN CREEK TR
OLIVE AV
PORTER AV
TROQUATO LN
TAVA LN
SAGE AV
STEVENS LN
PALAMINO PL
SANDY TER
BOBBITT AV
FRED ST
ARABIAN AV
VAN BUREN BLVD
HAYGEN ST
CATON CT
KING AV
WASHINGTON ST
GARDNER AV
GAMBLE AV
KRAMERIA AV

LSA

LEGEND

- Biological Study Area
- Sewer Work Site Plan
- Pump Station

N

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SOURCE: Google Maps (2019); City of Riverside (2019)

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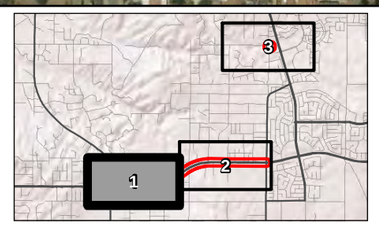
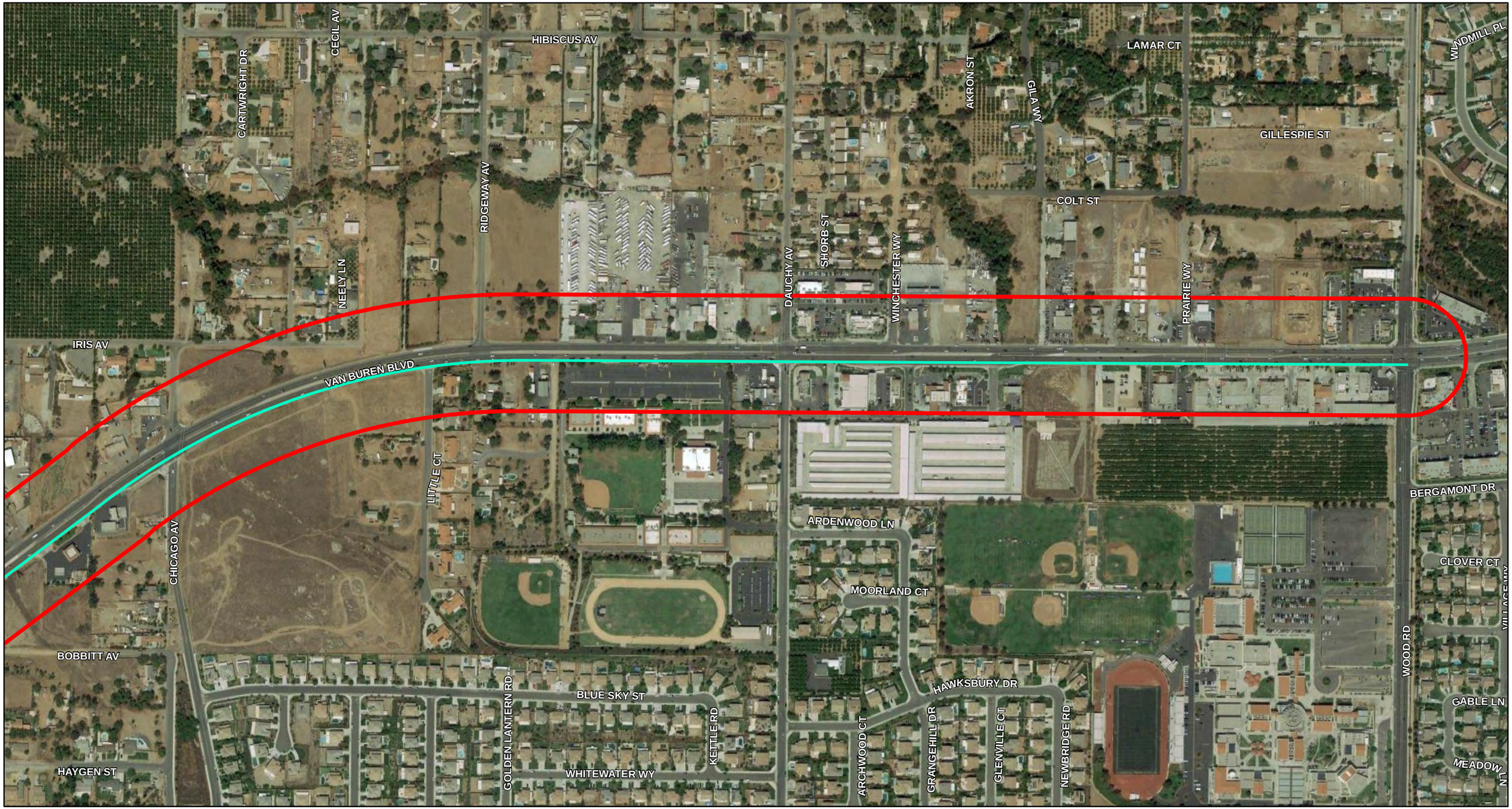


FIGURE 2

Sheet 1 of 3

Van Buren Boulevard Sewer Installation Project

Conceptual Site Plan

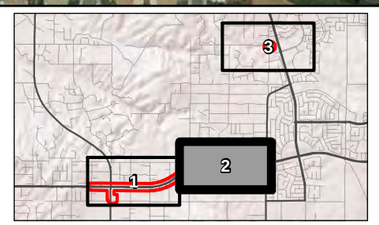


LSA

LEGEND

- Biological Study Area
- Sewer Work Site Plan
- Pump Station

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SOURCE: Google Maps (2019); City of Riverside (2019)

I:\KRS1901\GIS\MXD\SitePlan.mxd (10/16/2019)

FIGURE 2
Sheet 2 of 3

Van Buren Boulevard Sewer Installation Project
Conceptual Site Plan



LSA

LEGEND

- Biological Study Area
- Sewer Work Site Plan
- Pump Station

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FEET

SOURCE: Google Maps (2019); City of Riverside (2019)

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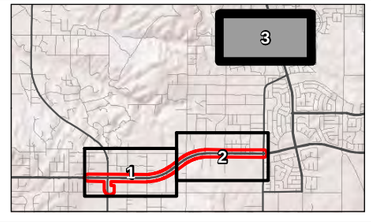
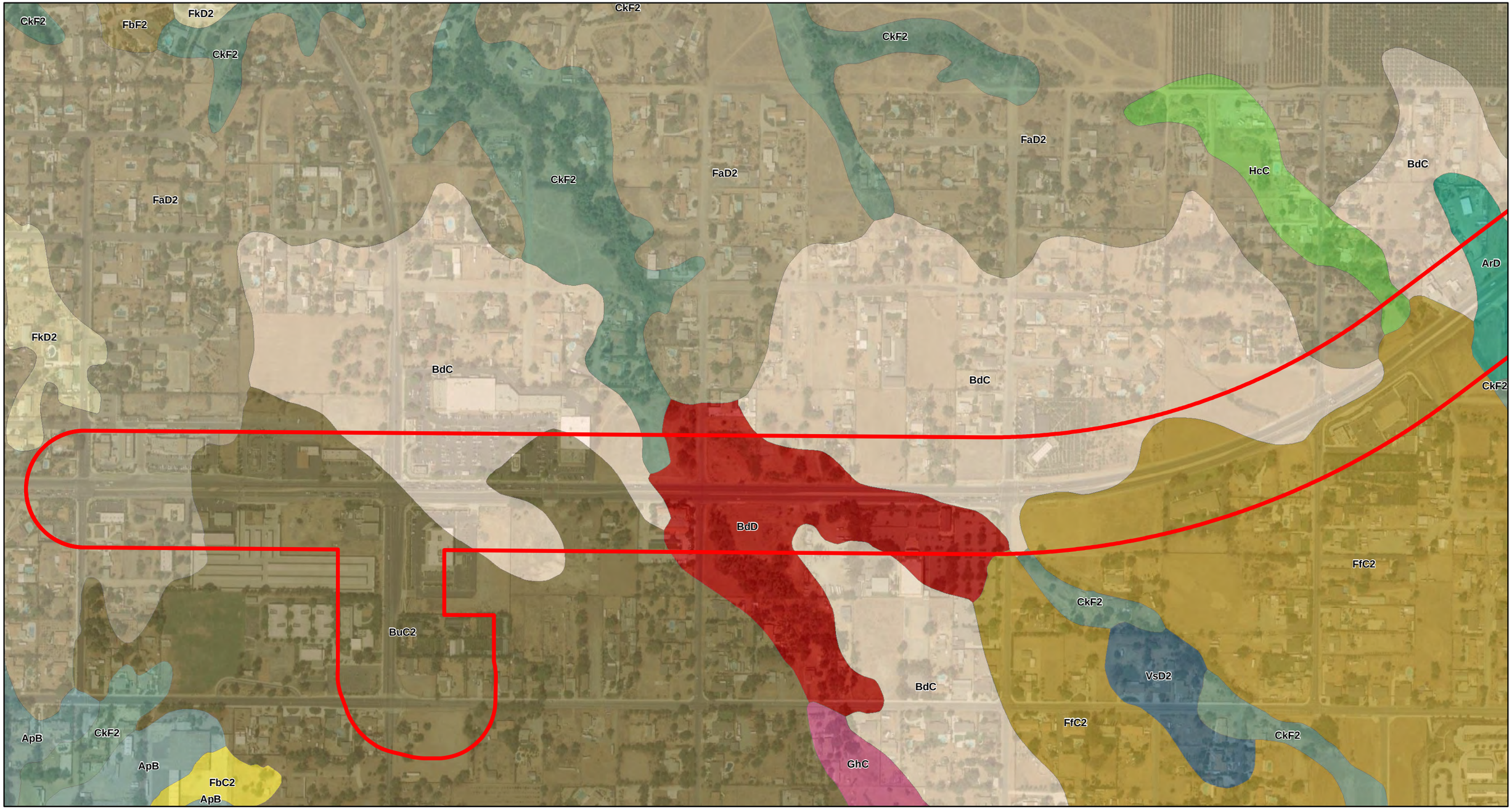


FIGURE 2

Sheet 3 of 3

Van Buren Boulevard Sewer Installation Project

Conceptual Site Plan



LSA

LEGEND

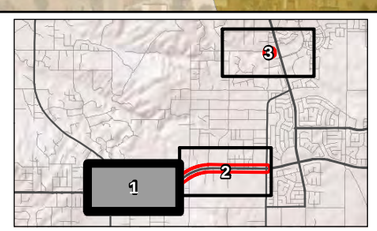
- Biological Study Area

Soils within Biological Study Area

- (ArD) Arlington loam, deep, 5 to 15 percent slopes
- (BdC) Bonsall fine sandy loam, 2 to 8 percent slopes
- (BdD) Bonsall fine sandy loam, 8 to 15 percent slopes
- (BuC2) Buren fine sandy loam, 2 to 8 percent slopes, eroded
- (CkF2) Cieneba rocky sandy loam, 15 to 50 percent slopes, eroded
- (FfC2) Fallbrook fine sandy loam, 2 to 8 percent slopes, eroded
- (FaD2) Fallbrook sandy loam, 8 to 15 percent slopes, eroded
- (HcC) Hanford coarse sandy loam, 2 to 8 percent slopes

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SOURCE: Google Maps (2019); City of Riverside (2019)

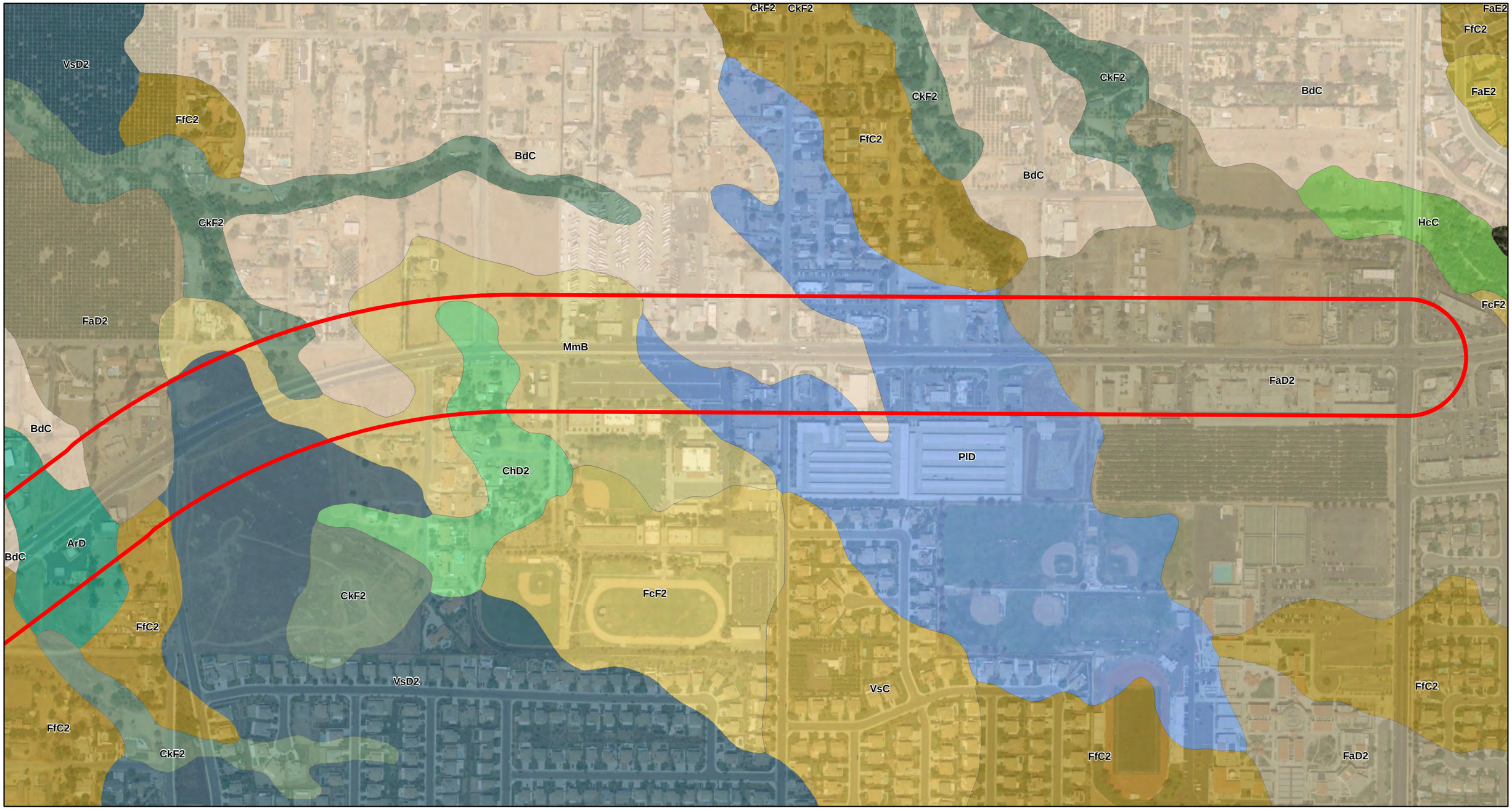
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FIGURE 3

Sheet 1 of 3

Van Buren Boulevard Sewer Installation Project

Soils



LSA

LEGEND

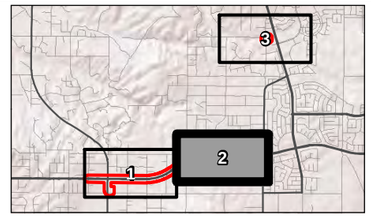
Biological Study Area

Soils within Biological Study Area

- (ArD) Arlington loam, deep, 5 to 15 percent slopes
- (BdC) Bonsall fine sandy loam, 2 to 8 percent slopes
- (ChD2) Cieneba sandy loam, 8 to 15 percent slopes, eroded
- (CkF2) Cieneba rocky sandy loam, 15 to 50 percent slopes, eroded
- (FfC2) Fallbrook fine sandy loam, 2 to 8 percent slopes, eroded
- (FaD2) Fallbrook sandy loam, 8 to 15 percent slopes, eroded
- (MmB) Monserate sandy loam, 0 to 5 percent slopes
- (PlD) Placentia fine sandy loam, 5 to 15 percent slopes
- (VsD2) Vista coarse sandy loam, 8 to 15 percent slopes, eroded

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SOURCE: Google Maps (2019); City of Riverside (2019)

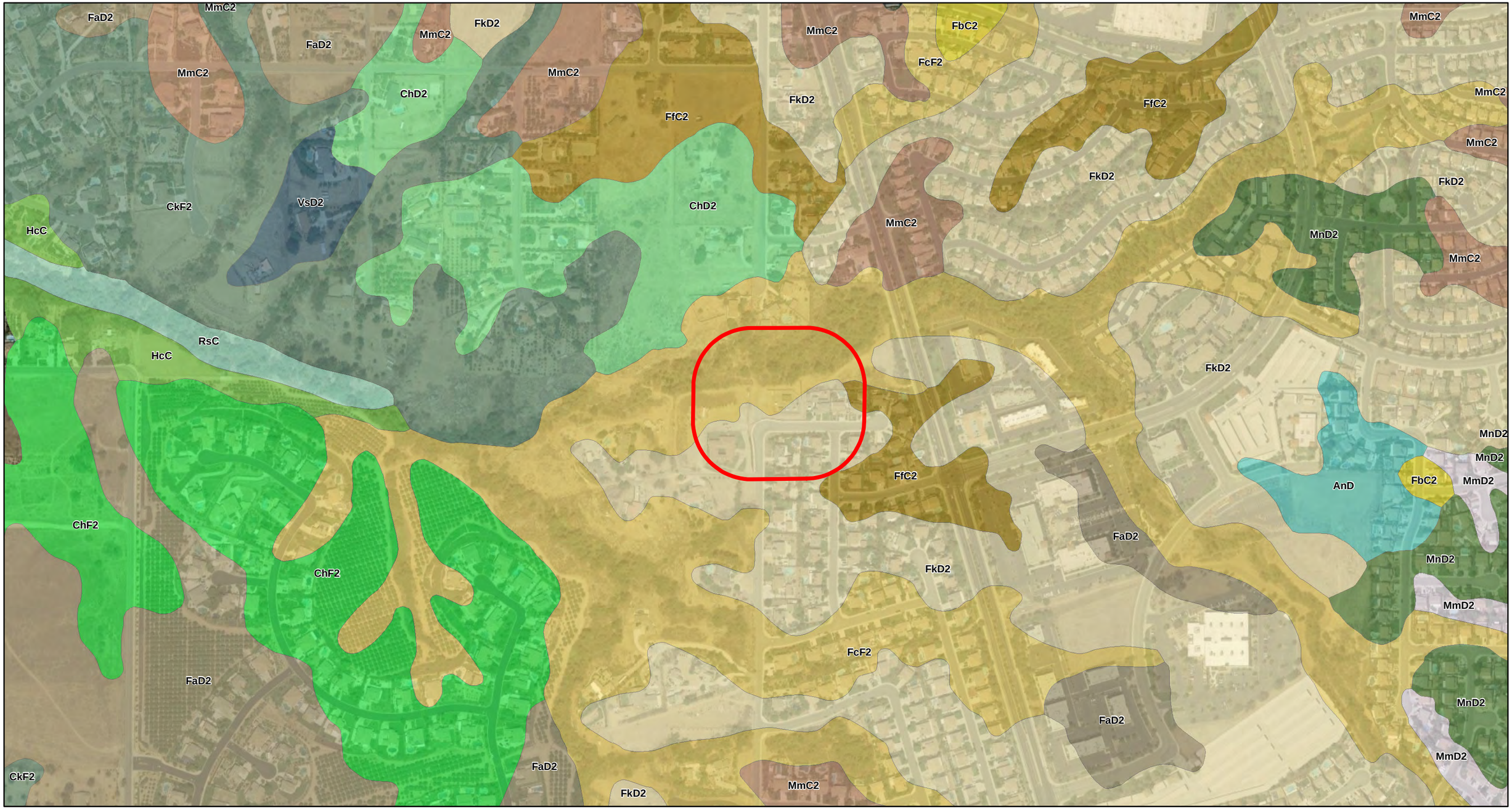
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FIGURE 3

Sheet 2 of 3

Van Buren Boulevard Sewer Installation Project

Soils



LSA

LEGEND

Biological Study Area

Soils within Biological Study Area

(CkF2) Cieneba rocky sandy loam, 15 to 50 percent slopes, eroded

(FfC2) Fallbrook fine sandy loam, 2 to 8 percent slopes, eroded

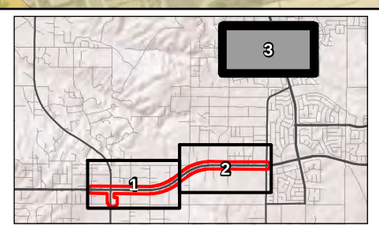
(FkD2) Fallbrook fine sandy loam, shallow, 8 to 15 percent slo pes, eroded

(FcF2) Fallbrook rocky sandy loam, shallow, 15 to 50 percent slopes, eroded

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FEET



SOURCE: Google Maps (2019); City of Riverside (2019)

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FIGURE 3

Sheet 3 of 3

Van Buren Boulevard Sewer Installation Project

Soils

DOOLEY PL
RANCHERO RD
IRIS AV
STALLION PL
INDIAN CREEK TR
OLIVE AV
PORTER AV
TROQUATO LN
TAVA LN
SAGE AV
STEVENS LN
PALAMINO PL
SANDY TER
BOBBITT AV
FRED ST
ARABIAN AV
VAN BUREN BLVD
HAYGEN ST
CATON CT
KING AV
WASHINGTON ST
GARDNER AV
GAMBLE AV
KRAMERIA AV
1
2
3
4
7
8

LSA

LEGEND

- Biological Study Area
- Site Photographs
- Developed/Disturbed (135.67 acres)
- Ruderal (26.75 acres)
- Southern Willow Scrub/Ornamental (4.78 acres)
- Potential Jurisdictional Waters/Riparian-Riverine Resources

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SOURCE: Google Maps (2019); City of Riverside (2019)

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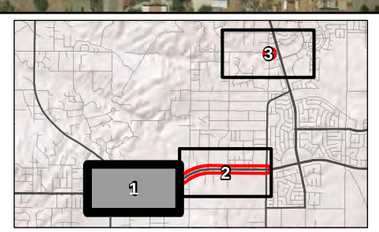
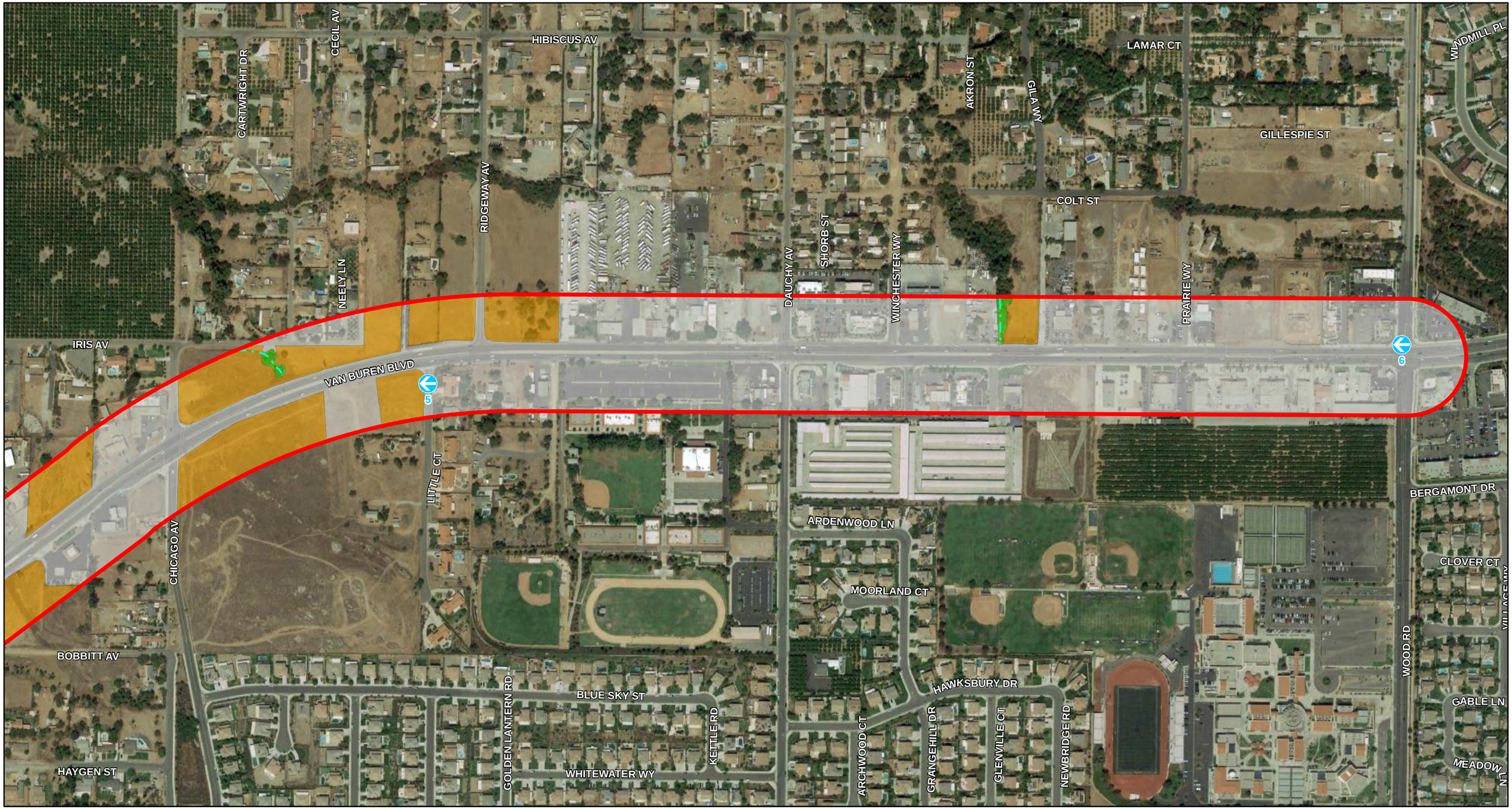


FIGURE 4

Sheet 1 of 3

Van Buren Boulevard Sewer Installation Project

Vegetation, Land Use and Potential Jurisdictional Waters/Riparian-Riverine Resources

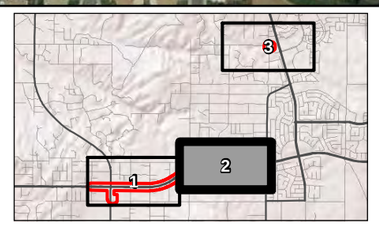


LSA

LEGEND

- Biological Study Area
- Site Photographs
- Developed/Disturbed (135.67 acres)
- Ruderal (26.75 acres)
- Southern Willow Scrub/Ornamental (4.78 acres)
- Potential Jurisdictional Waters/Riparian-Riverine Resources

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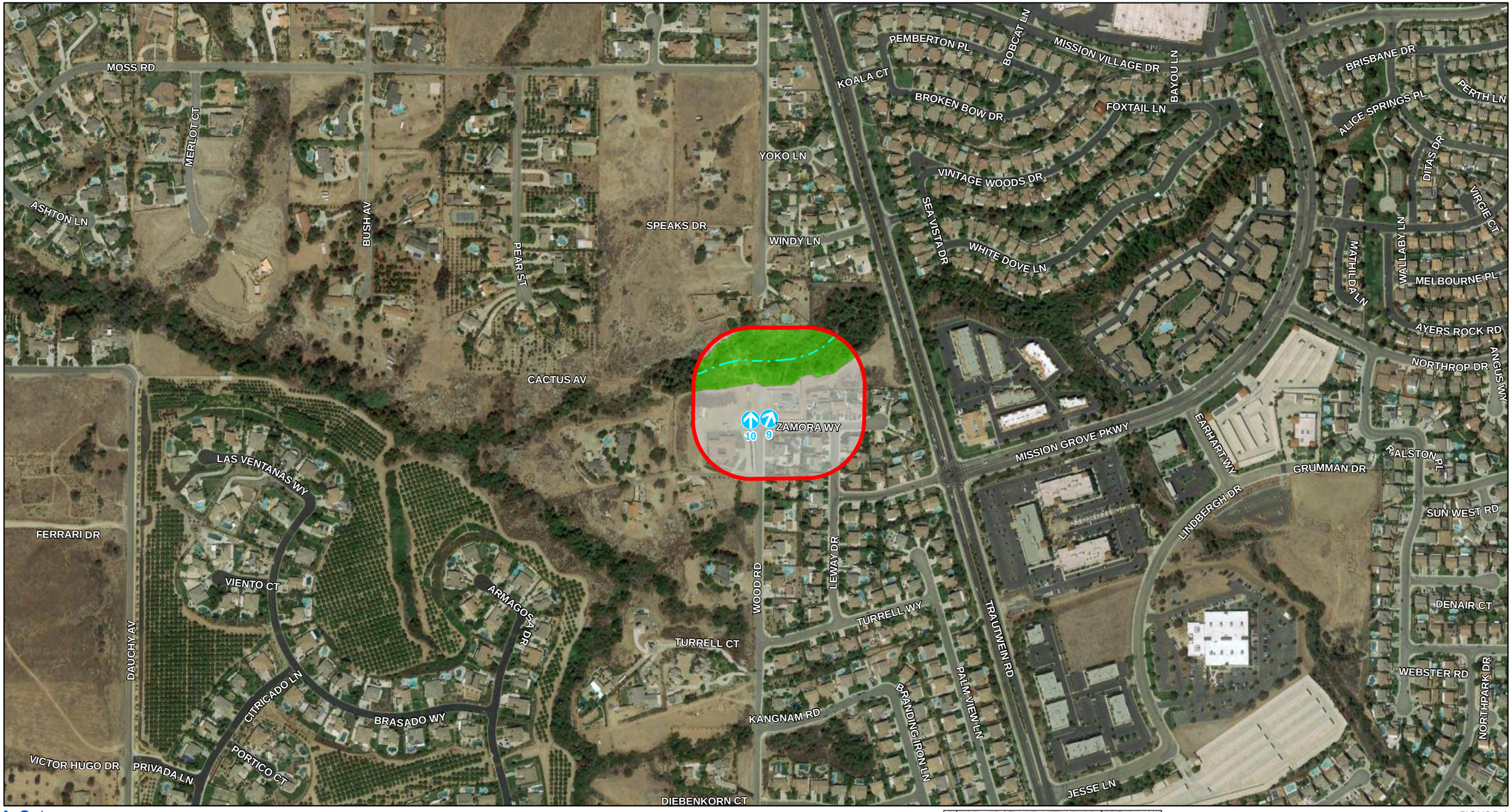
SOURCE: Google Maps (2019); City of Riverside (2019)

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FIGURE 4
Sheet 2 of 3

Van Buren Boulevard Sewer Installation Project

Vegetation, Land Use and Potential Jurisdictional Waters/Riparian-Riverine Resources



LSA

LEGEND

- Biological Study Area
- Site Photographs
- Developed/Disturbed (135.67 acres)
- Ruderal (26.75 acres)
- Southern Willow Scrub/Ornamental (4.78 acres)
- Potential Jurisdictional Waters/Riparian-Riverine Resources

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SOURCE: Google Maps (2019); City of Riverside (2019)

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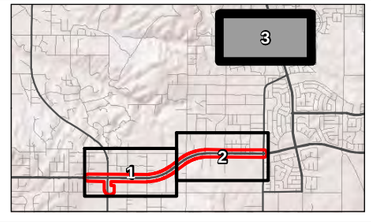


FIGURE 4

Sheet 3 of 3

Van Buren Boulevard Sewer Installation Project

Vegetation, Land Use and Potential Jurisdictional Waters/Riparian-Riverine Resources



1. View of development at the intersection of King Avenue and Van Buren Boulevard.



2. View of general site conditions easterly of the intersection of Gardner Avenue and Van Buren Boulevard.



3. View of southern willow scrub/ornamental vegetation and ruderal vegetation at the southeast corner of Gardner Avenue and Van Buren Boulevard.

LSA

FIGURE 5

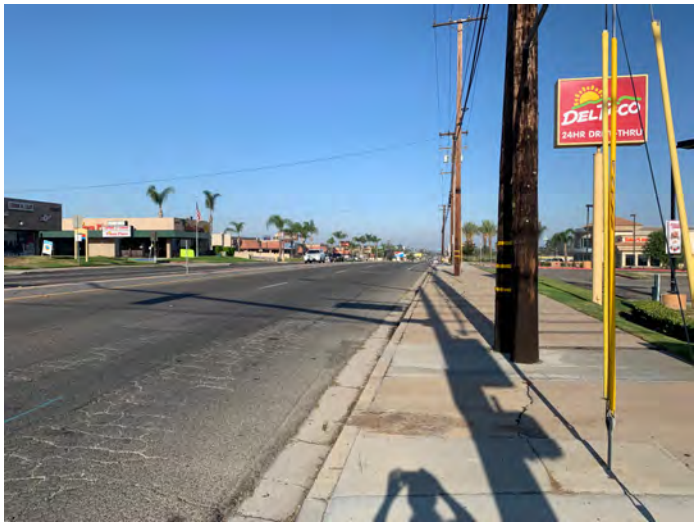
Van Buren Boulevard Sewer Installation Project
Site Photographs



4. View of ruderal and southern willow scrub/ornamental vegetation northwest of the intersection of Gamble Avenue and Van Buren Boulevard.



5. View of general site conditions westerly of the intersection of Little Court and Van Buren Boulevard.



6. View of development east of the intersection of Wood Road and Van Buren Boulevard.



7. View of disturbed conditions at the Krameria Avenue pump station.

LSA

FIGURE 5

Van Buren Boulevard Sewer Installation Project
Site Photographs

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8. View of developed conditions along Washington Street north of Krameria Avenue.



9. View of Wood Road pump station disturbed/developed conditions in foreground and adjacent southern willow scrub vegetation in background.



10. View of general conditions at the Wood Road pump station.

LSA

FIGURE 5

Van Buren Boulevard Sewer Installation Project
Site Photographs

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DOOLEY PL
RANCHERO RD
IRIS AV
STALLION PL
INDIAN CREEK TR
OLIVE AV
PORTER AV
TROQUATO LN
TAVA LN
SAGE AV
STEVENS LN
PALAMINO PL
SANDY TER
BOBBITT AV
FRED ST
ARABIAN AV
VAN BUREN BLVD
HAYGEN ST
CATON CT
KING AV
WASHINGTON ST
GARDNER AV
GAMBLE AV
KRAMERIA AV

LSA

LEGEND

Biological Study Area

Burrowing Owl Suitable Habitat

N

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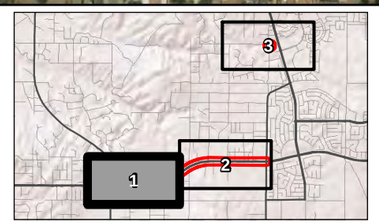


FIGURE 6

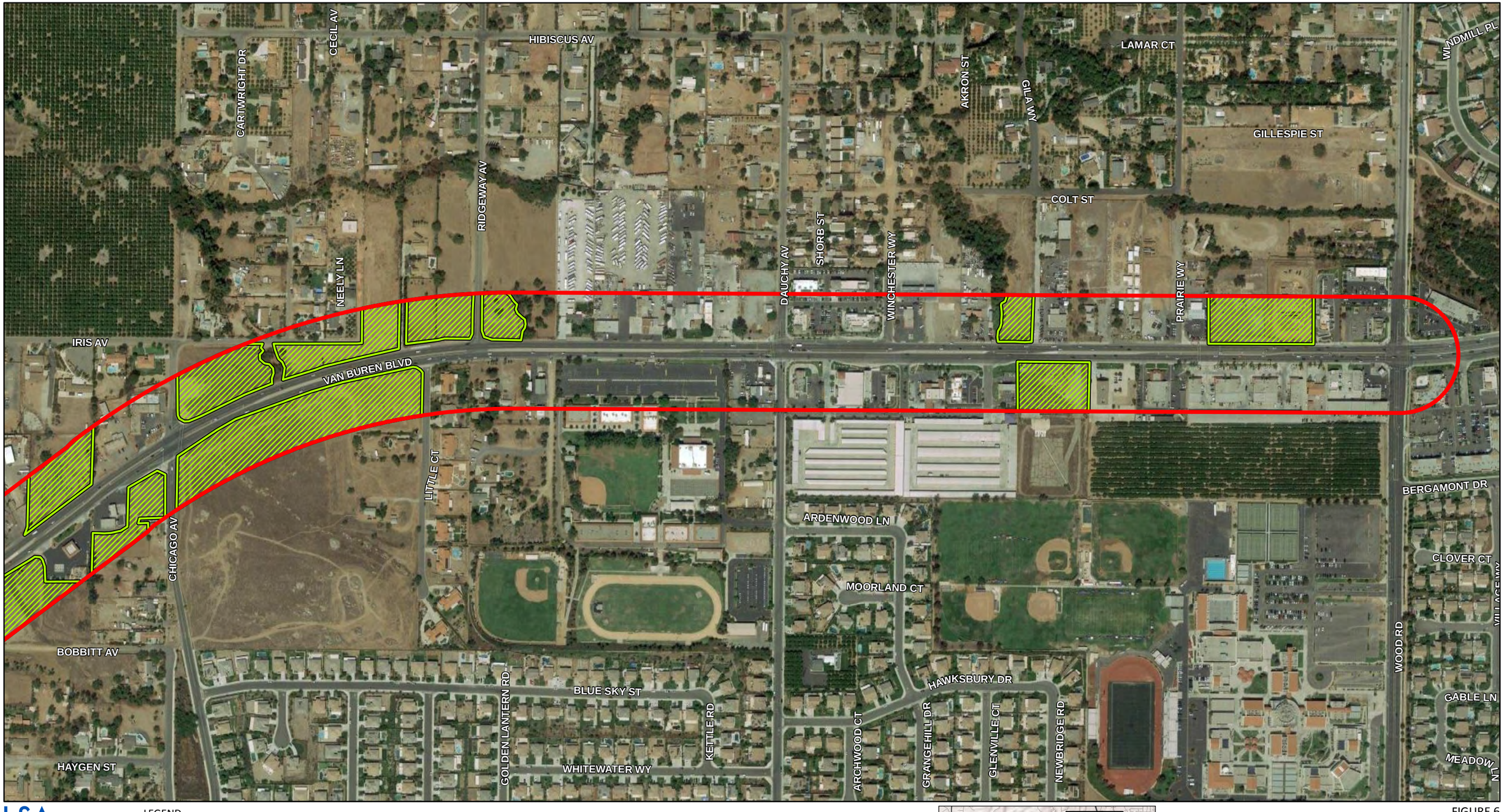
Sheet 1 of 3

Van Buren Boulevard Sewer Installation Project

Burrowing Owl Suitable Habitat

SOURCE: Google Maps (2019); City of Riverside (2019)

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LSA

LEGEND

- Biological Study Area
- Burrowing Owl Suitable Habitat

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SOURCE: Google Maps (2019); City of Riverside (2019)

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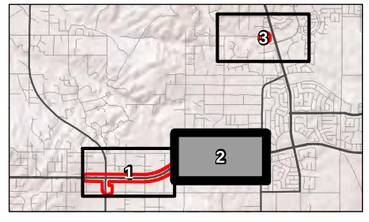
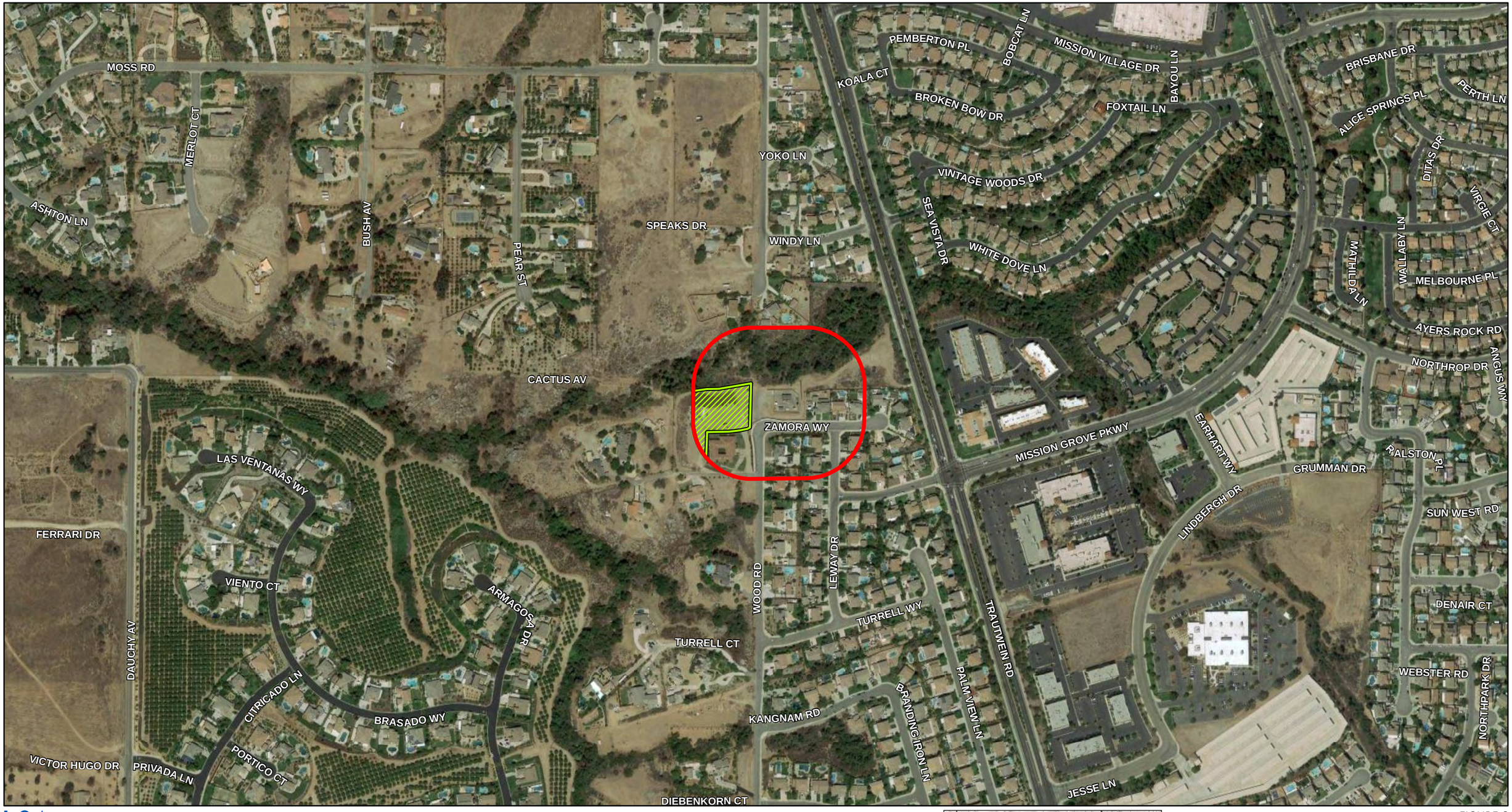


FIGURE 6

Sheet 2 of 3

Van Buren Boulevard Sewer Installation Project

Burrowing Owl Suitable Habitat



LSA

LEGEND

- Biological Study Area
- Burrowing Owl Suitable Habitat

N

0 200 400
FEET

SOURCE: Google Maps (2019); City of Riverside (2019)

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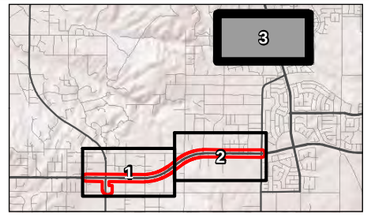


FIGURE 6

Sheet 3 of 3

Van Buren Boulevard Sewer Installation Project

Burrowing Owl Suitable Habitat

APPENDIX B

PLANT AND ANIMAL SPECIES OBSERVED

Plant and Animal Species Observed

Scientific Name	Common Name
EUDICOT FLOWERING PLANTS	
Adoxaceae	**Muskroot family**
Sambucus nigra ssp. *caerulea*	Blue elderberry
Anacardiaceae	Sumac family
Schinus molle (non-native species)	Peruvian peppertree
Asteraceae	**Sunflower family**
Baccharis salicifolia	Mule fat
Centaurea melitensis (non-native species)	Maltese star-thistle
Corethrogyne filaginifolia	California aster
Erigeron canadensis	Canadian horseweed
Helianthus annuus	Common sunflower
Heterotheca grandiflora	Telegraph weed
Lactuca serriola (non-native species)	Prickly lettuce
Oncosiphon piluliferum (non-native species)	Stinknet
Brassicaceae	**Mustard family**
Hirschfeldia incana (non-native species)	Shortpod mustard
Chenopodiaceae	**Saltbush family**
Salsola tragus (non-native species)	Russian thistle
Euphorbiaceae	**Spurge family**
Croton setigerus	Dove weed
Ricinus communis (non-native species)	Castor bean
Oleaceae	**Olive family**
Fraxinus arizonica (non-native species)	Arizona ash
Polygonaceae	**Buckwheat family**
Eriogonum fasciculatum	California buckwheat
Eriogonum gracile	Slender buckwheat
Salicaceae	**Willow family**
Populus fremontii	Fremont cottonwood
Salix lasiolepis	Arroyo willow
Solanaceae	**Nightshade family**
Datura wrightii	Sacred thorn-apple
Nicotiana glauca (non-native species)	Tree tobacco
Solanum sp.	Nightshade
Zygophyllaceace	**Caltrop family**
Tribulus terrestris (non-native species)	Puncture vine
MONOCOT FLOWERING PLANTS	
Arecaceae	**Palm family**
Washingtonia filifera	California fan palm
Poaceae	**Grass family**
Arundo donax (non-native species)	Giant reed

Plant and Animal Species Observed

Scientific Name	Common Name
Avena barbata (non-native species)	Slender wild oat
Bromus madritensis ssp. *rubens* (non-native species)	Red brome
Polypogon monspeliensis (non-native species)	Annual rabbitsfoot grass
Schismus barbatus (non-native species)	Common Mediterranean grass
Typhaceae	**Cattail family**
Typha sp.	Cattail
Reptiles	
Phrynosomatidae	**Phrynosomatid Lizards**
Uta stansburiana	Common side-blotched lizard
BIRDS	
Columbidae	**Pigeons and Doves**
Zenaida macroura	Mourning dove
Streptopelia decaocto (non-native species)	Eurasian collared dove
Trochilidae	**Hummingbirds**
Calypte anna	Anna's hummingbird
Picidae	**Woodpeckers**
Picoides nuttallii	Nuttall's woodpecker
Tyrannidae	**Tyrant Flycatchers**
Sayornis nigricans	Black phoebe
Corvidae	**Crows and Ravens**
Corvus brachyrhynchos	American crow
Troglodytidae	**Wrens**
Thryomanes bewickii	Bewick's wren
Passeridae	**Old World Sparrows**
Passer domesticus (non-native species)	House sparrow
Fringillidae	**Finches**
Haemorhous mexicanus	House finch
Spinus psaltria	Lesser goldfinch
Passerellidae	**New World Sparrows**
Pipilo maculatus	Spotted towhee
Melozone crissalis	California towhee
MAMMALS	
Leporidae	**Rabbits and Hares**
Sylvilagus audubonii	Desert cottontail

APPENDIX C

CULTURAL RESOURCES ASSESSMENT

PHASE I HISTORICAL/ARCHAEOLOGICAL RESOURCES SURVEY

VAN BUREN BOULEVARD SEWER INSTALLATION PROJECT

City of Riverside
Riverside County, California

For Submittal to:

City of Riverside Public Works Department
3900 Main Street, Fourth Floor
Riverside, CA 92522

Prepared for:

Krieger and Stewart
3602 University Avenue
Riverside, CA 92501

Prepared by:

CRM TECH
1016 E. Cooley Drive, Suite A/B
Colton, CA 92324

Bai "Tom" Tang, Principal Investigator
Michael Hogan, Principal Investigator

September 23, 2019
CRM TECH Contract No. 3471

Title: Phase I Historical/Archaeological Resources Survey: Van Buren Boulevard Sewer Installation Project, City of Riverside, Riverside County, California

Author(s): Bai "Tom" Tang, Principal Investigator/Historian
Deirdre Encarnación, Archaeologist/Report Writer
Daniel Ballester, Archaeologist/Field Director

Consulting Firm: CRM TECH
1016 E. Cooley Drive, Suite A/B
Colton, CA 92324
(909) 824-6400

Date: September 23, 2019

For Submittal to: City of Riverside Public Works Department
3900 Main Street, Fourth Floor
Riverside, CA 92522
(951) 826-5311

Prepared for: Victoria Morrell
Krieger and Stewart
3602 University Avenue
Riverside, CA 92501
(951) 684-6900

USGS Quadrangle: Riverside East, Calif., 7.5' quadrangle (Sections 17 and 30, T3S R4W and Sections 25 and 26, T3S R5W, San Bernardino Baseline and Meridian)

Keywords: Inland Empire region; Phase I historical/archaeological resources survey; Site 33-002695 (CA-RIV-2695): bedrock milling feature (no longer extant); no "historical resources" under CEQA

MANAGEMENT SUMMARY

Between April and September 2019, at the request of Krieger and Stewart, CRM TECH performed a cultural resources study on three sewer pump station sites and approximately 1,000 linear feet of pipeline alignment in the Woodcrest area of the City of Riverside, Riverside County, California. The study is part of the environmental review process for the proposed improvements to an existing pump station at 7802 Wood Road, the demolition of another existing pump station at 18601 Van Buren Avenue, and the construction of a new pump station at the northeast corner of Krameria Avenue and Washington Street, along with 1,000 feet of pipeline extending north along Washington Street to Van Buren Boulevard. The proposed project lies within Sections 17 and 30, T3S R4W and Sections 25 and 26, T3S R5W, San Bernardino Baseline and Meridian.

The City of Riverside Public Works Department, as the lead agency for the project, required the study in compliance with the California Environmental Quality Act (CEQA) and the City's Cultural Resources Ordinance. The purpose of the study is to provide the City with the necessary information and analysis to determine whether the proposed project would cause substantial adverse changes to any "historical resources," as defined by CEQA, that may exist in or around the project area. In order to identify such resources, CRM TECH conducted a cultural resources records search, pursued historical background research, contacted Native American representatives, and carried out a systematic field survey of the project area.

The results of the records search indicate that a prehistoric—i.e., Native American—archaeological site consisting of a bedrock outcrop with five milling slicks, designated 33-002695 (CA-RIV-2695) in the California Historical Resources Inventory, was previously recorded in close proximity to the Wood Road pump station site. During the field survey, it was confirmed that, as the existing site record suggests, Site 33-002695 has been removed as a result of a residential development at its former location and is no longer extant.

Based on these findings, CRM TECH recommends to the City of Riverside Public Works Department a determination of *No Impact* regarding "historical resources." No further cultural resources investigation is recommended for the project unless construction plans undergo such changes as to include areas not covered by this study. However, if buried cultural materials are discovered during earth-moving operations associated with the project, the City of Riverside Public Works Department should be notified immediately, and all work in the immediate vicinity must be halted or diverted until a qualified archaeologist can evaluate the nature and significance of the finds.

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INTRODUCTION

Between April and September 2019, at the request of Krieger and Stewart, CRM TECH performed a cultural resources study on three sewer pump station sites and approximately 1,000 linear feet of pipeline alignment in the Woodcrest area of the City of Riverside, Riverside County, California (Fig. 1). The study is part of the environmental review process for the proposed improvements to an existing pump station at 7802 Wood Road, the demolition of another existing pump station at 18601 Van Buren Avenue, and the construction of a new pump station at the northeast corner of Krameria Avenue and Washington Street, along with 1,000 feet of pipeline extending north along Washington Street to Van Buren Boulevard. The proposed project lies within Sections 17 and 30, T3S R4W and Sections 25 and 26, T3S R5W, San Bernardino Baseline and Meridian (Fig. 2).

The City of Riverside Public Works Department, as the lead agency for the project, required the study in compliance with the California Environmental Quality Act (CEQA; PRC §21000, et seq.) and the City's Cultural Resources Ordinance (Title 20, Riverside Municipal Code). The purpose of the study is to provide the City with the necessary information and analysis to determine whether the proposed project would cause substantial adverse changes to any "historical resources," as defined by CEQA, that may exist in or around the project area.

In order to identify such resources, CRM TECH conducted a cultural resources records search, pursued historical background research, contacted Native American representatives, and carried out a systematic field survey of the project area. The following report is a complete account of the methods, results, and final conclusion of the study. Personnel who participated in the study are named in the appropriate sections below, and their qualifications are provided in Appendix 1.

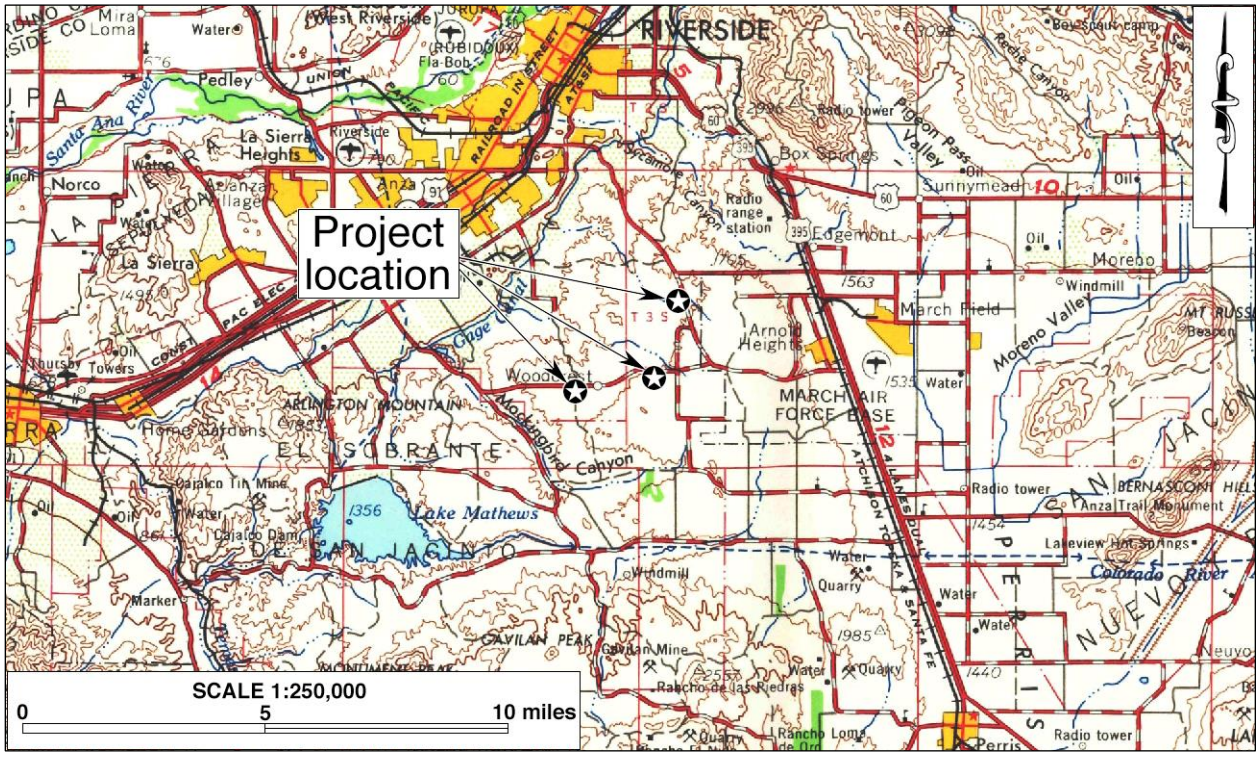


Figure 1. Project vicinity. (Based on USGS Santa Ana, Calif., 30'x60' quadrangle [USGS 1979])



Figure 2. Project location. (Based on USGS Riverside East and Riverside West, Calif., 7.5’ quadrangles [USGS 1980a; 1980b])

SETTING

CURRENT NATURAL SETTING

The project area lies in the Riverside-San Bernardino-Ontario metropolitan area, collectively known as the "Inland Empire." Centered in the San Bernardino Valley, the region is surrounded by the Santa Ana Mountains on the southwest, the San Jacinto Mountains on the southeast, and the San Gabriel and San Bernardino Mountain Ranges on the north. The natural landscape in the region features broad inland valleys separated by groups of rolling hills and rocky knolls. The climate in the region is mild and temperate, and the average annual rainfall is approximately 12 inches, most of which occurs between November and March.

The Woodcrest neighborhood lies in the southeastern corner of the City of Riverside and of the Riverside-San Bernardino-Ontario metropolitan area. The project area is composed of three non-contiguous locations that are roughly 1.5 miles from one another, in a largely urbanized setting. The proposed site of the new pump station at Washington Street and Krameria Avenue is currently vacant, but the ground surface at all three locations has extensively been disturbed (Fig. 3). Vegetation in the project vicinity consists mainly of landscaping plants with some scattered growth of such weeds as mustard and tumbleweed. Elevations at the project locations range roughly from 1,500 feet to 1,605 feet above mean sea level.



Figure 3. Typical landscapes in the project area. *Clockwise from upper left*: pump station at 18601 Van Buren Boulevard, view to the northwest; pump station at 7802 Wood Road, view to the east; proposed pump station site at the intersection of Washington Street and Krameria Avenue, view to the southeast and the northwest. (Photographs taken on July 18, 2019)

The Wood Road pump station is located north of the intersection of Wood Road and Zamora Way, in a residential neighborhood. The site contains the existing pump station and an asphalt access road, and the rest of the property is vacant (Fig. 3). Situated in a commercial district east of the intersection of Van Buren Boulevard and Dauchy Avenue, the Van Buren pump station sits within a patch of lawn in front of a self-storage facility, is surrounded by a chain-link fence and block wall enclosure (Fig. 3).

The proposed site of the pump station to be constructed on the corner of Washington Street and Krameria Avenue also lies in a residential neighborhood. The project site has been graded and cleared, with scattered gravel covering parts of the ground surface (Fig. 3). The proposed sewer pipeline will run from the new pump station northward along Washington Street, a paved, busy local thoroughfare, to its intersection with Van Buren Boulevard, another major thoroughfare.

CULTURAL SETTING

Prehistoric Context

The earliest evidence of human occupation in western Riverside County was discovered below the surface of an alluvial fan in the northern portion of the Lakeview Mountains, overlooking the San Jacinto Valley, with radiocarbon dates clustering around 9,500 B.P. (Horne and McDougall 2008). Another site found near the shoreline of Lake Elsinore, close to the confluence of Temescal Wash and the San Jacinto River, yielded radiocarbon dates between 8,000 and 9,000 B.P. (Grenda 1997). Additional sites with isolated Archaic dart points, bifaces, and other associated lithic artifacts from the same age range have been found in the nearby Cajon Pass area of San Bernardino County, typically atop knolls with good viewsheds (Basgall and True 1985; Goodman and McDonald 2001; Goodman 2002; Milburn et al. 2008).

The cultural history of southern California has been summarized into numerous chronologies, including those developed by Chartkoff and Chartkoff (1984), Warren (1984), and others. Specifically, the prehistory of Riverside County has been addressed by O'Connell et al. (1974), McDonald et al. (1987), Keller and McCarthy (1989), Grenda (1993), Goldberg (2001), and Horne and McDougall (2008). Although the beginning and ending dates of different cultural horizons vary regionally, the general framework of the prehistory of western Riverside County can be broken into three primary periods:

- Paleoindian Period (ca. 18,000-9,000 B.P.): Native peoples of this period created fluted spearhead bases designed to be hafted to wooden shafts. The distinctive method of thinning bifaces and spearhead preforms by removing long, linear flakes leaves diagnostic Paleoindian markers at tool-making sites. Other artifacts associated with the Paleoindian toolkit include choppers, cutting tools, retouched flakes, and perforators. Sites from this period are very sparse across the landscape and most are deeply buried.
- Archaic Period (ca. 9,000-1,500 B.P.): Archaic sites are characterized by abundant lithic scatters of considerable size with many biface thinning flakes, bifacial preforms broken during manufacture, and well-made groundstone bowls and basin metates. As a consequence of making dart points, many biface thinning waste flakes were generated at individual production stations, which is a diagnostic feature of Archaic sites.

- Late Prehistoric Period (ca. 1,500 B.P.-contact): Sites from this period typically contain small lithic scatters from the manufacture of small arrow points, expedient groundstone tools such as tabular metates and unshaped manos, wooden mortars with stone pestles, acorn or mesquite bean granaries, ceramic vessels, shell beads suggestive of extensive trading networks, and steatite implements such as pipes and arrow shaft straighteners.

Ethnohistoric Context

According to current ethnohistorical scholarship, what is now the City of Riverside lies on the border between the traditional territories of three Native American groups: the Serrano of the San Bernardino Mountains, the Luiseño of the Perris-Elsinore region, and the Gabrielino of the San Gabriel Valley. Kroeber (1925:Plate 57) suggests that the Native Americans of the Riverside area were probably Luiseño, Reid (1968:8-9) states that they were Serrano, and Strong (1929:7-9, 275) claims that they were Gabrielino. There also occurred a late influx of Cahuilla during the 19th century (Bean 1978).

All of these groups spoke languages which are part of the Uto-Aztecan stock, a family of languages that covers most of the southwest United States and reaches southward as far as Mexico City (Kroeber 1925:577). Generally, Native Americans along the Santa Ana River exhibited similar social organization and resource procurement strategies. Villages were based on clan or lineage groups. Their home/base sites are marked by midden deposits, often with bedrock mortar features. During their seasonal rounds to exploit plant resources, small groups often ranged some distances in search of specific plants and animals. Their gathering strategies often left behind signs of special use sites, usually grinding slicks on bedrock boulders, at the locations of the resources.

The Luiseño appear to be the most likely inhabitants of the Riverside area during ethnohistoric times, and are a Takic-speaking people whose territory extended from present-day Riverside to Escondido and Oceanside. The name of the group derived from Mission San Luis Rey, which held jurisdiction over most of the traditional Luiseño territory during the late 18th and early 19th centuries. Luiseño history, as recorded in traditional songs, tells the creation story from the birth of the first people, the *k<u>aa</u>malam*, to the sickness, death, and cremation of *Wiy<u>oo</u>t*, the most powerful and wise one, at Lake Elsinore. In modern anthropological literature, the leading sources on Luiseño culture and history are Kroeber (1925), Strong (1929), and Bean and Shipek (1978).

Anthropologists have divided the Luiseño into several autonomous lineages or kin groups, which represented the basic political unit among most southern California Indians. According to Bean and Shipek (1978:551), each Luiseño lineage possessed a permanent base camp, or village, on the valley floor and another in the mountain regions for acorn collection. Luiseño villages were made up of family members and relatives, where chiefs of the village inherited their position and each village owned its own land. Villages were usually located in sheltered canyons or near year-round sources of freshwater, always near subsistence resources.

Primarily hunters and gatherers, the Luiseño people exploited nearly all resources of the environment in a highly developed seasonal mobility system. They collected seeds, roots, wild berries, acorns, wild grapes, strawberries, wild onions, and prickly pear cacti, and hunted deer, elks, antelopes, rabbits, wood rats, and a variety of insects. Bows and arrows, atlatls or spear throwers,

rabbit sticks, traps, nets, clubs, and slings were the main hunting tools. Each lineage had exclusive hunting and gathering rights in their procurement ranges. These boundaries were respected and only crossed with permission (Bean and Shipek 1978:551).

It is estimated that when Spanish colonization of Alta California began in 1769, the Luiseño had approximately 50 active villages with an average population of 200 each, although other estimates place the total Luiseño population at 4,000-5,000 (Bean and Shipek 1978:557). Some of the villages were forcefully moved to the Spanish missions, while others were largely left intact (*ibid.*:558). Ultimately, Luiseño population declined rapidly after European contact because of diseases such as smallpox as well as harsh living conditions at the missions and, later, on the Mexican ranchos, where the Native people often worked as seasonal ranch hands. After the American annexation of Alta California, the large number of non-Native settlers further eroded the foundation of traditional Luiseño society. During the latter half of the 19th century, almost all of the remaining Luiseño villages were displaced, their occupants eventually removed to the various reservations.

Historic Context

The present-day Riverside area received its first European visitors during the early and mid-1770s, shortly after the beginning of Spanish colonization of Alta California in 1769 (Beck and Haase 1974:15). After the establishment of Mission San Gabriel in 1771, the area became one of the mission's principal *rancherías*, known at the time as Jurupa (Gunther 1984:258). Despite these early contacts, no Europeans are known to have settled in the area until after the creation of the Rancho Jurupa land grant in 1838, during secularization of the mission system. The land grant, which encompassed what is now the northern portion of the City of Riverside, was awarded to Juan Bandini, who served as the administrator of Mission San Gabriel and all its lands at the time (Patterson 1996:121).

Within a few years, Bandini divided his vast domain into two parts and sold them to two prominent Yankee-turned-*ranchéros*, one of whom was his son-in-law Abel Stearns (Gunther 1984:260). As a result, after the annexation of Alta California by the United States in 1846, the original land grant was confirmed as two separate entities, the 6,750-acre Rancho Jurupa (Rubidoux) and the 25,519-acre Rancho Jurupa (Stearns). It was on land purchased from both of these ranchos that the Southern California Colony Association founded the town of Riverside in today's downtown area in 1870, followed in the next few years by two other colonies in the Arlington-La Sierra area, some 7-9 miles to the southwest (Patterson 1996:47-48, 65-69). The three separate enterprises eventually merged in 1875, and the City of Riverside was incorporated in 1883 (*ibid.*:94).

During the 1870s-1880s, amid a land boom that swept through southern California, the young community of Riverside grew rapidly. The most important boost to Riverside's early prosperity came with the introduction of the navel orange in the mid-1870s (Brown 1985:56-57). Its instant success in Riverside led to the spread of citrus cultivation throughout southern California, and propelled Riverside to the forefront of the citrus industry (*ibid.*). In 1893, after a bitter local political dispute, Riverside split itself from San Bernardino County, and became the county seat and the dominant urban center of the newly created Riverside County (Patterson 1996:209-210).

To the south of the fast-growing city, the Woodcrest area saw enough settlement activities by 1894 to warrant the establishment of a school district, and the community received its name from a series

of subdivisions undertaken in the mid-1920s (Gunther 1984:580). Since the mid-20th century, with the increasing diversification of its economic livelihood, much of Riverside's agricultural heritage has given way to urban expansion. The Woodcrest area, in comparison, retained some of its rural characteristic to the present time.

RESEARCH METHODS

RECORDS SEARCH

On April 11, 2019, CRM TECH archaeologist Nina Gallardo completed the records search at the Eastern Information Center (EIC), University of California, Riverside, which is the State of California's official cultural resource records repository for the County of Riverside. During the records search, Gallardo examined maps and records on file at the EIC for previously identified cultural resources and existing cultural resources reports within a half-mile radius of the project area. Previously identified cultural resources include properties designated as California Historical Landmarks, Points of Historical Interest, or Riverside County Landmarks, as well as those listed in the National Register of Historic Places, the California Register of Historical Resources, or the California Historical Resources Inventory.

HISTORICAL RESEARCH

Historical background research for this study was conducted by CRM TECH principle investigator/ historian Bai "Tom" Tang. Sources consulted during the research included published literature in local and regional history, U.S. General Land Office (GLO) land survey plat map dated 1855, U.S. Geological Survey (USGS) topographic maps dated 1901-1980, and aerial photographs taken in 1948-2018. The historic maps are collected at the Science Library of the University of California, Riverside, and the California Desert District of the U.S. Bureau of Land Management, located in Moreno Valley. The aerial photographs are available at the Nationwide Environmental Title Research (NETR) Online website and through the Google Earth software.

NATIVE AMERICAN PARTICIPATION

On April 12, 2019, CRM TECH submitted a written request to the State of California Native American Heritage Commission (NAHC) for a records search in the commission's Sacred Lands File. In the meantime, the nearby Pechanga and Soboba Bands of Luiseño Indians were notified of the upcoming archaeological fieldwork and invited to participate. Following the NAHC's recommendations and previously established consultation protocol, CRM TECH further contacted a total of 10 tribal representatives in the region in writing on June 18, 2019, for further information on potential Native American cultural resources in or near the project area. The correspondence between CRM TECH and the Native American representatives is presented in Appendix 2.

FIELD SURVEY

On July 18, 2019, CRM TECH archaeologist Daniel Ballester carried out the field survey of the project area with the assistance of Native American monitors Cody Schlater from the Pechanga Band of Luiseño Indians and Jonathan Saucedo from the Soboba Band of Luiseño Indians. Dictated by

differences in surface conditions and archaeological sensitivity, different survey methods were used for the four components of the project area. At the existing Wood Road pump station site and the proposed Krameria Avenue pump station site, the survey was completed at an intensive level by walking a series of parallel east-west transects spaced five meters (approximately 15 feet) apart. The Van Buren pump station site, measuring only 20 feet by 10 feet and secured by a low enclosure (Fig. 3), was inspected from the perimeters. The pipeline route along Washington Street were surveyed on foot along the east side of the road and from a moving vehicle along the west side.

Using these methods, the ground surface in the entire project area was systematically and carefully examined for any evidence of human activities dating to the prehistoric or historic period (i.e., 50 years or older). Except where the ground surface was completely obscured by existing equipment or road pavement, ground visibility ranged from fair (70%) to good (80%).

RESULTS AND FINDINGS

RECORDS SEARCH

According to EIC records, the Wood Road pump station was previously included in a cultural resources survey as part of a larger, 637-acre study in 1983 (Bouscaren 1983a), and as a result a prehistoric—i.e., Native American—archaeological site was recorded outside of project boundary but in close proximity. Designated 33-002695 (CA-RIV-2695) in the California Historical Resources Inventory, the site consisted of five milling slicks on a single granitic boulder outcrop (Bouscaren 1983b). It was noted at that time that the location of the site was earmarked for development (*ibid*.). The other portions of the project area had evidently not been surveyed systematically prior to this study, and no cultural resources had been recorded within or adjacent to the project boundaries at those locations.

Within the half-mile scope of the records search, EIC records show more than 30 other previous studies on various tracts of land and linear features. These and other similar studies in the vicinity resulted in the identification of 58 additional historical/archaeological sites within the half-mile radius. The vast majority of these recorded sites, numbering 45 in total, were also of prehistoric origin, and virtually all of them represented bedrock milling features. One other site consisted of a single-family residence dating to 1952 as well as a boulder outcrop with five milling slicks on the same property.

The other 12 sites dated to the historic period and represented primarily buildings constructed from the mid-1920s to the mid-1940s, including single-family residences and a former barracks building from the WWII-era Camp Haan. The only two historic-period sites that were not buildings consisted of a utility pole and a concrete foundation with well pump. None of these 58 sites was found in the immediate vicinity of the project area, and thus none of them requires further consideration during this study.

HISTORICAL RESEARCH

Sources consulted for this study reveal that the Krameria Avenue and Van Buren pump station sites, as well as the Washington Street pipeline alignment, have been subject to development and ground

disturbances throughout the historic and modern eras (GLO 1855; USGS 1901-1953). In the mid-1850s, a trail ran roughly along the present-day course of Van Buren Boulevard and across the general vicinity of these project components (GLO 1855). Over the ensuing four decades, a web of roads had emerged in the Woodcrest area, including the direct forerunners of Van Buren Boulevard and Washington Street, along with a few scattered buildings (USGS 1901).

By the 1940s-1950s, the rural community of Woodcrest had gradually taken shape, with a gradually increasing number of buildings lining the Van Buren Boulevard corridor (USGS 1942; 1953; NETR Online 1948). Historic aerials reveal that the land use in the project vicinity during the mid-20th century was dominated by small farmsteads and large expanses of cultivated agricultural fields (NETR Online 1948-1967). During the mid-1970s, the land use emphasis shifted to commercial development, followed by suburban tract homes in the 1980s (NETR Online 1978; 1994). Sometime between 1978 and 1994, the Wood Road pump station was constructed at the site that had remained undeveloped up to that time (*ibid.*).

Around 2000, the residential tract surrounding the Wood Road pump station was constructed, resulting in the removal of the bedrock milling feature at Site 33-002695 (see above; Google Earth 1994; 2002). The Van Buren pump station was evidently built in the mid-2000s, together with the surrounding commercial development (Google Earth 2002-2006). The proposed Krameria Avenue pump station site was formerly occupied by e residential property at 16476 Washington Street, which dates at least to 1966 (NETR Online 1966). Between 2014 and 2016, however, all features associated with the residence were demolished, apparently as a result of a substantial widening and reconfiguration of the intersection (Google Earth 1994-2016).

In summary, based on the history of land uses at and near the project locations and the extent of past ground disturbances, the entire project area appears to be relatively low in sensitivity for potentially significant cultural resources from either the prehistoric period or the historic period.

NATIVE AMERICAN PARTICIPATION

In response to CRM TECH's inquiry, the NAHC reports in a letter dated April 30, 2019, that the Sacred Lands File identified no Native American cultural resources in the project vicinity but recommends that local Native American groups be contacted for further information. For that purpose, the NAHC provided a list of potential contacts in the region (see App. 2).

Upon receiving the NAHC's reply, CRM TECH sent written requests for comments to a total of nine Native American tribal organization in and near the Inland Empire region (see App. 2). For some of the tribes, the designated spokesperson on cultural resources issues was contacted in lieu of the individuals on the referral list, as recommended in the past by the tribal government staff. In all, ten individuals were contacted at the nine tribes, as listed below:

- BobbyRay Esparza, Cultural Director, Cahuilla Band of Indians;
- Shane Chapparosa, Chairperson, Los Coyotes Band of Cahuilla and Cupeño Indians;
- Travis Armstrong, Tribal Historic Preservation Officer, Morongo Band of Mission Indians;
- Tuba Ebru Ozdil, Planning Specialist, Pechanga Band of Luiseño Indians;
- John Gomez, Jr., Culture Resources Coordinator, Ramona Band of Cahuilla Indians;

- Jessica Mauck, Cultural Resources Analyst, San Manuel Band of Mission Indians;
- Mercedes Estrada, Tribal Administrative Assistant, Santa Rosa Band of Cahuilla Indians;
- Mark Cochrane, Co-Chairperson, Serrano Nation of Mission Indians;
- Wayne Walker, Co-Chairperson, Serrano Nation of Mission Indians;
- Joseph Ontiveros, Tribal Historic Preservation Officer, Soboba Band of Luiseño Indians.

As of this time, three of the tribal representatives have responded in writing (see App. 2). Among them, Jessica Mauck found the project locations to be outside the San Manuel Band's ancestral territory and, on behalf of the tribe, declined further consultation regarding this project. Travis Armstrong considered the project locations to be culturally sensitive to the Morongo Band. He stated that the tribe had no additional information to provide at this time but might provide other information to the City of Riverside in future government-to-government consultations.

Joseph Ontiveros identified the project area as a part of the Soboba Band's Traditional Use Area and also considered it to be culturally sensitive to the tribe. Therefore, he requested further consultation with the City of Riverside and Native American monitoring of ground-disturbing activities by the representatives of the Soboba Band. In addition, Mr. Ontiveros stated that an in-house database search identified "multiple areas of potential impacts" and offered to share specific information during future consultation with the City.

FIELD SURVEY

The field survey produced completely negative results for cultural resources, and no buildings, structures, objects, sites, features, or artifacts of potential historical value were encountered within or immediately adjacent to the project boundaries. It was confirmed during the field survey that the bedrock milling feature previously recorded as Site 33-002695 near the Wood Road pump station has been removed as a result of the residential development that included its former location, and no evidence of the site could be found today.

The current alignment of Washington Street, which coincides with the proposed pipeline route for 1,000 feet, is known to date to the early 20th century (USGS 1942), but the appearance and configuration of this heavily used roadway, resulting from repeated upgrading and constant maintenance over the years, do not exhibit any distinctively historical character. As a working component of the modern transportation infrastructure, Washington Street demonstrates no potential for historic significance and requires no further consideration during this study.

DISCUSSION

The purpose of this study is to identify any cultural resources in the project area and to assist the City of Riverside Public Works Department in determining whether such resources meet the definition of "historical resources," as provided in the California Public Resources Code. According to PRC §5020.1(j), "'historical resource' includes, but is not limited to, any object, building, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California."

More specifically, CEQA guidelines state that the term "historical resources" applies to any such resources listed in or determined to be eligible for listing in the California Register of Historical Resources, included in a local register of historical resources, or determined to be historically significant by the lead agency (Title 14 CCR §15064.5(a)(1)-(3)). Regarding the proper criteria of historical significance, CEQA guidelines mandate that "generally a resource shall be considered by the lead agency to be 'historically significant' if the resource meets the criteria for listing on the California Register of Historical Resources" (Title 14 CCR §15064.5(a)(3)). A resource may be listed in the California Register if it meets any of the following criteria:

(1) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
(2) Is associated with the lives of persons important in our past.
(3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
(4) Has yielded, or may be likely to yield, information important in prehistory or history. (PRC §5024.1(c))

A local register of historical resources, as defined by PRC §5020.1(k), "means a list of properties officially designated or recognized as historically significant by a local government pursuant to a local ordinance or resolution." For individual properties in Riverside, the City's Cultural Resources Ordinance provides two categories of historical significance designation, "Landmarks" and "Structures or Resources of Merit," the criteria for which are outlined in Riverside Municipal Code §20.50.010(T) and §20.50.010(DD), respectively.

In addition, City of Riverside policies also require potential "historical resources" identified within the City's jurisdiction to be evaluated for listing in the National Register of Historic Places. The eligibility for inclusion in the National Register is determined by applying the Secretary of the Interior's criteria, developed by the National Park Service as per provision of the National Historic Preservation Act, which are essentially identical to the California Register criteria. Federal regulations provide the National Register criteria as follows:

The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and
(a) that are associated with events that have made a significant contribution to the broad patterns of our history; or
(b) that are associated with the lives of persons significant in our past; or
(c) that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
(d) that have yielded, or may be likely to yield, information important in prehistory or history. (36 CFR 60.4)

In summary of the research results presented above, a prehistoric archaeological site consisting of a bedrock outcrop with five milling slicks, 33-002695, was recorded in 1983 as lying in close proximity to the Wood Road portion of the project area, but the site has been removed subsequently as a result of a residential development. No other potential "historical resources" were encountered throughout the course of this study. Based on these findings, and in light of the significance criteria

outlined above, the present study concludes that no "historical resources" exist within or adjacent to the project area.

CONCLUSION AND RECOMMENDATIONS

CEQA establishes that "a project that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment" (PRC §21084.1). "Substantial adverse change," according to PRC §5020.1(q), "means demolition, destruction, relocation, or alteration such that the significance of a historical resource would be impaired."

As stated above, no "historical resources," as defined by CEQA and associated regulations, are known to exist within or adjacent to the project area. Therefore, CRM TECH presents the following recommendations to the City of Riverside Public Works Department:

- The proposed project will not cause a substantial adverse change to any known "historical resources."
- No further cultural resources investigation is necessary for the proposed project unless construction plans undergo such changes as to include areas not covered by this study.
- If buried cultural materials are discovered during earth-moving operations associated with the project, the City of Riverside Public Works Department should be notified immediately, and all work in the immediate vicinity must be halted or diverted until a qualified archaeologist can evaluate the nature and significance of the finds.

REFERENCES

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2001 Archaeological Survey of the Southern California Trials Association Event Area, Little Pine Flats, Mountaintop Ranger District, San Bernardino National Forest, California. San Bernardino National Forest Technical Report 05-12-BB-106. San Bernardino, California.
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Grenda, Donn
1993 Archaeological Treatment Plan for CA-RIV-2798/H, Lake Elsinore, Riverside County, California. Report on file, Eastern Information Center, University of California, Riverside.
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2008 Archaeological Investigation at Baldy Mesa-Cajon Divide for the Baldy Mesa Off-Highway-Vehicle Recreation Trails Project San Bernardino National Forest, San Bernardino County, California. San Bernardino National Forest Technical Report 05-12-53-091, San Bernardino, California.

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1979 Map: Santa Ana, Calif. (1:250,000); 1959 edition revised.
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APPENDIX 1:
PERSONNEL QUALIFICATIONS

PRINCIPAL INVESTIGATOR/HISTORIAN
Bai "Tom" Tang, M.A.

Education

1988-1993	Graduate Program in Public History/Historic Preservation, UC Riverside.
1987	M.A., American History, Yale University, New Haven, Connecticut.
1982	B.A., History, Northwestern University, Xi'an, China.
2000	"Introduction to Section 106 Review," presented by the Advisory Council on Historic Preservation and the University of Nevada, Reno.
1994	"Assessing the Significance of Historic Archaeological Sites," presented by the Historic Preservation Program, University of Nevada, Reno.

Professional Experience

2002-	Principal Investigator, CRM TECH, Riverside/Colton, California.
1993-2002	Project Historian/Architectural Historian, CRM TECH, Riverside, California.
1993-1997	Project Historian, Greenwood and Associates, Pacific Palisades, California.
1991-1993	Project Historian, Archaeological Research Unit, UC Riverside.
1990	Intern Researcher, California State Office of Historic Preservation, Sacramento.
1990-1992	Teaching Assistant, History of Modern World, UC Riverside.
1988-1993	Research Assistant, American Social History, UC Riverside.
1985-1988	Research Assistant, Modern Chinese History, Yale University.
1985-1986	Teaching Assistant, Modern Chinese History, Yale University.
1982-1985	Lecturer, History, Xi'an Foreign Languages Institute, Xi'an, China.

Cultural Resources Management Reports

Preliminary Analyses and Recommendations Regarding California's Cultural Resources Inventory System (With Special Reference to Condition 14 of NPS 1990 Program Review Report). California State Office of Historic Preservation working paper, Sacramento, September 1990.

Numerous cultural resources management reports with the Archaeological Research Unit, Greenwood and Associates, and CRM TECH, since October 1991.

PRINCIPAL INVESTIGATOR/ARCHAEOLOGIST
Michael Hogan, Ph.D., RPA*

Education

1991	Ph.D., Anthropology, University of California, Riverside.
1981	B.S., Anthropology, University of California, Riverside; with honors.
1980-1981	Education Abroad Program, Lima, Peru.
2002	Section 106—National Historic Preservation Act: Federal Law at the Local Level. UCLA Extension Course #888.
2002	"Recognizing Historic Artifacts," workshop presented by Richard Norwood, Historical Archaeologist.
2002	"Wending Your Way through the Regulatory Maze," symposium presented by the Association of Environmental Professionals.
1992	"Southern California Ceramics Workshop," presented by Jerry Schaefer.
1992	"Historic Artifact Workshop," presented by Anne Duffield-Stoll.

Professional Experience

2002-	Principal Investigator, CRM TECH, Riverside/Colton, California.
1999-2002	Project Archaeologist/Field Director, CRM TECH, Riverside.
1996-1998	Project Director and Ethnographer, Statistical Research, Inc., Redlands.
1992-1998	Assistant Research Anthropologist, University of California, Riverside
1992-1995	Project Director, Archaeological Research Unit, U. C. Riverside.
1993-1994	Adjunct Professor, Riverside Community College, Mt. San Jacinto College, U.C. Riverside, Chapman University, and San Bernardino Valley College.
1991-1992	Crew Chief, Archaeological Research Unit, U. C. Riverside.
1984-1998	Archaeological Technician, Field Director, and Project Director for various southern California cultural resources management firms.

Research Interests

Cultural Resource Management, Southern Californian Archaeology, Settlement and Exchange Patterns, Specialization and Stratification, Culture Change, Native American Culture, Cultural Diversity.

Cultural Resources Management Reports

Author and co-author of, contributor to, and principal investigator for numerous cultural resources management study reports since 1986.

Memberships

* Register of Professional Archaeologists; Society for American Archaeology; Society for California Archaeology; Pacific Coast Archaeological Society; Coachella Valley Archaeological Society.

PROJECT ARCHAEOLOGIST/REPORT WRITER
Deirdre Encarnación, M.A.

Education

2003	M.A., Anthropology, San Diego State University, California.
2000	B.A., Anthropology, minor in Biology, with honors; San Diego State University, California.
1993	A.A., Communications, Nassau Community College, Garden City, N.Y.
2001	Archaeological Field School, San Diego State University.
2000	Archaeological Field School, San Diego State University.

Professional Experience

2004-	Project Archaeologist/Report Writer, CRM TECH, Riverside/Colton, California.
2001-2003	Part-time Lecturer, San Diego State University, California.
2001	Research Assistant for Dr. Lynn Gamble, San Diego State University.
2001	Archaeological Collection Catalog, SDSU Foundation.

PROJECT ARCHAEOLOGIST
Nina Gallardo, B.A.

Education

2004 B.A., Anthropology/Law and Society, University of California, Riverside.

Professional Experience

2004- Project Archaeologist, CRM TECH, Riverside/Colton, California.

- Surveys, excavations, construction monitoring, field recordation, mapping, records searches, and Native American liaison.

Cultural Resources Management Reports

Co-author of and contributor to numerous cultural resources management reports since 2004.

PROJECT ARCHAEOLOGIST/FIELD DIRECTOR
Daniel Ballester, M.S.

Education

2013	M.S., Geographic Information System (GIS), University of Redlands, California.
1998	B.A., Anthropology, California State University, San Bernardino.
1997	Archaeological Field School, University of Las Vegas and University of California, Riverside.
1994	University of Puerto Rico, Rio Piedras, Puerto Rico.
2007	Certificate in Geographic Information Systems (GIS), California State University, San Bernardino.
2002	"Historic Archaeology Workshop," presented by Richard Norwood, Base Archaeologist, Edwards Air Force Base; presented at CRM TECH, Riverside, California.

Professional Experience

2002-	Field Director/GIS Specialist, CRM TECH, Riverside/Colton, California.
1999-2002	Project Archaeologist, CRM TECH, Riverside, California.
1998-1999	Field Crew, K.E.A. Environmental, San Diego, California.
1998	Field Crew, A.S.M. Affiliates, Encinitas, California.
1998	Field Crew, Archaeological Research Unit, University of California, Riverside.

APPENDIX 2

CORRESPONDENCE WITH NATIVE AMERICAN REPRESENTATIVES*

* A total of 10 local Native American representatives were contacted; a sample letter is included in this appendix.

SACRED LANDS FILE & NATIVE AMERICAN CONTACTS LIST REQUEST

NATIVE AMERICAN HERITAGE COMMISSION
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
(916)373-3710
(916)373-5471 Fax
nahc@pacbell.net

Project: Proposed Wood Road Pump Station Improvements, Krameria Avenue Pump Station Design, Van Buren Sewage Pump Station Demolition, and Pipeline Alignment Project (CRM TECH No. 3471)

County: Riverside

USGS Quadrangle Name: Riverside

Township 3 South **Range** 4 West SB **BM; Section(s)**: 17 and 30

Township 3 South **Range** 5 West SB **BM; Section(s)**: 25 and 26

Company/Firm/Agency: CRM TECH

Contact Person: Nina Gallardo

Street Address: 1016 E. Cooley Drive, Suite A/B

City: Colton, CA **Zip:** 92324

Phone: (909) 824-6400 **Fax:** (909) 824-6405

Email: ngallardo@crmtech.us

Project Description: The primary component of the project is to construct three small pump stations and install approximately 1,000 feet of pipeline in the Woodcrest area of the City of Riverside, Riverside County, California.

April 12, 2019

NATIVE AMERICAN HERITAGE COMMISSION
Cultural and Environmental Department
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
Phone: (916) 373-3710
Email: nahc@nahc.ca.gov
Website: http://www.nahc.ca.gov
Twitter: @CA_NAHC

April 30, 2019

Nina Gallardo
CRM Tech

VIA Email to: ngallardo@crmtech.us

RE: CRM TECH No. 3471 Project, Riverside County

Dear Ms. Gallardo:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative. However, the absence of specific site information in the SLF does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify the NAHC. With your assistance, we can assure that our lists contain current information. If you have any questions or need additional information, please contact me at my email address: steven.quinn@nahc.ca.gov.

Sincerely,

Steven Quinn
Associate Governmental Program Analyst

Attachment

Native American Heritage Commission
Native American Contact List
Riverside County
4/30/2019

Agua Caliente Band of Cahuilla Indians
Jeff Grubbe, Chairperson
5401 Dinah Shore Drive — Cahuilla
Palm Springs, CA, 92264
Phone: (760) 699 - 6800
Fax: (760) 699-6919

Agua Caliente Band of Cahuilla Indians
Patricia Garcia-Plotkin, Director
5401 Dinah Shore Drive — Cahuilla
Palm Springs, CA, 92264
Phone: (760) 699 - 6907
Fax: (760) 699-6924
ACBCI-THPO@aguacaliente.net

Augustine Band of Cahuilla Mission Indians
Amanda Vance, Chairperson
P.O. Box 846 — Cahuilla
Coachella, CA, 92236
Phone: (760) 398 - 4722
Fax: (760) 369-7161
hhaines@augustinetribe.com

Cabazon Band of Mission Indians
Doug Welmas, Chairperson
84-245 Indio Springs Parkway — Cahuilla
Indio, CA, 92203
Phone: (760) 342 - 2593
Fax: (760) 347-7880
jstapp@cabazonindians-nsn.gov

Cahuilla Band of Indians
Daniel Salgado, Chairperson
52701 U.S. Highway 371 — Cahuilla
Anza, CA, 92539
Phone: (951) 763 - 5549
Fax: (951) 763-2808
Chairman@cahuilla.net

Gabrieleno Band of Mission Indians - Kizh Nation
Andrew Salas, Chairperson
P.O. Box 393 — Gabrieleno
Covina, CA, 91723
Phone: (626) 926 - 4131
admin@gabrielenoindians.org

Gabrieleno/Tongva San Gabriel Band of Mission Indians
Anthony Morales, Chairperson
P.O. Box 693 — Gabrieleno
San Gabriel, CA, 91778
Phone: (626) 483 - 3564
Fax: (626) 286-1262
GTTribalcouncil@aol.com

Gabrielino /Tongva Nation
Sandonne Goad, Chairperson
106 1/2 Judge John Aiso St., #231 — Gabrielino
Los Angeles, CA, 90012
Phone: (951) 807 - 0479
sgoad@gabrielino-tongva.com

Gabrielino Tongva Indians of California Tribal Council
Robert Dorame, Chairperson
P.O. Box 490 — Gabrielino
Bellflower, CA, 90707
Phone: (562) 761 - 6417
Fax: (562) 761-6417
gtongva@gmail.com

Gabrielino-Tongva Tribe
Charles Alvarez,
23454 Vanowen Street — Gabrielino
West Hills, CA, 91307
Phone: (310) 403 - 6048
roadkingcharles@aol.com

Los Coyotes Band of Cahuilla and Cupeño Indians
John Perada, Environmental Director
P. O. Box 189 — Cahuilla
Warner Springs, CA, 92086
Phone: (760) 782 - 0712
Fax: (760) 782-2730

Los Coyotes Band of Cahuilla and Cupeño Indians
Shane Chapparosa, Chairperson
P.O. Box 189 — Cahuilla
Warner Springs, CA, 92086-0189
Phone: (760) 782 - 0711
Fax: (760) 782-0712
Chapparosa@msn.com

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed CRM TECH No. 3471 Project, Riverside County.

Morongo Band of Mission Indians
Robert Martin, Chairperson
12700 Pumarra Rroad — Cahuilla
Banning, CA, 92220 — Serrano
Phone: (951) 849 - 8807
Fax: (951) 922-8146
dtorres@morongo-nsn.gov

Morongo Band of Mission Indians
Denisa Torres, Cultural Resources Manager
12700 Pumarra Rroad — Cahuilla
Banning, CA, 92220 — Serrano
Phone: (951) 849 - 8807
Fax: (951) 922-8146
dtorres@morongo-nsn.gov

Ramona Band of Cahuilla
Joseph Hamilton, Chairperson
P.O. Box 391670 — Cahuilla
Anza, CA, 92539
Phone: (951) 763 - 4105
Fax: (951) 763-4325
admin@ramonatribe.com

Ramona Band of Cahuilla
John Gomez, Environmental Coordinator
P. O. Box 391670 — Cahuilla
Anza, CA, 92539
Phone: (951) 763 - 4105
Fax: (951) 763-4325
jgomez@ramonatribe.com

San Manuel Band of Mission Indians
Lee Clauss, Director of Cultural Resources
26569 Community Center Drive — Serrano
Highland, CA, 92346
Phone: (909) 864 - 8933
Fax: (909) 864-3370
lclauss@sanmanuel-nsn.gov

Santa Rosa Band of Cahuilla Indians
Steven Estrada, Chairperson
P.O. Box 391820 — Cahuilla
Anza, CA, 92539
Phone: (951) 659 - 2700
Fax: (951) 659-2228
mflaxbeard@santarosacahuilla-nsn.gov

Serrano Nation of Mission Indians
Mark Cochrane, Co-Chairperson
15334 Ranchero Road P. O. Box 343, Patton, CA, 92369 — Serrano
Hesperia, CA, 92345
Phone: (909) 528 - 9032
serranonation1@gmail.com

Serrano Nation of Mission Indians
Wayne Walker, Co-Chairperson
15334 Ranchero Road P. O. Box 343, Patton, CA, 92369 — Serrano
Hesperia, CA, 92345
Phone: (253) 370 - 0167
serranonation1@gmail.com

Soboba Band of Luiseno Indians
Scott Cozart, Chairperson
P. O. Box 487 — Cahuilla
San Jacinto, CA, 92583 — Luiseno
Phone: (951) 654 - 2765
Fax: (951) 654-4198
jontiveros@soboba-nsn.gov

Soboba Band of Luiseno Indians
Joseph Ontiveros, Cultural Resource Department
P.O. BOX 487 — Cahuilla
San Jacinto, CA, 92581 — Luiseno
Phone: (951) 663 - 5279
Fax: (951) 654-4198
jontiveros@soboba-nsn.gov

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed CRM TECH No. 3471 Project, Riverside County.

Torres-Martinez Desert Cahuilla Indians
Michael Mirelez, Cultural Resource Coordinator
P.O. Box 1160 Cahuilla
Thermal, CA, 92274
Phone: (760) 399 - 0022
Fax: (760) 397-8146
mmirelez@tmdci.org

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed CRM TECH No. 3471 Project, Riverside County.

June 18, 2019

BobbyRay Esparza, Cultural Director
Cahuilla Band of Indians
52701 Highway 371
Anza, CA 92539

RE: Proposed Project that Includes the Improvements to the Wood Road Pump Station, the Design for the Proposed Krameria Avenue Pump Station, the Demolition of the Van Buren Sewage Pump Station, and a Pipeline Alignment
In the Woodcrest Area of the City of Riverside
Riverside County, California
CRM TECH Contract #3471

Dear Mr. Esparza:

I am writing to bring your attention to an ongoing CEQA-compliance study for the project referenced above. The project entails improvements to the Wood Road pump station, design of the proposed Krameria Avenue pump station, demolition of the Van Buren Sewage pump station, and the installation of approximately 885 feet of pipeline in the Woodcrest area of the City of Riverside, California. The accompanying map, based on USGS Riverside East and Riverside West, Calif., 7.5' quadrangles, depicts the location of the project area in Sections 17 and 30, T3S R4W; and Sections 25 and 26, T3S R5W, SBBM.

In a letter dated April 30, 2019, the Native American Heritage Commission reports that the Sacred Lands File search identified no Native American cultural resources within the project area but recommends that local Native American groups be contacted for further information (see attached). Therefore, as part of the cultural resources study for this project, I am writing to request your input regarding potential Native American cultural resources in or near the project area that we should consider in our study.

Please respond at your earliest convenience if you have any specific knowledge of sacred/religious sites or other sites of Native American traditional cultural value in or near the project area, or any other information to consider during the cultural resources investigations. Any information or concerns may be forwarded to CRM TECH by telephone, e-mail, facsimile, or standard mail. Requests for documentation or information we cannot provide will be forwarded to our client and/or the lead agency, namely the City of Riverside Public Works Department.

We would also like to clarify that, as the cultural resources consultant for the project, CRM TECH is not involved in the AB 52-compliance process or in government-to-government consultations. The purpose of this letter is to seek any information that you may have to help us determine if there are cultural resources in or near the project area that we should be aware of and to help us assess the sensitivity of the project area. Thank you for your time and effort in addressing this important matter.

Respectfully,

Nina Gallardo
Project Archaeologist/Native American Liaison
CRM TECH

From: Tribal Historic Preservation Office <thpo@morongo-nsn.gov>
Sent: Wednesday, June 19, 2019 9:19 AM
To: 'ngallardo@crmtech.us'
Subject: RE: NA Scoping Letter for the Proposed Project that Includes the Improvements to the Wood Road Pump Station, the Design for the Proposed Krameria Avenue PS, the Demolition of the Van Buren PS, and a Pipeline Alignment Project; 3471

Hello,

This project is within a culturally senstive area for our office.

We have no additional information to provide at this time but may provide other information to the lead agency during the AB 52 consultation process.

Thank you for reaching out to our office.

Sincerely,

Travis Armstrong
Tribal Historic Preservation Officer
Morongo Band of Mission Indians
951-755-5259
Email: thpo@morongo-nsn.gov

From: Jessica Mauck <JMauck@sanmanuel-nsn.gov>
Sent: Wednesday, June 19, 2019 3:23 PM
To: ngallardo@crmtech.us
Subject: RE: NA Scoping Letter for the Proposed Project that Includes the Improvements to the Wood Road Pump Station, the Design for the Proposed Krameria Avenue PS, the Demolition of the Van Buren PS, and a Pipeline Alignment Project; 3471

Hi Nina – This project is outside of Serrano ancestral territory and, as such, SMBMI has no comments to provide and will not consult with the Lead Agency for this project. Thank you!

Jessica Mauck
CULTURAL RESOURCES ANALYST
O: (909) 864-8933 x3249
M: (909) 725-9054
26569 Community Center Drive
Highland California 92346

July 20, 2019

Attn: Nina Gallardo, Project Archaeologist/Native American Liaison
CRM TECH
1016 E. Cooley Drive, Suite A/B
Colton, CA 92324

SOBOBA BAND OF LUISEÑO INDIANS
EST. JUNE 19, 1883

RE: Proposed Project that Includes the Improvements to the Wood Road Pump Station, the Design for the Proposed Krameria Avenue Pump Station, the Demolition of the Van Buren Sewage Pump Station, and a Pipeline Alignment Project – Woodcrest area of the City of Riverside, Riverside County, CA – CRM TECH Contract #3471

The Soboba Band of Luiseño Indians appreciates your observance of Tribal Cultural Resources and their preservation in your project. The information provided to us on said project has been assessed through our Cultural Resource Department, where it was concluded that although it is outside the existing reservation, the project area does fall within the bounds of our Tribal Traditional Use Areas. This project location is in proximity to known sites, is a shared use area that was used in ongoing trade between the tribes and is considered to be culturally sensitive by the people of Soboba.

Soboba Band of Luiseño Indians is requesting the following:

1. To initiate a consultation with the project proponents and lead agency.

2. The transfer of information to the Soboba Band of Luiseno Indians regarding the progress of this project should be done as soon as new developments occur.

3. Soboba Band of Luiseño Indians continues to act as a consulting tribal entity for this project.

4. Working in and around traditional use areas intensifies the possibility of encountering cultural resources during the construction/excavation phase. For this reason, the Soboba Band of Luiseño Indians requests that Native American Monitor(s) from the Soboba Band of Luiseño Indians Cultural Resource Department to be present during any ground disturbing proceedings. Including surveys and archaeological testing.

5. Request that proper procedures be taken, and requests of the tribe be honored (Please see the attachment)

Multiple areas of potential impact were identified during an in-house database search. Specifics to be discussed in consultation with the lead agency.

Sincerely,

Joseph Ontiveros, Tribal Historic Preservation Officer
Soboba Band of Luiseño Indians
P.O. Box 487
San Jacinto, CA 92581
Phone (951) 654-5544 ext. 4137
Cell (951) 663-5279
jontiveros@soboba-nsn.gov

JUL 23 2019

Cultural Items (Artifacts). Ceremonial items and items of cultural patrimony reflect traditional religious beliefs and practices of the Soboba Band. The Developer should agree to return all Native American ceremonial items and items of cultural patrimony that may be found on the project site to the Soboba Band for appropriate treatment. In addition, the Soboba Band requests the return of all other cultural items (artifacts) that are recovered during the course of archaeological investigations. Where appropriate and agreed upon in advance, Developer's archeologist may conduct analyses of certain artifact classes if required by CEQA, Section 106 of NHPA, the mitigation measures or conditions of approval for the Project. This may include but is not limited or restricted to include shell, bone, ceramic, stone or other artifacts.

The Developer should waive any and all claims to ownership of Native American ceremonial and cultural artifacts that may be found on the Project site. Upon completion of authorized and mandatory archeological analysis, the Developer should return said artifacts to the Soboba Band within a reasonable time period agreed to by the Parties and not to exceed (30) days from the initial recovery of the items.

Treatment and Disposition of Remains.

A. The Soboba Band shall be allowed, under California Public Resources Code § 5097.98 (a), to (1) inspect the site of the discovery and (2) make determinations as to how the human remains and grave goods shall be treated and disposed of with appropriate dignity.

B. The Soboba Band, as MLD, shall complete its inspection within twenty-four (24) hours of receiving notification from either the Developer or the NAHC, as required by California Public Resources Code § 5097.98 (a). The Parties agree to discuss in good faith what constitutes "appropriate dignity" as that term is used in the applicable statutes.

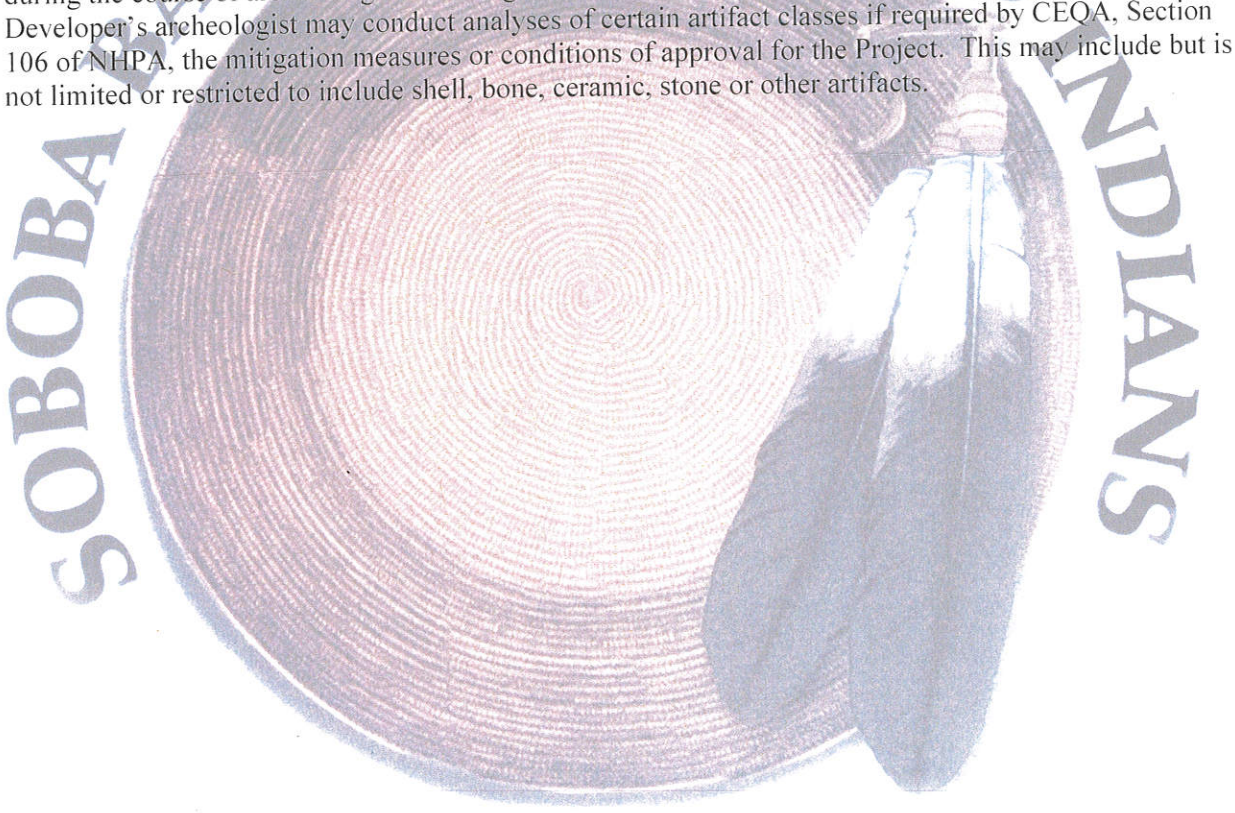
C. Reburial of human remains shall be accomplished in compliance with the California Public Resources Code § 5097.98 (a) and (b). The Soboba Band, as the MLD in consultation with the Developer, shall make the final discretionary determination regarding the appropriate disposition and treatment of human remains.

D. All parties are aware that the Soboba Band may wish to rebury the human remains and associated ceremonial and cultural items (artifacts) on or near, the site of their discovery, in an area that shall not be subject to future subsurface disturbances. The Developer should accommodate on-site reburial in a location mutually agreed upon by the Parties.

E. The term "human remains" encompasses more than human bones because the Soboba Band's traditions periodically necessitated the ceremonial burning of human remains. Grave goods are those artifacts associated with any human remains. These items, and other funerary remnants and their ashes are to be treated in the same manner as human bone fragments or bones that remain intact

Coordination with County Coroner's Office. The Lead Agencies and the Developer should immediately contact both the Coroner and the Soboba Band in the event that any human remains are discovered during implementation of the Project. 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, the Coroner shall ensure that notification is provided to the NAHC within twenty-four (24) hours of the determination, as required by California Health and Safety Code § 7050.5 (c).

Non-Disclosure of Location Reburials. It is understood by all parties that unless otherwise required by law, the site of any reburial of Native American human remains or cultural artifacts shall not be disclosed and shall not be governed by public disclosure requirements of the California Public Records Act. The Coroner, parties, and Lead Agencies will be asked to withhold public disclosure information related to such reburial, pursuant to the specific exemption set forth in California Government Code § 6254 (r). Ceremonial items and items of cultural patrimony reflect traditional religious beliefs and practices of the Soboba Band. The Developer agrees to return all Native American ceremonial items and items of cultural patrimony that may be found on the project site to the Soboba Band for appropriate treatment. In addition, the Soboba Band requests the return of all other cultural items (artifacts) that are recovered during the course of archaeological investigations. Where appropriate and agreed upon in advance, Developer's archeologist may conduct analyses of certain artifact classes if required by CEQA, Section 106 of NHPA, the mitigation measures or conditions of approval for the Project. This may include but is not limited or restricted to include shell, bone, ceramic, stone or other artifacts.



Confidentiality: The entirety of the contents of this letter shall remain confidential between Soboba and the City of Riverside Public Works Department, as well as hired consultant (CRM TECH). No part of the contents of this letter may be shared, copied, or utilized in any way with any other individual, entity, municipality, or tribe, whatsoever, without the expressed written permission of the Soboba Band of Luiseño Indians.

APPENDIX D

CALIFORNIA EMISSIONS ESTIMATOR MODEL
PRINTOUTS OF MODEL OUTPUTS FOR PROJECT
(CALEEMOD VERSION 2016.3.2)

Gravity Sewers for Van Buren Boulevard Sewer Installation Project

Riverside-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
	0.00		0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2022
Utility Company	Riverside Public Utilities				
CO2 Intensity (lb/MWhr)	1325.65	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase -

Off-road Equipment - Types and numbers of construction equipment and hours per day of use for each are based on engineer's estimates of construction for the gravity sewer.

Trips and VMT - Estimated number of worker trips and hauling trips are based on engineer's estimates for construction of the sewer.

Stationary Sources - Emergency Generators and Fire Pumps -

Table Name	Column Name	Default Value	New Value
tblOffRoadEquipment	HorsePower	9.00	231.00

Gravity Sewers for Van Buren Boulevard Sewer Installation Project - Riverside-South Coast County, Summer

tblOffRoadEquipment	HorsePower	81.00	89.00
tblOffRoadEquipment	HorsePower	231.00	97.00
tblOffRoadEquipment	LoadFactor	0.56	0.29
tblOffRoadEquipment	LoadFactor	0.73	0.20
tblOffRoadEquipment	LoadFactor	0.29	0.37
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.36	0.36
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.30	0.30
tblOffRoadEquipment	LoadFactor	0.46	0.46
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	OffRoadEquipmentType	Cranes	Cement and Mortar Mixers
tblOffRoadEquipment	OffRoadEquipmentType	Forklifts	Concrete/Industrial Saws
tblOffRoadEquipment	OffRoadEquipmentType	Tractors/Loaders/Backhoes	Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Dumpers/Tenders
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Paving Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Rollers
tblOffRoadEquipment	OffRoadEquipmentType		Signal Boards
tblOffRoadEquipment	OffRoadEquipmentType		Surfacing Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Sweepers/Scrubbers
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblTripsAndVMT	HaulingTripNumber	0.00	1.00
tblTripsAndVMT	WorkerTripNumber	48.00	6.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	3.2629	30.0928	27.7100	0.0548	0.0672	1.5518	1.6190	0.0178	1.4406	1.4584	0.0000	5,183.4399	5,183.4399	1.5320	0.0000	5,221.7409
Maximum	**3.2629**	**30.0928**	**27.7100**	**0.0548**	**0.0672**	**1.5518**	**1.6190**	**0.0178**	**1.4406**	**1.4584**	**0.0000**	**5,183.4399**	**5,183.4399**	**1.5320**	**0.0000**	**5,221.7409**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	3.2629	30.0928	27.7100	0.0548	0.0672	1.5518	1.6190	0.0178	1.4406	1.4584	0.0000	5,183.4399	5,183.4399	1.5320	0.0000	5,221.7409
Maximum	**3.2629**	**30.0928**	**27.7100**	**0.0548**	**0.0672**	**1.5518**	**1.6190**	**0.0178**	**1.4406**	**1.4584**	**0.0000**	**5,183.4399**	**5,183.4399**	**1.5320**	**0.0000**	**5,221.7409**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Trenching	5/4/2020	11/1/2020	5	130	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Gravity Sewers for Van Buren Boulevard Sewer Installation Project - Riverside-South Coast County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Cement and Mortar Mixers	1	8.00	231	0.29
Building Construction	Concrete/Industrial Saws	1	8.00	89	0.20
Building Construction	Cranes	1	4.00	97	0.37
Building Construction	Dumpers/Tenders	1	8.00	16	0.38
Building Construction	Excavators	2	8.00	158	0.38
Building Construction	Off-Highway Trucks	1	8.00	402	0.38
Building Construction	Paving Equipment	1	8.00	132	0.36
Building Construction	Rollers	1	8.00	80	0.38
Building Construction	Signal Boards	6	8.00	6	0.82
Building Construction	Surfacing Equipment	1	8.00	263	0.30
Building Construction	Sweepers/Scrubbers	1	8.00	64	0.46
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	19	6.00	0.00	1.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.2324	30.0729	27.4678	0.0541		1.5514	1.5514		1.4402	1.4402		5,116.7229	5,116.7229	1.5303		5,154.9806
Total	**3.2324**	**30.0729**	**27.4678**	**0.0541**		**1.5514**	**1.5514**		**1.4402**	**1.4402**		**5,116.7229**	**5,116.7229**	**1.5303**		**5,154.9806**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.0000e-005	1.8200e-003	2.2000e-004	1.0000e-005	1.3000e-004	1.0000e-005	1.4000e-004	4.0000e-005	1.0000e-005	4.0000e-005		0.6214	0.6214	4.0000e-005		0.6223
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0305	0.0181	0.2419	6.6000e-004	0.0671	4.1000e-004	0.0675	0.0178	3.7000e-004	0.0182		66.0957	66.0957	1.6900e-003		66.1380
Total	**0.0306**	**0.0199**	**0.2422**	**6.7000e-004**	**0.0672**	**4.2000e-004**	**0.0676**	**0.0178**	**3.8000e-004**	**0.0182**		**66.7170**	**66.7170**	**1.7300e-003**		**66.7603**

3.2 Building Construction - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.2324	30.0729	27.4678	0.0541		1.5514	1.5514		1.4402	1.4402	0.0000	5,116.7229	5,116.7229	1.5303		5,154.9806
Total	**3.2324**	**30.0729**	**27.4678**	**0.0541**		**1.5514**	**1.5514**		**1.4402**	**1.4402**	**0.0000**	**5,116.7229**	**5,116.7229**	**1.5303**		**5,154.9806**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.0000e-005	1.8200e-003	2.2000e-004	1.0000e-005	1.3000e-004	1.0000e-005	1.4000e-004	4.0000e-005	1.0000e-005	4.0000e-005		0.6214	0.6214	4.0000e-005		0.6223
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0305	0.0181	0.2419	6.6000e-004	0.0671	4.1000e-004	0.0675	0.0178	3.7000e-004	0.0182		66.0957	66.0957	1.6900e-003		66.1380
Total	**0.0306**	**0.0199**	**0.2422**	**6.7000e-004**	**0.0672**	**4.2000e-004**	**0.0676**	**0.0178**	**3.8000e-004**	**0.0182**		**66.7170**	**66.7170**	**1.7300e-003**		**66.7603**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Total					

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
	0.545527	0.036856	0.186032	0.115338	0.015222	0.004970	0.017525	0.069528	0.001397	0.001160	0.004547	0.000932	0.000965

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Force Mains for Van Buren Boulevard Sewer Installation Project

Riverside-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
	0.00		0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2022
Utility Company	Riverside Public Utilities				
CO2 Intensity (lb/MWhr)	1325.65	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Estimated construction period for the force main.

Off-road Equipment - Equipment expected to be needed for force main construction.

Trips and VMT - Workers' vehicles and hauling trips expected per day during construciton of the force main.

Force Mains for Van Buren Boulevard Sewer Installation Project - Riverside-South Coast County, Summer

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	0.00	130.00
tblConstructionPhase	PhaseEndDate	12/31/2010	5/2/2021
tblConstructionPhase	PhaseStartDate	1/1/2011	11/2/2020
tblOffRoadEquipment	HorsePower	9.00	231.00
tblOffRoadEquipment	HorsePower	81.00	89.00
tblOffRoadEquipment	HorsePower	231.00	97.00
tblOffRoadEquipment	LoadFactor	0.56	0.29
tblOffRoadEquipment	LoadFactor	0.73	0.20
tblOffRoadEquipment	LoadFactor	0.29	0.37
tblOffRoadEquipment	OffRoadEquipmentType	Cranes	Cement and Mortar Mixers
tblOffRoadEquipment	OffRoadEquipmentType	Forklifts	Concrete/Industrial Saws
tblOffRoadEquipment	OffRoadEquipmentType		Dumpers/Tenders
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Paving Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Rollers
tblOffRoadEquipment	OffRoadEquipmentType		Signal Boards
tblOffRoadEquipment	OffRoadEquipmentType		Surfacing Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Sweepers/Scrubbers
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblTripsAndVMT	HaulingTripNumber	0.00	1.00
tblTripsAndVMT	WorkerTripNumber	0.00	6.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	3.2724	29.9601	27.2364	0.0540	0.0674	1.5669	1.6343	0.0179	1.4545	1.4723	0.0000	5,103.4145	5,103.4145	1.5062	0.0000	5,141.0684
2021	3.0197	26.9628	26.8774	0.0539	0.0673	1.3723	1.4395	0.0178	1.2747	1.2926	0.0000	5,101.4889	5,101.4889	1.5051	0.0000	5,139.1173
Maximum	**3.2724**	**29.9601**	**27.2364**	**0.0540**	**0.0674**	**1.5669**	**1.6343**	**0.0179**	**1.4545**	**1.4723**	**0.0000**	**5,103.4145**	**5,103.4145**	**1.5062**	**0.0000**	**5,141.0684**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	3.2724	29.9601	27.2364	0.0540	0.0674	1.5669	1.6343	0.0179	1.4545	1.4723	0.0000	5,103.4145	5,103.4145	1.5062	0.0000	5,141.0684
2021	3.0197	26.9628	26.8774	0.0539	0.0673	1.3723	1.4395	0.0178	1.2747	1.2926	0.0000	5,101.4889	5,101.4889	1.5051	0.0000	5,139.1173
Maximum	**3.2724**	**29.9601**	**27.2364**	**0.0540**	**0.0674**	**1.5669**	**1.6343**	**0.0179**	**1.4545**	**1.4723**	**0.0000**	**5,103.4145**	**5,103.4145**	**1.5062**	**0.0000**	**5,141.0684**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	11/2/2020	5/2/2021	5	130	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Force Mains for Van Buren Boulevard Sewer Installation Project - Riverside-South Coast County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Dumpers/Tenders	1	8.00	16	0.38
Building Construction	Excavators	2	8.00	158	0.38
Building Construction	Off-Highway Trucks	1	8.00	402	0.38
Building Construction	Paving Equipment	1	8.00	132	0.36
Building Construction	Cement and Mortar Mixers	1	4.00	231	0.29
Building Construction	Concrete/Industrial Saws	1	8.00	89	0.20
Building Construction	Rollers	1	8.00	80	0.38
Building Construction	Signal Boards	6	8.00	6	0.82
Building Construction	Surfacing Equipment	1	8.00	263	0.30
Building Construction	Sweepers/Scrubbers	1	8.00	64	0.46
Building Construction	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Cranes	1	4.00	97	0.37
Building Construction	Forklifts	2	6.00	89	0.20

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	20	6.00	0.00	1.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.2418	29.9403	26.9942	0.0533		1.5665	1.5665		1.4541	1.4541		5,036.6974	5,036.6974	1.5044		5,074.3081
Total	**3.2418**	**29.9403**	**26.9942**	**0.0533**		**1.5665**	**1.5665**		**1.4541**	**1.4541**		**5,036.6974**	**5,036.6974**	**1.5044**		**5,074.3081**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.0000e-005	1.8200e-003	2.2000e-004	1.0000e-005	3.3000e-004	1.0000e-005	3.4000e-004	9.0000e-005	1.0000e-005	9.0000e-005		0.6214	0.6214	4.0000e-005		0.6223
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0305	0.0181	0.2419	6.6000e-004	0.0671	4.1000e-004	0.0675	0.0178	3.7000e-004	0.0182		66.0957	66.0957	1.6900e-003		66.1380
Total	**0.0306**	**0.0199**	**0.2422**	**6.7000e-004**	**0.0674**	**4.2000e-004**	**0.0678**	**0.0179**	**3.8000e-004**	**0.0183**		**66.7170**	**66.7170**	**1.7300e-003**		**66.7603**

3.2 Building Construction - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.2418	29.9403	26.9942	0.0533		1.5665	1.5665		1.4541	1.4541	0.0000	5,036.6974	5,036.6974	1.5044		5,074.3081
Total	**3.2418**	**29.9403**	**26.9942**	**0.0533**		**1.5665**	**1.5665**		**1.4541**	**1.4541**	**0.0000**	**5,036.6974**	**5,036.6974**	**1.5044**		**5,074.3081**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.0000e-005	1.8200e-003	2.2000e-004	1.0000e-005	3.3000e-004	1.0000e-005	3.4000e-004	9.0000e-005	1.0000e-005	9.0000e-005		0.6214	0.6214	4.0000e-005		0.6223
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0305	0.0181	0.2419	6.6000e-004	0.0671	4.1000e-004	0.0675	0.0178	3.7000e-004	0.0182		66.0957	66.0957	1.6900e-003		66.1380
Total	**0.0306**	**0.0199**	**0.2422**	**6.7000e-004**	**0.0674**	**4.2000e-004**	**0.0678**	**0.0179**	**3.8000e-004**	**0.0183**		**66.7170**	**66.7170**	**1.7300e-003**		**66.7603**

3.2 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.9912	26.9449	26.6553	0.0533		1.3719	1.3719		1.2744	1.2744		5,036.9890	5,036.9890	1.5036		5,074.5784
Total	**2.9912**	**26.9449**	**26.6553**	**0.0533**		**1.3719**	**1.3719**		**1.2744**	**1.2744**		**5,036.9890**	**5,036.9890**	**1.5036**		**5,074.5784**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.0000e-005	1.6700e-003	2.2000e-004	1.0000e-005	1.9000e-004	1.0000e-005	1.9000e-004	5.0000e-005	0.0000	5.0000e-005		0.6149	0.6149	4.0000e-005		0.6158
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0285	0.0162	0.2218	6.4000e-004	0.0671	4.0000e-004	0.0675	0.0178	3.6000e-004	0.0182		63.8851	63.8851	1.5200e-003		63.9231
Total	**0.0285**	**0.0179**	**0.2221**	**6.5000e-004**	**0.0673**	**4.1000e-004**	**0.0677**	**0.0178**	**3.6000e-004**	**0.0182**		**64.4999**	**64.4999**	**1.5600e-003**		**64.5389**

3.2 Building Construction - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.9912	26.9449	26.6553	0.0533		1.3719	1.3719		1.2744	1.2744	0.0000	5,036.9889	5,036.9889	1.5036		5,074.5784
Total	**2.9912**	**26.9449**	**26.6553**	**0.0533**		**1.3719**	**1.3719**		**1.2744**	**1.2744**	**0.0000**	**5,036.9889**	**5,036.9889**	**1.5036**		**5,074.5784**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.0000e-005	1.6700e-003	2.2000e-004	1.0000e-005	1.9000e-004	1.0000e-005	1.9000e-004	5.0000e-005	0.0000	5.0000e-005		0.6149	0.6149	4.0000e-005		0.6158
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0285	0.0162	0.2218	6.4000e-004	0.0671	4.0000e-004	0.0675	0.0178	3.6000e-004	0.0182		63.8851	63.8851	1.5200e-003		63.9231
Total	**0.0285**	**0.0179**	**0.2221**	**6.5000e-004**	**0.0673**	**4.1000e-004**	**0.0677**	**0.0178**	**3.6000e-004**	**0.0182**		**64.4999**	**64.4999**	**1.5600e-003**		**64.5389**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Total					

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
	0.545527	0.036856	0.186032	0.115338	0.015222	0.004970	0.017525	0.069528	0.001397	0.001160	0.004547	0.000932	0.000965

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Krameria LS for Van Buren Boulevard Sewer Installation Project

Riverside-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
	0.00		0.24	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Lot size of Krameria LS site in a residential neighborhood.

Construction Phase - Estimated construction period for Krameria LS.

Off-road Equipment - Equipment needed for construction of Krameria LS.

Trips and VMT - Estimated number of worker vehicle trips and hauling truck trips during construction of Krameria LS.

Stationary Sources - Emergency Generators and Fire Pumps -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	100.00	196.00
tblConstructionPhase	PhaseEndDate	10/6/2021	1/31/2022

Krameria LS for Van Buren Boulevard Sewer Installation Project - Riverside-South Coast County, Summer

tblConstructionPhase	PhaseStartDate	5/20/2021	5/3/2021
tblOffRoadEquipment	HorsePower	9.00	231.00
tblOffRoadEquipment	HorsePower	81.00	89.00
tblOffRoadEquipment	HorsePower	231.00	97.00
tblOffRoadEquipment	LoadFactor	0.56	0.29
tblOffRoadEquipment	LoadFactor	0.73	0.20
tblOffRoadEquipment	LoadFactor	0.29	0.37
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.20	0.20
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.36	0.36
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	OffRoadEquipmentType	Cranes	Cement and Mortar Mixers
tblOffRoadEquipment	OffRoadEquipmentType	Forklifts	Concrete/Industrial Saws
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Paving Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Rollers
tblOffRoadEquipment	OffRoadEquipmentType		Skid Steer Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Welders
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblStationaryGeneratorsPumpsEF	CH4_EF	0.07	0.07
tblStationaryGeneratorsPumpsEF	CH4_EF	0.07	0.07
tblStationaryGeneratorsPumpsEF	ROG_EF	2.2480e-003	2.2477e-003
tblStationaryGeneratorsPumpsEF	ROG_EF	2.2480e-003	2.2477e-003
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	275.00
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	225.00
tblStationaryGeneratorsPumpsUse	HoursPerDay	0.00	1.00
tblStationaryGeneratorsPumpsUse	HoursPerDay	0.00	1.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	200.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	200.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblTripsAndVMT	HaulingTripNumber	0.00	1.00
tblTripsAndVMT	WorkerTripNumber	0.00	8.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	2.5746	22.2450	22.3016	0.0452	0.0895	1.0956	1.1851	0.0237	1.0180	1.0418	0.0000	4,338.0639	4,338.0639	1.2900	0.0000	4,370.3130
2022	2.2903	18.8647	21.7819	0.0452	0.0901	0.9016	0.9917	0.0239	0.8382	0.8621	0.0000	4,336.0567	4,336.0567	1.2873	0.0000	4,368.2391
Maximum	**2.5746**	**22.2450**	**22.3016**	**0.0452**	**0.0901**	**1.0956**	**1.1851**	**0.0239**	**1.0180**	**1.0418**	**0.0000**	**4,338.0639**	**4,338.0639**	**1.2900**	**0.0000**	**4,370.3130**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	2.5746	22.2450	22.3016	0.0452	0.0895	1.0956	1.1851	0.0237	1.0180	1.0418	0.0000	4,338.0639	4,338.0639	1.2900	0.0000	4,370.3130
2022	2.2903	18.8647	21.7819	0.0452	0.0901	0.9016	0.9917	0.0239	0.8382	0.8621	0.0000	4,336.0566	4,336.0566	1.2873	0.0000	4,368.2391
Maximum	**2.5746**	**22.2450**	**22.3016**	**0.0452**	**0.0901**	**1.0956**	**1.1851**	**0.0239**	**1.0180**	**1.0418**	**0.0000**	**4,338.0639**	**4,338.0639**	**1.2900**	**0.0000**	**4,370.3130**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Stationary	0.8204	2.2934	2.0922	3.9400e-003		0.1207	0.1207		0.1207	0.1207		419.7571	419.7571	0.0589		421.2283
Total	**0.8204**	**2.2934**	**2.0922**	**3.9400e-003**		**0.1207**	**0.1207**		**0.1207**	**0.1207**	**0.0000**	**419.7571**	**419.7571**	**0.0589**	**0.0000**	**421.2283**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Stationary	0.8204	2.2934	2.0922	3.9400e-003		0.1207	0.1207		0.1207	0.1207		419.7571	419.7571	0.0589		421.2283
Total	**0.8204**	**2.2934**	**2.0922**	**3.9400e-003**		**0.1207**	**0.1207**		**0.1207**	**0.1207**	**0.0000**	**419.7571**	**419.7571**	**0.0589**	**0.0000**	**421.2283**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	5/3/2021	1/31/2022	5	196	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Excavators	1	8.00	158	0.38
Building Construction	Forklifts	1	8.00	89	0.20
Building Construction	Off-Highway Trucks	1	8.00	402	0.38
Building Construction	Off-Highway Trucks	1	4.00	402	0.38
Building Construction	Cement and Mortar Mixers	1	8.00	231	0.29
Building Construction	Concrete/Industrial Saws	1	8.00	89	0.20
Building Construction	Paving Equipment	1	8.00	132	0.36
Building Construction	Rollers	1	8.00	80	0.38
Building Construction	Skid Steer Loaders	1	8.00	65	0.37
Building Construction	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Building Construction	Cranes	1	4.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	12	8.00	0.00	1.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5366	22.2223	22.0057	0.0444		1.0950	1.0950		1.0175	1.0175		4,252.4760	4,252.4760	1.2879		4,284.6737
Total	**2.5366**	**22.2223**	**22.0057**	**0.0444**		**1.0950**	**1.0950**		**1.0175**	**1.0175**		**4,252.4760**	**4,252.4760**	**1.2879**		**4,284.6737**

3.2 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.0000e-005	1.1100e-003	1.5000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005		0.4078	0.4078	2.0000e-005		0.4084
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0379	0.0216	0.2958	8.5000e-004	0.0894	5.3000e-004	0.0900	0.0237	4.9000e-004	0.0242		85.1801	85.1801	2.0300e-003		85.2309
Total	**0.0380**	**0.0227**	**0.2959**	**8.5000e-004**	**0.0895**	**5.3000e-004**	**0.0901**	**0.0237**	**4.9000e-004**	**0.0242**		**85.5879**	**85.5879**	**2.0500e-003**		**85.6393**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5366	22.2223	22.0057	0.0444		1.0950	1.0950		1.0175	1.0175	0.0000	4,252.4760	4,252.4760	1.2879		4,284.6737
Total	**2.5366**	**22.2223**	**22.0057**	**0.0444**		**1.0950**	**1.0950**		**1.0175**	**1.0175**	**0.0000**	**4,252.4760**	**4,252.4760**	**1.2879**		**4,284.6737**

3.2 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.0000e-005	1.1100e-003	1.5000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005		0.4078	0.4078	2.0000e-005		0.4084
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0379	0.0216	0.2958	8.5000e-004	0.0894	5.3000e-004	0.0900	0.0237	4.9000e-004	0.0242		85.1801	85.1801	2.0300e-003		85.2309
Total	**0.0380**	**0.0227**	**0.2959**	**8.5000e-004**	**0.0895**	**5.3000e-004**	**0.0901**	**0.0237**	**4.9000e-004**	**0.0242**		**85.5879**	**85.5879**	**2.0500e-003**		**85.6393**

3.2 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2548	18.8442	21.5090	0.0444		0.9011	0.9011		0.8378	0.8378		4,253.5858	4,253.5858	1.2855		4,285.7220
Total	**2.2548**	**18.8442**	**21.5090**	**0.0444**		**0.9011**	**0.9011**		**0.8378**	**0.8378**		**4,253.5858**	**4,253.5858**	**1.2855**		**4,285.7220**

3.2 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.0000e-005	1.0100e-003	1.4000e-004	0.0000	6.5000e-004	0.0000	6.5000e-004	1.6000e-004	0.0000	1.7000e-004		0.4032	0.4032	2.0000e-005		0.4038
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0355	0.0194	0.2728	8.2000e-004	0.0894	5.1000e-004	0.0899	0.0237	4.7000e-004	0.0242		82.0677	82.0677	1.8200e-003		82.1133
Total	**0.0355**	**0.0205**	**0.2730**	**8.2000e-004**	**0.0901**	**5.1000e-004**	**0.0906**	**0.0239**	**4.7000e-004**	**0.0244**		**82.4709**	**82.4709**	**1.8400e-003**		**82.5170**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2548	18.8442	21.5090	0.0444		0.9011	0.9011		0.8378	0.8378	0.0000	4,253.5858	4,253.5858	1.2855		4,285.7220
Total	**2.2548**	**18.8442**	**21.5090**	**0.0444**		**0.9011**	**0.9011**		**0.8378**	**0.8378**	**0.0000**	**4,253.5858**	**4,253.5858**	**1.2855**		**4,285.7220**

3.2 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.0000e-005	1.0100e-003	1.4000e-004	0.0000	6.5000e-004	0.0000	6.5000e-004	1.6000e-004	0.0000	1.7000e-004		0.4032	0.4032	2.0000e-005		0.4038
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0355	0.0194	0.2728	8.2000e-004	0.0894	5.1000e-004	0.0899	0.0237	4.7000e-004	0.0242		82.0677	82.0677	1.8200e-003		82.1133
Total	**0.0355**	**0.0205**	**0.2730**	**8.2000e-004**	**0.0901**	**5.1000e-004**	**0.0906**	**0.0239**	**4.7000e-004**	**0.0244**		**82.4709**	**82.4709**	**1.8400e-003**		**82.5170**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Total					

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
	0.545527	0.036856	0.186032	0.115338	0.015222	0.004970	0.017525	0.069528	0.001397	0.001160	0.004547	0.000932	0.000965

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	1	200	275	0.73	Diesel
Emergency Generator	1	1	200	225	0.73	Diesel

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	lb/day										lb/day					
Emergency Generator - Diesel (175 - 300 HP)	0.8204	2.2934	2.0922	3.9400e-003		0.1207	0.1207		0.1207	0.1207		419.7571	419.7571	0.0589		421.2283
Total	**0.8204**	**2.2934**	**2.0922**	**3.9400e-003**		**0.1207**	**0.1207**		**0.1207**	**0.1207**		**419.7571**	**419.7571**	**0.0589**		**421.2283**

11.0 Vegetation

MLK1 LS Demolition

Riverside-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
	0.00		0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2022
Utility Company	Riverside Public Utilities				
CO2 Intensity (lb/MWhr)	1325.65	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Estimated schedule for demolition of MLK1 LS.

Off-road Equipment - Equipment needed for demolition of MLK1 LS.

Trips and VMT - Estimated number of worker vehicles and hauling truck trips per day.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	0.00	44.00
tblConstructionPhase	PhaseEndDate	1/31/2022	4/1/2022
tblOffRoadEquipment	HorsePower	16.00	247.00
tblOffRoadEquipment	HorsePower	402.00	97.00
tblOffRoadEquipment	LoadFactor	0.38	0.40
tblOffRoadEquipment	LoadFactor	0.38	0.37
tblOffRoadEquipment	LoadFactor	0.42	0.42
tblOffRoadEquipment	LoadFactor	0.36	0.36
tblOffRoadEquipment	LoadFactor	0.46	0.46
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	OffRoadEquipmentType	Rubber Tired Dozers	Dumpers/Tenders
tblOffRoadEquipment	OffRoadEquipmentType	Tractors/Loaders/Backhoes	Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Pavers
tblOffRoadEquipment	OffRoadEquipmentType		Paving Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Pressure Washers
tblOffRoadEquipment	OffRoadEquipmentType		Signal Boards
tblOffRoadEquipment	OffRoadEquipmentType		Sweepers/Scrubbers
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblTripsAndVMT	HaulingTripNumber	0.00	1.00
tblTripsAndVMT	WorkerTripNumber	28.00	4.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	1.3740	12.1798	14.5847	0.0240	0.0451	0.6352	0.6803	0.0120	0.5997	0.6116	0.0000	2,259.8016	2,259.8016	0.5282	0.0000	2,273.0072
Maximum	**1.3740**	**12.1798**	**14.5847**	**0.0240**	**0.0451**	**0.6352**	**0.6803**	**0.0120**	**0.5997**	**0.6116**	**0.0000**	**2,259.8016**	**2,259.8016**	**0.5282**	**0.0000**	**2,273.0072**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	1.3740	12.1798	14.5847	0.0240	0.0451	0.6352	0.6803	0.0120	0.5997	0.6116	0.0000	2,259.8016	2,259.8016	0.5282	0.0000	2,273.0072
Maximum	**1.3740**	**12.1798**	**14.5847**	**0.0240**	**0.0451**	**0.6352**	**0.6803**	**0.0120**	**0.5997**	**0.6116**	**0.0000**	**2,259.8016**	**2,259.8016**	**0.5282**	**0.0000**	**2,273.0072**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	2/1/2022	4/1/2022	5	44	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Pavers	1	8.00	130	0.42
Demolition	Paving Equipment	1	8.00	132	0.36
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Pressure Washers	1	8.00	13	0.30
Demolition	Signal Boards	2	8.00	6	0.82
Demolition	Sweepers/Scrubbers	1	8.00	64	0.46
Demolition	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Demolition	Dumpers/Tenders	1	8.00	247	0.40
Demolition	Off-Highway Trucks	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	11	4.00	0.00	1.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3561	12.1655	14.4477	0.0236		0.6349	0.6349		0.5994	0.5994		2,216.9717	2,216.9717	0.5272		2,230.1521
Total	**1.3561**	**12.1655**	**14.4477**	**0.0236**		**0.6349**	**0.6349**		**0.5994**	**0.5994**		**2,216.9717**	**2,216.9717**	**0.5272**		**2,230.1521**

3.2 Demolition - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.0000e-004	4.5000e-003	6.3000e-004	2.0000e-005	4.0000e-004	1.0000e-005	4.1000e-004	1.1000e-004	1.0000e-005	1.2000e-004		1.7960	1.7960	1.0000e-004		1.7985
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0177	9.7200e-003	0.1364	4.1000e-004	0.0447	2.6000e-004	0.0450	0.0119	2.4000e-004	0.0121		41.0338	41.0338	9.1000e-004		41.0567
Total	**0.0178**	**0.0142**	**0.1370**	**4.3000e-004**	**0.0451**	**2.7000e-004**	**0.0454**	**0.0120**	**2.5000e-004**	**0.0122**		**42.8298**	**42.8298**	**1.0100e-003**		**42.8552**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3561	12.1655	14.4477	0.0236		0.6349	0.6349		0.5994	0.5994	0.0000	2,216.9717	2,216.9717	0.5272		2,230.1521
Total	**1.3561**	**12.1655**	**14.4477**	**0.0236**		**0.6349**	**0.6349**		**0.5994**	**0.5994**	**0.0000**	**2,216.9717**	**2,216.9717**	**0.5272**		**2,230.1521**

3.2 Demolition - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.0000e-004	4.5000e-003	6.3000e-004	2.0000e-005	4.0000e-004	1.0000e-005	4.1000e-004	1.1000e-004	1.0000e-005	1.2000e-004		1.7960	1.7960	1.0000e-004		1.7985
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0177	9.7200e-003	0.1364	4.1000e-004	0.0447	2.6000e-004	0.0450	0.0119	2.4000e-004	0.0121		41.0338	41.0338	9.1000e-004		41.0567
Total	**0.0178**	**0.0142**	**0.1370**	**4.3000e-004**	**0.0451**	**2.7000e-004**	**0.0454**	**0.0120**	**2.5000e-004**	**0.0122**		**42.8298**	**42.8298**	**1.0100e-003**		**42.8552**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Total					

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
	0.545527	0.036856	0.186032	0.115338	0.015222	0.004970	0.017525	0.069528	0.001397	0.001160	0.004547	0.000932	0.000965

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Wood Road LS Improvements for Van Buren Sewer Installation Project

Riverside-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
	0.00		0.47	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2022
Utility Company	Riverside Public Utilities				
CO2 Intensity (lb/MWhr)	1325.65	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Estimated schedule for construction of improvements at the existing Wood Road LS.

Off-road Equipment - Equipment needed to construct improvements at the Wood Road LS.

Trips and VMT - Estimated number of worker vehicle trips and hauling truck trips for construction of Wood Road LS improvements.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	100.00	89.00
tblConstructionPhase	PhaseEndDate	9/7/2022	8/4/2022
tblConstructionPhase	PhaseStartDate	4/21/2022	4/4/2022

tblOffRoadEquipment	HorsePower	9.00	231.00
tblOffRoadEquipment	HorsePower	81.00	89.00
tblOffRoadEquipment	HorsePower	16.00	97.00
tblOffRoadEquipment	LoadFactor	0.56	0.29
tblOffRoadEquipment	LoadFactor	0.73	0.20
tblOffRoadEquipment	LoadFactor	0.38	0.37
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.36	0.36
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.40	0.40
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	OffRoadEquipmentType	Cranes	Cement and Mortar Mixers
tblOffRoadEquipment	OffRoadEquipmentType	Forklifts	Concrete/Industrial Saws
tblOffRoadEquipment	OffRoadEquipmentType	Tractors/Loaders/Backhoes	Dumpers/Tenders
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Paving Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Rollers
tblOffRoadEquipment	OffRoadEquipmentType		Rubber Tired Dozers
tblOffRoadEquipment	OffRoadEquipmentType		Skid Steer Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblTripsAndVMT	HaulingTripNumber	0.00	1.00

tblTripsAndVMT	WorkerTripNumber	0.00	4.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	2.8830	27.0683	23.7499	0.0528	0.0449	1.2619	1.3068	0.0119	1.1646	1.1765	0.0000	5,109.2872	5,109.2872	1.5919	0.0000	5,149.0843
Maximum	**2.8830**	**27.0683**	**23.7499**	**0.0528**	**0.0449**	**1.2619**	**1.3068**	**0.0119**	**1.1646**	**1.1765**	**0.0000**	**5,109.2872**	**5,109.2872**	**1.5919**	**0.0000**	**5,149.0843**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	2.8830	27.0683	23.7499	0.0528	0.0449	1.2619	1.3068	0.0119	1.1646	1.1765	0.0000	5,109.2872	5,109.2872	1.5919	0.0000	5,149.0843
Maximum	**2.8830**	**27.0683**	**23.7499**	**0.0528**	**0.0449**	**1.2619**	**1.3068**	**0.0119**	**1.1646**	**1.1765**	**0.0000**	**5,109.2872**	**5,109.2872**	**1.5919**	**0.0000**	**5,149.0843**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	4/4/2022	8/4/2022	5	89	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Excavators	1	8.00	158	0.38
Building Construction	Off-Highway Trucks	1	8.00	402	0.38
Building Construction	Off-Highway Trucks	1	4.00	402	0.38
Building Construction	Paving Equipment	1	8.00	132	0.36
Building Construction	Cement and Mortar Mixers	1	8.00	231	0.29
Building Construction	Concrete/Industrial Saws	1	8.00	89	0.20
Building Construction	Rollers	1	8.00	80	0.38
Building Construction	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Skid Steer Loaders	1	8.00	65	0.37
Building Construction	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Dumpers/Tenders	1	8.00	97	0.37
Building Construction	Forklifts	2	6.00	89	0.20

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	14	4.00	0.00	1.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.8652	27.0564	23.6132	0.0524		1.2617	1.2617		1.1644	1.1644		5,067.3655	5,067.3655	1.5909		5,107.1385
Total	**2.8652**	**27.0564**	**23.6132**	**0.0524**		**1.2617**	**1.2617**		**1.1644**	**1.1644**		**5,067.3655**	**5,067.3655**	**1.5909**		**5,107.1385**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.0000e-005	2.2300e-003	3.1000e-004	1.0000e-005	2.0000e-004	1.0000e-005	2.0000e-004	5.0000e-005	1.0000e-005	6.0000e-005		0.8879	0.8879	5.0000e-005		0.8892
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0177	9.7200e-003	0.1364	4.1000e-004	0.0447	2.6000e-004	0.0450	0.0119	2.4000e-004	0.0121		41.0338	41.0338	9.1000e-004		41.0567
Total	**0.0178**	**0.0120**	**0.1367**	**4.2000e-004**	**0.0449**	**2.7000e-004**	**0.0452**	**0.0119**	**2.5000e-004**	**0.0122**		**41.9217**	**41.9217**	**9.6000e-004**		**41.9458**

3.2 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.8652	27.0564	23.6132	0.0524		1.2617	1.2617		1.1644	1.1644	0.0000	5,067.3655	5,067.3655	1.5909		5,107.1385
Total	**2.8652**	**27.0564**	**23.6132**	**0.0524**		**1.2617**	**1.2617**		**1.1644**	**1.1644**	**0.0000**	**5,067.3655**	**5,067.3655**	**1.5909**		**5,107.1385**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.0000e-005	2.2300e-003	3.1000e-004	1.0000e-005	2.0000e-004	1.0000e-005	2.0000e-004	5.0000e-005	1.0000e-005	6.0000e-005		0.8879	0.8879	5.0000e-005		0.8892
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0177	9.7200e-003	0.1364	4.1000e-004	0.0447	2.6000e-004	0.0450	0.0119	2.4000e-004	0.0121		41.0338	41.0338	9.1000e-004		41.0567
Total	**0.0178**	**0.0120**	**0.1367**	**4.2000e-004**	**0.0449**	**2.7000e-004**	**0.0452**	**0.0119**	**2.5000e-004**	**0.0122**		**41.9217**	**41.9217**	**9.6000e-004**		**41.9458**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Total					

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
	0.545527	0.036856	0.186032	0.115338	0.015222	0.004970	0.017525	0.069528	0.001397	0.001160	0.004547	0.000932	0.000965

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation