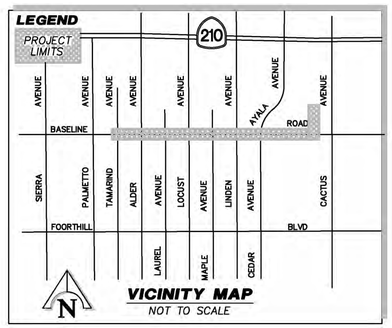
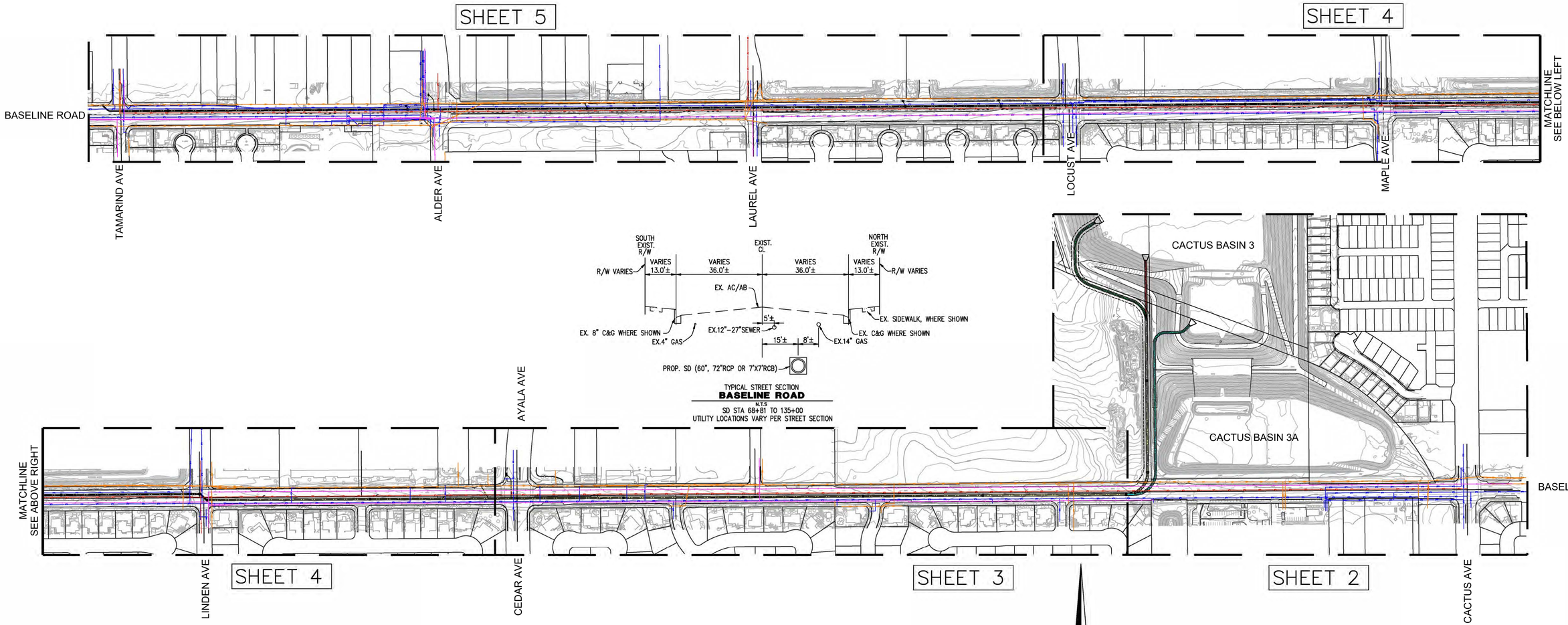
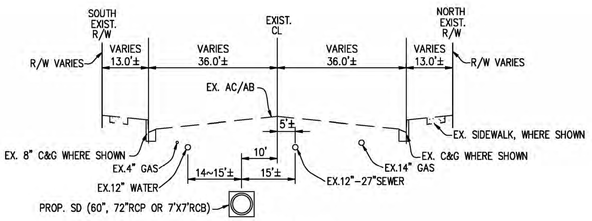
APPENDIX 1

COMPOSITE UTILITY PLAN
AND PROPOSED
BASELINE ROAD STORM DRAIN ALIGNMENT

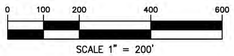




TYPICAL STREET SECTION
BASELINE ROAD
N.T.S
SD STA 68+81 TO 135+00
UTILITY LOCATIONS VARY PER STREET SECTION



TYPICAL STREET SECTION
BASELINE ROAD
N.T.S
SD STA 30+00 TO 68+81
UTILITY LOCATIONS VARY PER STREET SECTION



N

NOTE:
LOCATION OF EXISTING UTILITY LINES IS BASED ON RECORD DRAWINGS AND ATLASES PROVIDED BY THE CITY AND UTILITY COMPANIES. LOCATIONS TO BE VERIFIED BY CONTRACTOR BEFORE CONSTRUCTION.

CONCEPTUAL
NOT FOR CONSTRUCTION

PRELIMINARY - SUBJECT TO CHANGE

UTILITY PROVIDERS

ELECTRICITY
SOUTHERN CALIFORNIA EDISON
7951 REDWOOD AVENUE
FONTANA, CA 92336
(909) 357-6203

TELEPHONE
AT&T
3939 E CORONADO STREET
ANAHEIM, CA 92807
(714) 237-6155

TELEPHONE
FRONTIER
150 S. JUANITA
HEMET, CA 92543
(909) 658-7305

WATER
FONTANA WATER CO.
15966 ARROW ROUTE
FONTANA, CALIFORNIA 92335
(909) 822-2201

SEWER
CITY OF RIALRO
150 S. PALM AVE
RIALTO, CA 92376
(909) 820-2689

GAS
SOUTHERN CALIFORNIA GAS CO.
1981 W. LUGONIA AVENUE
REDLANDS, CA 92374
(800) 427-2200

CABLE
SPECTRUM
1500 AUTO CENTER DRIVE
ONTARIO, CA 91761
(800) 892-2253

REGISTERED PROFESSIONAL ENGINEER
JOHNNY MURAD
NO. 67512
EXPIRATION
6-30-2019
CIVIL
STATE OF CALIFORNIA

HUITT-ZOLLARS
Huitt-Zollars, Inc. Ontario
3990 CONCOURS, #330 * ONTARIO, CALIFORNIA 91761 * (909) 941-7799

PREPARED UNDER THE SUPERVISION OF: JOHNNY MURAD

67512 R.C.E. | 6-30-19 EXPIRES | DATE

CITY OF RIALTO, CALIFORNIA
COMPOSITE UTILITY PLAN

DRAWN BY: H.Z. STAFF	**BASELINE STORM DRAIN** TITLE SHEET & INDEX MAP	SCALE: AS SHOWN
DESIGNED BY: H.Z. STAFF		DATE: OCT 2018
CHECKED BY: J.M./R.C./M.H.		DWG. NO.: 1/5

UNDERGROUND UTILITY LEGEND

- EXISTING WATER LINES
- EXISTING SEWER LINES
- EXISTING STORM DRAIN LINES
- EXISTING ELEC, COM, TEL, & OH LINES
- EXISTING GAS LINES
- PROPOSED STORM DRAIN ALIGNMENT
- ALTERNATIVE 1 (EASEMENT REQUIRED)
- ALTERNATIVE 2 (EASEMENT REQUIRED)
- ALTERNATIVE 3

LEGEND

- POWER POLE
- GUY WIRE (ANCHOR)
- TRAFFIC SIGNAL
- SITE LIGHT
- STREET LIGHT ON POWER POLE
- STREET LIGHT
- FIRE HYDRANT
- TRAFFIC SIGN
- WATER VALVE COVER
- MANHOLE
- WATER METER
- CENTERLINE
- RIGHT OF WAY

BASELINE ROAD
MATCHLINE STA. 30+00.00
SEE SHEET 3

ALTERNATIVES 1 & 2
REQUIRE EASEMENT
ON PRIVATE PROPERTY

SEALED MH
STA 28+58

SEALED MH
STA 25+00

7'X9' RCB

7'X9' RCB

SBCFC/R/W

ALTERNATIVE 1

ALTERNATIVE 2

ALTERNATIVE 3

DAM EMBANKMENT

DAM EMBANKMENT

CACTUS BASIN NO. 3A

CACTUS BASIN NO. 3

12" CMCL STEEL

27" VCP SEWER

36'
52'

29'
53'

BASELINE ROAD

0 20 40 80 120
SCALE 1" = 40'

CONCEPTUAL
NOT FOR CONSTRUCTION

REGISTERED PROFESSIONAL ENGINEER
JOHNNY MURAD
NO. 67512
EXPIRATION
6-30-2019
CIVIL
STATE OF CALIFORNIA

HUITT-ZOLLARS
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PREPARED UNDER THE SUPERVISION OF: JOHNNY MURAD

67512 R.C.E. 6-30-19 EXPIRES DATE

CITY OF RIALTO, CALIFORNIA

COMPOSITE UTILITY PLAN

DRAWN BY: H.Z. STAFF	**BASELINE STORM DRAIN BASIN CONNECTION ALTERNATIVES**	SCALE: AS SHOWN
DESIGNED BY: H.Z. STAFF		DATE: OCT 2018
CHECKED BY: J.M./R.C./M.H.		DWG. NO.: 2/5

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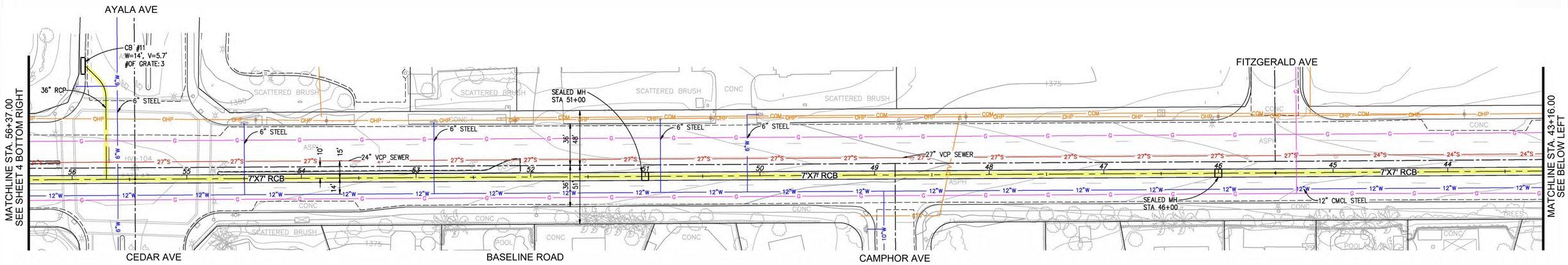

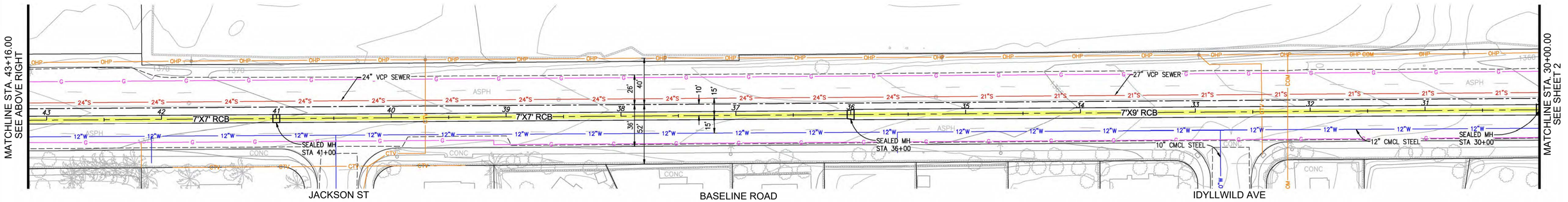

UNDERGROUND UTILITY LEGEND

- EXISTING WATER LINES
- EXISTING SEWER LINES
- EXISTING STORM DRAIN LINES
- EXISTING ELEC, COM, TEL, & OH LINES
- EXISTING GAS LINES
- PROPOSED STORM DRAIN ALIGNMENT

LEGEND

- POWER POLE
- GUY WIRE (ANCHOR)
- TRAFFIC SIGNAL
- SITE LIGHT
- STREET LIGHT ON POWER POLE
- STREET LIGHT
- FIRE HYDRANT
- TRAFFIC SIGN
- WATER VALVE COVER
- MANHOLE
- WATER METER
- CENTERLINE
- RIGHT OF WAY

N

0 20 40 80 120

SCALE 1" = 40'

CONCEPTUAL
NOT FOR CONSTRUCTION

REGISTERED PROFESSIONAL ENGINEER
JOHNNY MURAD
NO. 67512
EXPIRATION
6-30-2019
CIVIL
STATE OF CALIFORNIA

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PREPARED UNDER THE SUPERVISION OF: JOHNNY MURAD

67512 R.C.E. 6-30-19 EXPIRES DATE

CITY OF RIALTO, CALIFORNIA

COMPOSITE UTILITY PLAN

DRAWN BY: H.Z. STAFF	**BASELINE STORM DRAIN IDYLLWILD AVE TO CEDAR AVE STA. 30+00.00 TO 56+37.00**	SCALE: AS SHOWN
DESIGNED BY: H.Z. STAFF		DATE: OCT 2018
CHECKED BY: J.M./R.C./M.H.		DWG. NO.: 3/5

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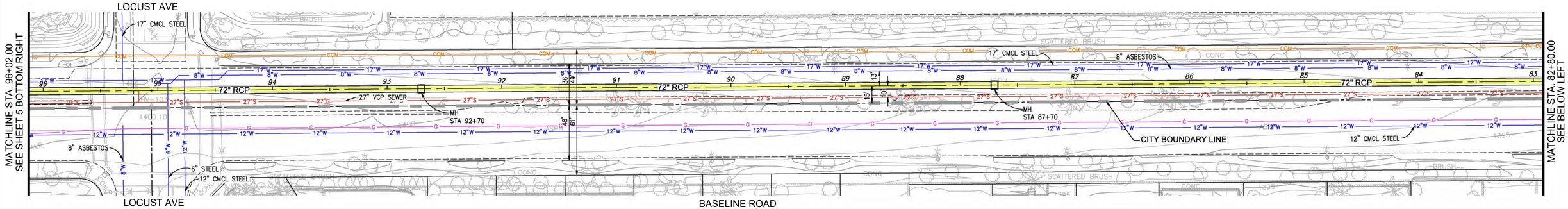

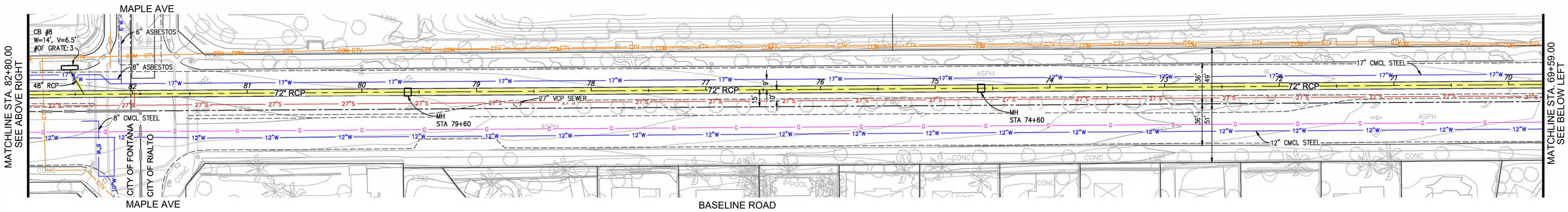

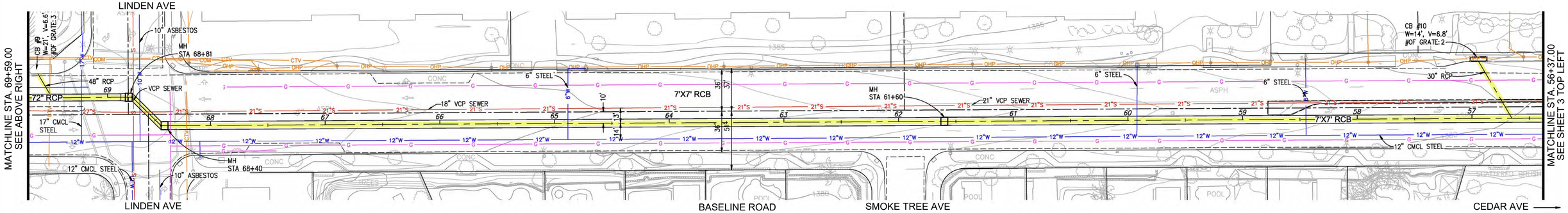

LEGEND

- POWER POLE
- GUY WIRE (ANCHOR)
- TRAFFIC SIGNAL
- SITE LIGHT
- STREET LIGHT ON POWER POLE
- STREET LIGHT
- FIRE HYDRANT
- TRAFFIC SIGN
- WATER VALVE COVER
- MANHOLE
- WATER METER
- CENTERLINE
- RIGHT OF WAY
- CITY BOUNDARY LINE

UNDERGROUND UTILITY LEGEND

- EXISTING WATER LINES
- EXISTING SEWER LINES
- EXISTING STORM DRAIN LINES
- EXISTING ELEC, COM, TEL, & OH LINES
- EXISTING GAS LINES
- PROPOSED STORM DRAIN ALIGNMENT

CAUTION AREA

N

0 20 40 80 120

SCALE 1" = 40'

CONCEPTUAL
NOT FOR CONSTRUCTION

REGISTERED PROFESSIONAL ENGINEER
JOHNNY MURAD
NO. 67512
EXPIRATION
6-30-2019
CIVIL
STATE OF CALIFORNIA

HUITT-ZOLLARS
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3990 CONCOURS, #330 * ONTARIO, CALIFORNIA 91761 * (909) 941-7799

PREPARED UNDER THE SUPERVISION OF: JOHNNY MURAD

67512 R.C.E. 6-30-19 EXPIRES DATE

CITY OF RIALTO, CALIFORNIA

COMPOSITE UTILITY PLAN

BASELINE STORM DRAIN
CEDAR AVE TO LOCUST AVE
STA. 56+37.00 TO 96+02.00

DRAWN BY: H.Z. STAFF
DESIGNED BY: H.Z. STAFF
CHECKED BY: J.M./R.C./M.H.

SCALE: AS SHOWN
DATE: OCT 2018
DWG. NO.: 4/5

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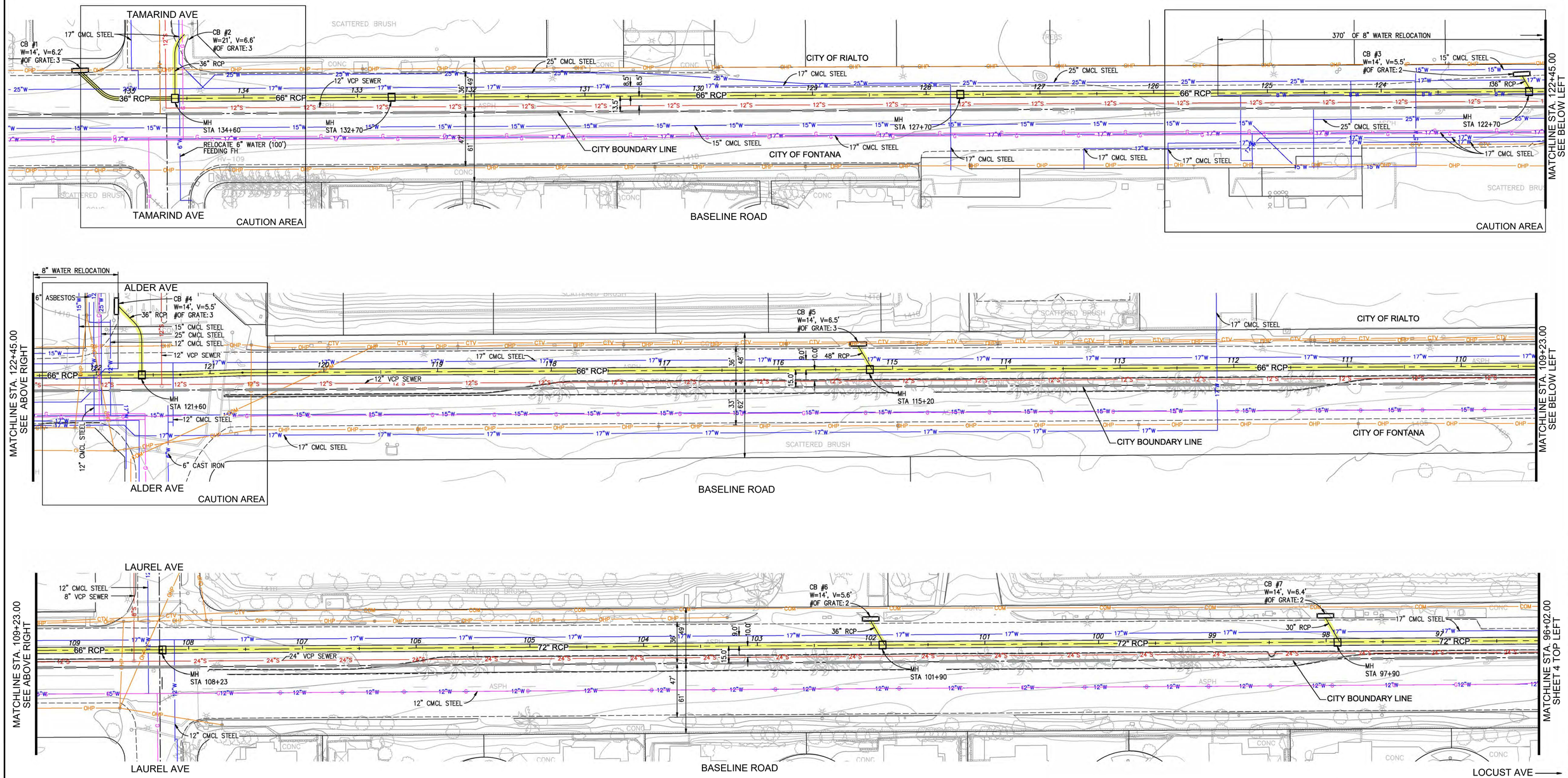

UNDERGROUND UTILITY LEGEND

- EXISTING WATER LINES
- EXISTING SEWER LINES
- EXISTING STORM DRAIN LINES
- EXISTING ELEC, COM, TEL, & OH LINES
- EXISTING GAS LINES
- PROPOSED STORM DRAIN ALIGNMENT

LEGEND

- POWER POLE
- GUY WIRE (ANCHOR)
- TRAFFIC SIGNAL
- SITE LIGHT
- STREET LIGHT ON POWER POLE
- STREET LIGHT
- FIRE HYDRANT
- TRAFFIC SIGN
- WATER VALVE COVER
- MANHOLE
- WATER METER
- CENTERLINE
- RIGHT OF WAY
- CITY BOUNDARY LINE

N

0 20 40 80 120

SCALE 1" = 40'

CONCEPTUAL
NOT FOR CONSTRUCTION

REGISTERED PROFESSIONAL ENGINEER
JOHNNY MURAD
NO. 67512
EXPIRATION
6-30-2019
CIVIL
STATE OF CALIFORNIA

HUITT-ZOLLARS
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3990 CONCOURS, #330 * ONTARIO, CALIFORNIA 91761 * (909) 941-7799

PREPARED UNDER THE SUPERVISION OF: JOHNNY MURAD

67512 R.C.E. 6-30-19 EXPIRES DATE

CITY OF RIALTO, CALIFORNIA

COMPOSITE UTILITY PLAN

DRAWN BY: H.Z. STAFF
DESIGNED BY: H.Z. STAFF
CHECKED BY: J.M./R.C./M.H.

BASELINE STORM DRAIN
LOCUST AVE TAMARIND AVE
STA 96+02.00 TO 134+00.00

SCALE: AS SHOWN
DATE: OCT 2018
DWG. NO.: 5/5

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APPENDIX 2

AIR QUALITY and GHG IMPACT ANALYSES

HZ-116
RIALTO BASELINE STORM DRAIN PROJECT

CITY OF RIALTO, CALIFORNIA

Prepared by:

Giroux & Associates
1800 E Garry St., #205
Santa Ana, CA 92705

Prepared for:

Tom Dodson & Associates
Attn: Kaitlyn Dodson
2150 N. Arrowhead Avenue
San Bernardino, California 92405

Date:

April 15, 2019

Project No.: P19-009 A

ATMOSPHERIC SETTING

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

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

Winds across the project area are an important meteorological parameter because they control both the initial rate of dilution of locally generated air pollutant emissions as well as controlling their regional trajectory. Winds across the project site display a very unidirectional onshore flow from the southwest-west that is strongest in summer with a weaker offshore return flow from the northeast that is strongest on winter nights when the land is colder than the ocean. The onshore winds during the day average 6-10 mph while the offshore flow is often calm or drifts slowly westward at 1-3 mph.

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

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

In winter, when the air near the ground cools while the air aloft remains warm, radiation inversions are formed that trap low-level emissions such as automobile exhaust near their source. As background levels of primary vehicular exhaust rise during the seaward return flow, the combination of rising non-local baseline levels plus emissions trapped locally by these radiation inversions creates micro-scale air pollution "hot spots" near freeways, shopping centers and other

traffic concentrations in coastal areas of the Los Angeles Basin. Because the nocturnal airflow across the project site has its origin in very lightly developed areas of the San Gabriel Mountains, background pollution levels at night in winter are very low in the project vicinity. Localized air pollution contributions are insufficient to create a "hot spot" potential when superimposed upon the clean nocturnal baseline. The combination of winds and inversions are critical determinants in leading to the degraded air quality in summer, and the generally good air quality in winter in the project area.

AIR QUALITY SETTING

AMBIENT AIR QUALITY STANDARDS (AAQS)

In order to gauge the significance of the air quality impacts of the proposed project, those impacts, together with existing background air quality levels, must be compared to the applicable ambient air quality standards. These standards are the levels of air quality considered safe, with an adequate margin of safety, to protect the public health and welfare. They are designed to protect those people most susceptible to further respiratory distress such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise, called "sensitive receptors." Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed. Recent research has shown, however, that chronic exposure to ozone (the primary ingredient in photochemical smog) may lead to adverse respiratory health even at concentrations close to the ambient standard.

National AAQS were established in 1971 for six pollution species with states retaining the option to add other pollutants, require more stringent compliance, or to include different exposure periods. The initial attainment deadline of 1977 was extended several times in air quality problem areas like Southern California. In 2003, the Environmental Protection Agency (EPA) adopted a rule, which extended and established a new attainment deadline for ozone for the year 2021. Because the State of California had established AAQS several years before the federal action and because of unique air quality problems introduced by the restrictive dispersion meteorology, there is considerable difference between state and national clean air standards. Those standards currently in effect in California are shown in Table 1. Sources and health effects of various pollutants are shown in Table 2.

The Federal Clean Air Act Amendments (CAAA) of 1990 required that the U.S. Environmental Protection Agency (EPA) review all national AAQS in light of currently known health effects. EPA was charged with modifying existing standards or promulgating new ones where appropriate. EPA subsequently developed standards for chronic ozone exposure (8+ hours per day) and for very small diameter particulate matter (called "PM-2.5"). New national AAQS were adopted in 1997 for these pollutants.

Planning and enforcement of the federal standards for PM-2.5 and for ozone (8-hour) were challenged by trucking and manufacturing organizations. In a unanimous decision, the U.S. Supreme Court ruled that EPA did not require specific congressional authorization to adopt national clean air standards. The Court also ruled that health-based standards did not require preparation of a cost-benefit analysis. The Court did find, however, that there was some inconsistency between existing and "new" standards in their required attainment schedules. Such attainment-planning schedule inconsistencies centered mainly on the 8-hour ozone standard. EPA subsequently agreed to downgrade the attainment designation for a large number of communities to “non-attainment” for the 8-hour ozone standard.

Table 1

Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards [1]		National Standards [2]		
		Concentration [3]	Method [4]	Primary [3,5]	Secondary [3,6]	Method [7]
Ozone (O_3)[8]	1 Hour	0.09 ppm (180 µg/m³)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m³)		0.070 ppm (137 µg/m³)		
Respirable Particulate Matter (PM10)[9]	24 Hour	50 µg/m³	Gravimetric or Beta Attenuation	150 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m³		—		
Fine Particulate Matter (PM2.5)[9]	24 Hour	—	—	35 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m³	Gravimetric or Beta Attenuation	12.0 µg/m³	15 µg/m³	
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m³)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m³)	—	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10 mg/m³)		9 ppm (10 mg/m³)	—	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m³)		—	—	
Nitrogen Dioxide (NO_2)[10]	1 Hour	0.18 ppm (339 µg/m³)	Gas Phase Chemiluminescence	100 ppb (188 µg/m³)	—	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m³)		0.053 ppm (100 µg/m³)	Same as Primary Standard	
Sulfur Dioxide (SO_2)[11]	1 Hour	0.25 ppm (655 µg/m³)	Ultraviolet Fluorescence	75 ppb (196 µg/m³)	—	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method)
	3 Hour	—		—	0.5 ppm (1300 µg/m³)	
	24 Hour	0.04 ppm (105 µg/m³)		0.14 ppm (for certain areas)[11]	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas)[11]	—	
Lead[12,13]	30 Day Average	1.5 µg/m³	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m³ (for certain areas)[12]	Same as Primary Standard	
	Rolling 3-Month Average	—		0.15 µg/m³		
Visibility Reducing Particles[14]	8 Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape	No National Standards		
Sulfates	24 Hour	25 µg/m³	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m³)	Ultraviolet Fluorescence			
Vinyl Chloride[12]	24 Hour	0.01 ppm (26 µg/m³)	Gas Chromatography			

See footnotes on next page ...

For more information please call ARB-PIO at (916) 322-2990

California Air Resources Board (5/4/16)

Table 1 (continued)

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu g/m^3$ is equal to or less than one. For PM2.5, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.

3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

4. Any equivalent measurement method which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.

5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

7. Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.

8. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

9. On December 14, 2012, the national annual PM2.5 primary standard was lowered from 15 $\mu g/m^3$ to 12.0 $\mu g/m^3$. The existing national 24-hour PM2.5 standards (primary and secondary) were retained at 35 $\mu g/m^3$, as was the annual secondary standard of 15 $\mu g/m^3$. The existing 24-hour PM10 standards (primary and secondary) of 150 $\mu g/m^3$ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

10. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.

11. On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

    Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

12. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

13. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 $\mu g/m^3$ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

14. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

Table 2
Health Effects of Major Criteria Pollutants

Pollutants	Sources	Primary Effects
Carbon Monoxide (CO)	• Incomplete combustion of fuels and other carbon-containing substances, such as motor exhaust. • Natural events, such as decomposition of organic matter.	• Reduced tolerance for exercise. • Impairment of mental function. • Impairment of fetal development. • Death at high levels of exposure. • Aggravation of some heart diseases (angina).
Nitrogen Dioxide (NO_2)	• Motor vehicle exhaust. • High temperature stationary combustion. • Atmospheric reactions.	• Aggravation of respiratory illness. • Reduced visibility. • Reduced plant growth. • Formation of acid rain.
Ozone (O_3)	• Atmospheric reaction of organic gases with nitrogen oxides in sunlight.	• Aggravation of respiratory and cardiovascular diseases. • Irritation of eyes. • Impairment of cardiopulmonary function. • Plant leaf injury.
Lead (Pb)	• Contaminated soil.	• Impairment of blood function and nerve construction. • Behavioral and hearing problems in children.
Respirable Particulate Matter (PM-10)	• Stationary combustion of solid fuels. • Construction activities. • Industrial processes. • Atmospheric chemical reactions.	• Reduced lung function. • Aggravation of the effects of gaseous pollutants. • Aggravation of respiratory and cardio respiratory diseases. • Increased cough and chest discomfort. • Soiling. • Reduced visibility.
Fine Particulate Matter (PM-2.5)	• Fuel combustion in motor vehicles, equipment, and industrial sources. • Residential and agricultural burning. • Industrial processes. • Also, formed from photochemical reactions of other pollutants, including NOx, sulfur oxides, and organics.	• Increases respiratory disease. • Lung damage. • Cancer and premature death. • Reduces visibility and results in surface soiling.
Sulfur Dioxide (SO_2)	• Combustion of sulfur-containing fossil fuels. • Smelting of sulfur-bearing metal ores. • Industrial processes.	• Aggravation of respiratory diseases (asthma, emphysema). • Reduced lung function. • Irritation of eyes. • Reduced visibility. • Plant injury. • Deterioration of metals, textiles, leather, finishes, coatings, etc.

Source: California Air Resources Board, 2002.

Evaluation of the most current data on the health effects of inhalation of fine particulate matter prompted the California Air Resources Board (ARB) to recommend adoption of the statewide PM-2.5 standard that is more stringent than the federal standard. This standard was adopted in 2002. The State PM-2.5 standard is more of a goal in that it does not have specific attainment planning requirements like a federal clean air standard, but only requires continued progress towards attainment.

Similarly, the ARB extensively evaluated health effects of ozone exposure. A new state standard for an 8-hour ozone exposure was adopted in 2005, which aligned with the exposure period for the federal 8-hour standard. The California 8-hour ozone standard of 0.07 ppm is more stringent than the federal 8-hour standard of 0.075 ppm. The state standard, however, does not have a specific attainment deadline. California air quality jurisdictions are required to make steady progress towards attaining state standards, but there are no hard deadlines or any consequences of non-attainment. During the same re-evaluation process, the ARB adopted an annual state standard for nitrogen dioxide ($NO_{2)}$ that is more stringent than the corresponding federal standard, and strengthened the state one-hour NO_2 standard.

As part of EPA's 2002 consent decree on clean air standards, a further review of airborne particulate matter (PM) and human health was initiated. A substantial modification of federal clean air standards for PM was promulgated in 2006. Standards for PM-2.5 were strengthened, a new class of PM in the 2.5 to 10 micron size was created, some PM-10 standards were revoked, and a distinction between rural and urban air quality was adopted. In December, 2012, the federal annual standard for PM-2.5 was reduced from 15 $\mu g/m^3$ to 12 $\mu g/m^3$ which matches the California AAQS. The severity of the basin's non-attainment status for PM-2.5 may be increased by this action and thus require accelerated planning for future PM-2.5 attainment.

In response to continuing evidence that ozone exposure at levels just meeting federal clean air standards is demonstrably unhealthful, EPA had proposed a further strengthening of the 8-hour standard. A new 8-hour ozone standard was adopted in 2015 after extensive analysis and public input. The adopted national 8-hour ozone standard is 0.07 ppm which matches the current California standard. It will require three years of ambient data collection, then 2 years of non-attainment findings and planning protocol adoption, then several years of plan development and approval. Final air quality plans for the new standard are likely to be adopted around 2022. Ultimate attainment of the new standard in ozone problem areas such as Southern California might be after 2025.

In 2010 a new federal one-hour primary standard for nitrogen dioxide (NO_2) was adopted. This standard is more stringent than the existing state standard. Based upon air quality monitoring data in the South Coast Air Basin, the California Air Resources Board has requested the EPA to designate the basin as being in attainment for this standard. The federal standard for sulfur dioxide (SO_2) was also recently revised. However, with minimal combustion of coal and mandatory use of low sulfur fuels in California, SO_2 is typically not a problem pollutant.

BASELINE AIR QUALITY

Existing levels of ambient air quality and historical trends and projections in the project area are best documented from measurements made near the project site. The South Coast Air Quality Management District (SCAQMD) operates a monitoring station in Fontana that monitors the complete spectrum of gaseous and particulate pollutants for which there are clean air standards. From these data resources, one can well infer that baseline air quality levels near the project site are improving, but occasionally unhealthful. Full attainment may still be many years away. Table 3 summarizes the last four years of published monitoring data from the Fontana station.

1. Photochemical smog (ozone) levels frequently exceed standards. The 1-hour state standard was violated 9.2 percent of all days in the last four years in Fontana. The 8-hour state ozone standard has been exceeded 14 percent of all days in the past four years. The Federal eight-hour ozone standard has averaged around 10 percent of the time during this period. While ozone levels are still high, they are much lower than 10 to 20 years ago. Attainment of all clean air standards in the project vicinity is not likely to occur soon, but the severity and frequency of violations is expected to continue to slowly decline during the current decade.

2. Carbon monoxide (CO) levels at the Fontana station have remained level throughout the last four years. The 8-hour standard has not been exceeded and the maximum 8-hour standard has been steadily declining, with 2016 having the lowest concentration in the time period analyzed. These data suggest that baseline CO levels in the project area are generally healthful and can accommodate a reasonable level of additional traffic emissions before any adverse air quality effects would be expected.

3. PM-10 levels periodically exceed the state 24-hour standard, but no measurements in excess of the national 24-hour particulate standard has been recorded in the last four years. State PM-10 standards are exceeded an average of 22 percent of all days per year.

4. A substantial fraction of PM-10 is comprised of ultra-small diameter particulates capable of being inhaled into deep lung tissue (PM-2.5). Year 2016 showed the fewest violations in recent years. Less than one percent of all days exceeded the current national 24-hour standard of 35 $\mu g/m^3$.

5. More localized pollutants such as nitrogen oxides, lead, etc. are very low near the project site because background levels never exceed allowable levels, and there are only limited sources of such emissions near the project site.

Table 3
Air Quality Monitoring Summary (2014-2017)
(Number of Days Standards Were Exceeded, and
Maximum Levels During Such Violations)
(Entries shown as ratios = samples exceeding standard/samples taken)

Pollutant/Standard	2014	2015	2016	2017
Ozone				
1-Hour > 0.09 ppm (S)	31	36	34	33
8-Hour > 0.07 ppm (S)	52	57	49	49
8- Hour > 0.075 ppm (F)	37	39	34	38
Max. 1-Hour Conc. (ppm)	0.127	0.133	0.139	0.137
Max. 8-Hour Conc. (ppm)	0.105	0.111	0.105	0.118
Carbon Monoxide				
8- Hour > 9. ppm (S,F)	0	0	0	0
Max 8-hour Conc. (ppm)	1.2	1.2	1.0	1.3
Nitrogen Dioxide				
1-Hour > 0.18 ppm (S)	0	0	0	0
Max. 1-Hour Conc. (ppm)	0.074	0.089	0.071	0.069
Inhalable Particulates (PM-10)				
24-hour > 50 $\mu g/m^3$ (S)	13/58	13/55	15/61	7/43
24-hour > 150 $\mu g/m^3$ (F)	0/58	0/55	0/61	0/43
Max. 24-Hr. Conc. ($\mu g/m^3$)	68.	96.	94.	75.
Ultra-Fine Particulates (PM-2.5)				
24-Hour > 35 $\mu g/m^3$ (F)	1/58	2/113	0/111	1/120
Max. 24-Hr. Conc. ($\mu g/m^3$)	78.9	47.3	30.4	39.2

S=State Standard
F=Federal Standard

Source: South Coast AQMD – Fontana Air Quality Monitoring Station
data: www.arb.ca.gov/adam/77

AIR QUALITY PLANNING

The Federal Clean Air Act (1977 Amendments) required that designated agencies in any area of the nation not meeting national clean air standards must prepare a plan demonstrating the steps that would bring the area into compliance with all national standards. The SCAB could not meet the deadlines for ozone, nitrogen dioxide, carbon monoxide, or PM-10. In the SCAB, the agencies designated by the governor to develop regional air quality plans are the SCAQMD and the Southern California Association of Governments (SCAG). The two agencies first adopted an Air Quality Management Plan (AQMP) in 1979 and revised it several times as earlier attainment forecasts were shown to be overly optimistic.

The 1990 Federal Clean Air Act Amendment (CAAA) required that all states with air-sheds with "serious" or worse ozone problems submit a revision to the State Implementation Plan (SIP). Amendments to the SIP have been proposed, revised and approved over the past decade. The most current regional attainment emissions forecast for ozone precursors (ROG and NOx) and for carbon monoxide (CO) and for particulate matter are shown in Table 4. Substantial reductions in emissions of ROG, NOx and CO are forecast to continue throughout the next several decades. Unless new particulate control programs are implemented, PM-10 and PM-2.5 are forecast to slightly increase.

The Air Quality Management District (AQMD) adopted an updated clean air "blueprint" in August 2003. The 2003 Air Quality Management Plan (AQMP) was approved by the EPA in 2004. The AQMP outlined the air pollution measures needed to meet federal health-based standards for ozone by 2010 and for particulates (PM-10) by 2006. The 2003 AQMP was based upon the federal one-hour ozone standard which was revoked late in 2005 and replaced by an 8-hour federal standard. Because of the revocation of the hourly standard, a new air quality planning cycle was initiated.

With re-designation of the air basin as non-attainment for the 8-hour ozone standard, a new attainment plan was developed. This plan shifted most of the one-hour ozone standard attainment strategies to the 8-hour standard. As previously noted, the attainment date was to "slip" from 2010 to 2021. The updated attainment plan also includes strategies for ultimately meeting the federal PM-2.5 standard.

Because projected attainment by 2021 required control technologies that did not exist yet, the SCAQMD requested a voluntary "bump-up" from a "severe non-attainment" area to an "extreme non-attainment" designation for ozone. The extreme designation was to allow a longer time period for these technologies to develop. If attainment cannot be demonstrated within the specified deadline without relying on "black-box" measures, EPA would have been required to impose sanctions on the region had the bump-up request not been approved. In April 2010, the EPA approved the change in the non-attainment designation from "severe-17" to "extreme." This reclassification set a later attainment deadline (2024), but also required the air basin to adopt even more stringent emissions controls.

Table 4

South Coast Air Basin Emissions Forecasts (Emissions in tons/day)

Pollutant	2015[a]	2020[b]	2025[b]	2030[b]
NOx	357	289	266	257
VOC	400	393	393	391
PM-10	161	165	170	172
PM-2.5	67	68	70	71

[a]2015 Base Year.
[b]With current emissions reduction programs and adopted growth forecasts.
Source: California Air Resources Board, 2013 Almanac of Air Quality

In other air quality attainment plan reviews, EPA had disapproved part of the SCAB PM-2.5 attainment plan included in the AQMP. EPA stated that the current attainment plan relied on PM-2.5 control regulations that had not yet been approved or implemented. It was expected that a number of rules that were pending approval would remove the identified deficiencies. If these issues were not resolved within the next several years, federal funding sanctions for transportation projects could result. The 2012 AQMP included in the current California State Implementation Plan (SIP) was expected to remedy identified PM-2.5 planning deficiencies.

The federal Clean Air Act requires that non-attainment air basins have EPA approved attainment plans in place. This requirement includes the federal one-hour ozone standard even though that standard was revoked almost ten years ago. There was no approved attainment plan for the one-hour federal standard at the time of revocation. Through a legal quirk, the SCAQMD is now required to develop an AQMP for the long since revoked one-hour federal ozone standard. Because the current SIP for the basin contains a number of control measures for the 8-hour ozone standard that are equally effective for one-hour levels, the 2012 AQMP was believed to satisfy hourly attainment planning requirements.

AQMPs are required to be updated every three years. The 2012 AQMP was adopted in early 2013. An updated AQMP was required for completion in 2016. The 2016 AQMP was adopted by the SCAQMD Board in March, 2017, and has been submitted the California Air Resources Board for forwarding to the EPA. The 2016 AQMP acknowledges that motor vehicle emissions have been effectively controlled and that reductions in NOx, the continuing ozone problem pollutant, may need to come from major stationary sources (power plants, refineries, landfill flares, etc.). The current attainment deadlines for all federal non-attainment pollutants are now as follows:

8-hour ozone (70 ppb)	2032
Annual PM-2.5 (12 $\mu g/m^3$)	2025
8-hour ozone (75 ppb)	2024 (former standard)
1-hour ozone (120 ppb)	2023 (rescinded standard)

24-hour PM-2.5 (35 μg/m^3) 2019

The key challenge is that NOx emission levels, as a critical ozone precursor pollutant, are forecast to continue to exceed the levels that would allow the above deadlines to be met. Unless additional stringent NOx control measures are adopted and implemented, ozone attainment goals may not be met.

The proposed project does not directly relate to the AQMP in that there are no specific air quality programs or regulations governing storm drain improvement projects. Conformity with adopted plans, forecasts and programs relative to population, housing, employment and land use is the primary yardstick by which impact significance of planned growth is determined. The SCAQMD, however, while acknowledging that the AQMP is a growth-accommodating document, does not favor designating regional impacts as less-than-significant just because the proposed development is consistent with regional growth projections. Air quality impact significance for the proposed project has therefore been analyzed on a project-specific basis.

AIR QUALITY IMPACT

STANDARDS OF SIGNIFICANCE

Air quality impacts are considered "significant" if they cause clean air standards to be violated where they are currently met, or if they "substantially" contribute to an existing violation of standards. Any substantial emissions of air contaminants for which there is no safe exposure, or nuisance emissions such as dust or odors, would also be considered a significant impact.

Appendix G of the California CEQA Guidelines offers the following five tests of air quality impact significance. A project would have a potentially significant impact if it:

a) Conflict with or obstruct implementation of the applicable air quality plan?
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?
c) Expose sensitive receptors to substantial pollutant concentrations?
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Primary Pollutants

Air quality impacts generally occur on two scales of motion. Near an individual source of emissions or a collection of sources such as a crowded intersection or parking lot, levels of those pollutants that are emitted in their already unhealthful form will be highest. Carbon monoxide (CO) is an example of such a pollutant. Primary pollutant impacts can generally be evaluated directly in comparison to appropriate clean air standards. Violations of these standards where they are currently met, or a measurable worsening of an existing or future violation, would be considered a significant impact. Many particulates, especially fugitive dust emissions, are also primary pollutants. Because of the non-attainment status of the South Coast Air Basin (SCAB) for PM-10, an aggressive dust control program is required to control fugitive dust during project construction.

Secondary Pollutants

Many pollutants, however, require time to transform from a more benign form to a more unhealthful contaminant. Their impact occurs regionally far from the source. Their incremental regional impact is minute on an individual basis and cannot be quantified except through complex photochemical computer models. Analysis of significance of such emissions is based upon a specified amount of emissions (pounds, tons, etc.) even though there is no way to translate those emissions directly into a corresponding ambient air quality impact.

Because of the chemical complexity of primary versus secondary pollutants, the SCAQMD has designated significant emissions levels as surrogates for evaluating regional air quality impact significance independent of chemical transformation processes. Projects with daily emissions that

exceed any of the following emission thresholds are recommended by the SCAQMD to be considered significant under CEQA guidelines.

Table 5
Daily Emissions Thresholds

Pollutant	Construction	Operations
ROG	75	55
NOx	100	55
CO	550	550
PM-10	150	150
PM-2.5	55	55
SOx	150	150
Lead	3	3

Source: SCAQMD CEQA Air Quality Handbook, November, 1993 Rev.

Additional Indicators

In its CEQA Handbook, the SCAQMD also states that additional indicators should be used as screening criteria to determine the need for further analysis with respect to air quality. The additional indicators are as follows:

- Project could interfere with the attainment of the federal or state ambient air quality standards by either violating or contributing to an existing or projected air quality violation

- Project could result in population increases within the regional statistical area which would be in excess of that projected in the AQMP and in other than planned locations for the project's build-out year.

- Project could generate vehicle trips that cause a CO hot spot.

CONSTRUCTION ACTIVITY IMPACTS

CalEEMod was developed by the SCAQMD to provide a model by which to calculate construction emissions from a variety of land use projects. It calculates both the daily maximum and annual average emissions for criteria pollutants as well as total or annual greenhouse gas (GHG) emissions.

The City of Rialto proposes to upgrade the existing drainage infrastructure conditions within Baseline Road from Cactus Basin (Cactus Avenue) to Tamarind Avenue. The project consists of installing approximately 11,000 lineal feet (LF) of various diameter storm drains that would capture flows north of Baseline Road.

The Project will be constructed once funding becomes available, which is anticipated to be secured in 2021 or 2022. Construction is anticipated to require between 6 months and one year to complete. At any given time during construction a maximum of 30 employees would be required each day, though the number of construction workers required will range from 10 to 30 persons per day.

Although exhaust emissions will result from on and off-site equipment, the exact types and numbers of equipment will vary among contractors such that such emissions cannot be quantified with certainty. The CalEEMod.2016.3.2 computer model was used to calculate emissions from the prototype construction equipment fleet and schedule as indicated in Table 6.

Table 6
CalEEMod Construction Activity Equipment Fleet and Workdays
(30 workers daily)

Prep and Concrete Removal (3 months)	1 Concrete Saw
	1 Dozer
	1 Loader/Backhoe
	2 Skid Steer Loaders
Trench and Install Pipeline (4 months)	1 Loader/Backhoe
	2 Trenchers
	1 Forklifts
	1 Crane
	1 Excavator
Backfill and Paving (3 months)	1 Paver
	1 Roller
	1 Loader/Backhoe
	4 Mixers
	2 Compactors

Utilizing the indicated equipment fleet shown in Tables 6 the following worst-case daily construction emissions are calculated by CalEEMod and are listed in Table 7.

Table 7
Construction Activity Emissions
Maximum Daily Emissions (pounds/day)

Maximal Construction Emissions per Calendar Year	ROG	NOx	CO	SO_2	PM-10	PM-2.5
Year 2021	2.4	21.9	19.5	0.0	1.8	1.2
SCAQMD Thresholds	75	100	550	150	150	55

Source: CalEEMod.2016.3.2 output in appendix

Peak daily construction activity emissions are below their respective SCAQMD CEQA significance thresholds without the need for any additional mitigation.

LOCALIZED SIGNIFICANCE THRESHOLDS

The SCAQMD has developed analysis parameters to evaluate ambient air quality on a local level in addition to the more regional emissions-based thresholds of significance. These analysis elements are called Localized Significance Thresholds (LSTs). LSTs were developed in response to Governing Board's Environmental Justice Enhancement Initiative 1-4 and the LST methodology was provisionally adopted in October 2003 and formally approved by SCAQMD's Mobile Source Committee in February 2005.

For the proposed project, the primary source of possible LST impact would be during construction. LST screening tables are available for various source-receptor distances. For this project the most stringent thresholds for a 1-acre site and a 25-meter source-receptor distance was used to compare to construction emissions as shown in Table 8.

Table 8
LST and Project Emissions (pounds/day)

LST 1 acre/25 meters Central San Bernardino Valley	**CO**	**NOx**	**PM-10**	**PM-2.5**
LST Thresholds	667	118	4	3
Max On-Site Project Emissions	20	22	2	1

LSTs were compared to the maximum daily construction activities. As seen in Table 8, even without use of mitigation, emissions easily meet the LST thresholds. LST impacts are less-than-significant.

OPERATIONAL IMPACTS

There are no operational air pollution emissions associated with a gravity fed storm drain.

CONSTRUCTION EMISSIONS MINIMIZATION

Construction activities are not anticipated to cause dust emissions to exceed SCAQMD CEQA thresholds. Nevertheless, emissions minimization through enhanced dust control measures is recommended for use because of the non-attainment status of the air basin. Recommended measures include:

Fugitive Dust Control

- Apply soil stabilizers or moisten inactive areas.
- Water exposed surfaces as needed to avoid visible dust leaving the construction site (typically 2-3 times/day).
- Cover all stock piles with tarps at the end of each day or as needed.
- Provide water spray during loading and unloading of earthen materials.
- Minimize in-out traffic from construction zone
- Cover all trucks hauling dirt, sand, or loose material and require all trucks to maintain at least two feet of freeboard
- Sweep streets daily if visible soil material is carried out from the construction site

Similarly, ozone precursor emissions (ROG and NOx) are calculated to be below SCAQMD CEQA thresholds. However, because of the regional non-attainment for photochemical smog, the use of reasonably available control measures for diesel exhaust is recommended. Combustion emissions control options include:

Exhaust Emissions Control

- Utilize well-tuned off-road construction equipment.
- Establish a preference for contractors using Tier 3 or better rated heavy equipment.
- Enforce 5-minute idling limits for both on-road trucks and off-road equipment.

GREENHOUSE GAS EMISSIONS

GREENHOUSE GAS EMISSIONS

"Greenhouse gases" (so called because of their role in trapping heat near the surface of the earth) emitted by human activity are implicated in global climate change, commonly referred to as "global warming." These greenhouse gases contribute to an increase in the temperature of the earth's atmosphere by transparency to short wavelength visible sunlight, but near opacity to outgoing terrestrial long wavelength heat radiation in some parts of the infrared spectrum. The principal greenhouse gases (GHGs) are carbon dioxide, methane, nitrous oxide, ozone, and water vapor. For purposes of planning and regulation, Section 15364.5 of the California Code of Regulations defines GHGs to include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride. Fossil fuel consumption in the transportation sector (on-road motor vehicles, off-highway mobile sources, and aircraft) is the single largest source of GHG emissions, accounting for approximately half of GHG emissions globally. Industrial and commercial sources are the second largest contributors of GHG emissions with about one-fourth of total emissions.

California has passed several bills and the Governor has signed at least three executive orders regarding greenhouse gases. GHG statues and executive orders (EO) include AB 32, SB 1368, EO S-03-05, EO S-20-06 and EO S-01-07.

AB 32 is one of the most significant pieces of environmental legislation that California has adopted. Among other things, it is designed to maintain California's reputation as a "national and international leader on energy conservation and environmental stewardship." It will have wide-ranging effects on California businesses and lifestyles as well as far reaching effects on other states and countries. A unique aspect of AB 32, beyond its broad and wide-ranging mandatory provisions and dramatic GHG reductions are the short time frames within which it must be implemented. Major components of the AB 32 include:

- Require the monitoring and reporting of GHG emissions beginning with sources or categories of sources that contribute the most to statewide emissions.
- Requires immediate "early action" control programs on the most readily controlled GHG sources.
- Mandates that by 2020, California's GHG emissions be reduced to 1990 levels.
- Forces an overall reduction of GHG gases in California by 25-40%, from business as usual, to be achieved by 2020.
- Must complement efforts to achieve and maintain federal and state ambient air quality standards and to reduce toxic air contaminants.

Statewide, the framework for developing the implementing regulations for AB 32 is under way. Maximum GHG reductions are expected to derive from increased vehicle fuel efficiency, from greater use of renewable energy and from increased structural energy efficiency. Additionally, through the California Climate Action Registry (CCAR now called the Climate Action Reserve), general and industry-specific protocols for assessing and reporting GHG emissions have been

developed. GHG sources are categorized into direct sources (i.e. company owned) and indirect sources (i.e. not company owned). Direct sources include combustion emissions from on-and off-road mobile sources, and fugitive emissions. Indirect sources include off-site electricity generation and non-company owned mobile sources.

GREENHOUSE GAS EMISSIONS SIGNIFICANCE THRESHOLDS

In response to the requirements of SB97, the State Resources Agency developed guidelines for the treatment of GHG emissions under CEQA. These new guidelines became state laws as part of Title 14 of the California Code of Regulations in March 2010. The CEQA Appendix G guidelines were modified to include GHG as a required analysis element. A project would have a potentially significant impact if it:

- Generates GHG emissions, directly or indirectly, that may have a significant impact on the environment, or,

- Conflicts with an applicable plan, policy or regulation adopted to reduce GHG emissions.

Section 15064.4 of the Code specifies how significance of GHG emissions is to be evaluated. The process is broken down into quantification of project-related GHG emissions, deciding significance, and specification of any appropriate mitigation if impacts are found to be potentially significant. At each of these steps, the new GHG guidelines afford the lead agency with substantial flexibility.

Emissions identification may be quantitative, qualitative or based on performance standards. CEQA guidelines allow the lead agency to "select the model or methodology it considers most appropriate." The most common practice for transportation/combustion GHG emissions quantification is to use a computer model such as CalEEMod, as was used in the ensuing analysis.

The significance of those emissions then must be evaluated; the selection of a threshold of significance must take into consideration what level of GHG emissions would be cumulatively considerable. The guidelines are clear that they do not support a zero net emissions threshold. If the lead agency does not have sufficient expertise in evaluating GHG impacts, it may rely on thresholds adopted by an agency with greater expertise.

On December 5, 2008 the SCAQMD Governing Board adopted an Interim quantitative GHG Significance Threshold for industrial projects where the SCAQMD is the lead agency (e.g., stationary source permit projects, rules, plans, etc.) of 10,000 Metric Tons (MT) CO_2 equivalent/year. In September 2010, the Working Group released revisions which recommended a threshold of 3,000 MT CO_2e for all land use types. This 3,000 MT/year recommendation has been used as a guideline for this analysis.

PROJECT RELATED GHG EMISSIONS GENERATION

Construction Activity GHG Emissions

The project is assumed to require 10 months for construction starting in November of 2019 and continuing September 2021. During project construction, the CalEEMod2016.3.2 computer model predicts that the construction activities will generate the annual CO_2e emissions identified in Table 9.

Table 9
Construction Emissions (Metric Tons $CO_2(e)$)

Year 2021	
Total	**252.4**
Amortized	8.4
Significance Threshold	3,000

*CalEEMod Output provided in appendix

SCAQMD GHG emissions policy from construction activities is to amortize emissions over a 30-year lifetime. The amortized level is also provided. GHG impacts from construction are considered individually less-than-significant.

CONSISTENCY WITH GHG PLANS, PROGRAMS AND POLICIES

The City of Rialto has participated in the San Bernardino County Regional Greenhouse Gas Reduction Plan with the San Bernardino Associated Governments (SANBAG). This study includes an inventory compilation of GHG emissions and an evaluation of reduction measures that could be adopted by the 21 partnership cities of San Bernardino County.

The proposed project has no associated operational emissions and generates minimal construction GHG emissions. Project GHG emissions will cease after the 10-month construction period. Therefore, there are no applicable mitigation measures for the proposed project.

Storm water conveyance is a very small component of the total City of Rialto GHG emissions inventory. Since project construction is below the recommended SCAQMD 3,000 MT CO_2e threshold it would not conflict with any applicable plan, policy, or regulation to reduce GHG emissions.

CALEEMOD OUTPUT

- **Construction Daily**
- **Construction Annual**

Riato Storm Drain

South Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	1.50	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	10			**Operational Year**	2021
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 - 11,000 lf x 72"

Construction Phase - Prep and Concrete Removal: 3 months, Trench and Install Pipe: 4 months, Cover and Fill: 3 months

Off-road Equipment - Cover and Fill: 4 mixers, 1 paver, 1 roller, 1 loader/backhoe, 2 compactors

Off-road Equipment - Prep and Concrete Removal: 1 concrete saw, 1 dozer, 3 loader/backhoes, 2 skid steer loaders

Off-road Equipment - Pipeline Install: 1 loader/backhoe, 2 trenchers, 1 forklift, 1 crane, 1 excavator

Trips and VMT - 30 workers-60 trips per day

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	60.00
tblConstructionPhase	NumDays	10.00	60.00
tblConstructionPhase	PhaseEndDate	1/28/2021	3/25/2021
tblConstructionPhase	PhaseEndDate	11/26/2021	10/22/2021
tblConstructionPhase	PhaseStartDate	11/13/2021	8/1/2021
tblLandUse	LotAcreage	0.00	1.50
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	LoadFactor	0.20	0.20
tblOffRoadEquipment	LoadFactor	0.29	0.29
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	OffRoadEquipmentType		Skid Steer Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	WorkerTripNumber	18.00	60.00
tblTripsAndVMT	WorkerTripNumber	25.00	60.00
tblTripsAndVMT	WorkerTripNumber	15.00	60.00

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	2.3945	21.8593	19.5140	0.0349	0.6771	1.1272	1.7979	0.1797	1.0509	1.2287	0.0000	3,385.6295	3,385.6295	0.7408	0.0000	3,404.1501
Maximum	**2.3945**	**21.8593**	**19.5140**	**0.0349**	**0.6771**	**1.1272**	**1.7979**	**0.1797**	**1.0509**	**1.2287**	**0.0000**	**3,385.6295**	**3,385.6295**	**0.7408**	**0.0000**	**3,404.1501**

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	2.3945	21.8593	19.5140	0.0349	0.6771	1.1272	1.7979	0.1797	1.0509	1.2287	0.0000	3,385.6295	3,385.6295	0.7408	0.0000	3,404.1501
Maximum	**2.3945**	**21.8593**	**19.5140**	**0.0349**	**0.6771**	**1.1272**	**1.7979**	**0.1797**	**1.0509**	**1.2287**	**0.0000**	**3,385.6295**	**3,385.6295**	**0.7408**	**0.0000**	**3,404.1501**

	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	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	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
Mobile	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	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.0000**	**2.3000e-004**

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	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	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
Mobile	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	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.0000**	**2.3000e-004**

	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	Prep and Concrete Removal	Demolition	1/1/2021	3/25/2021	5	60	
2	Pipeline Install	Trenching	4/1/2021	7/21/2021	5	80	
3	Cover and Fill	Paving	8/1/2021	10/22/2021	5	60	

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
Cover and Fill	Plate Compactors	2	7.00	8	0.43
Cover and Fill	Cement and Mortar Mixers	4	6.00	9	0.56
Prep and Concrete Removal	Concrete/Industrial Saws	1	8.00	81	0.73
Prep and Concrete Removal	Skid Steer Loaders	2	8.00	65	0.37
Pipeline Install	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Pipeline Install	Trenchers	2	8.00	78	0.50
Pipeline Install	Forklifts	1	8.00	89	0.20
Cover and Fill	Pavers	1	6.00	130	0.42
Cover and Fill	Rollers	1	7.00	80	0.38
Prep and Concrete Removal	Rubber Tired Dozers	1	8.00	247	0.40
Pipeline Install	Cranes	1	8.00	231	0.29
Pipeline Install	Excavators	1	8.00	158	0.38
Prep and Concrete Removal	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Cover and Fill	Paving Equipment	1	8.00	132	0.36
Cover and Fill	Tractors/Loaders/Backhoes	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
Prep and Concrete Removal	7	60.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Pipeline Install	6	60.00	1.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Cover and Fill	10	60.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Prep and Concrete Removal - 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	2.1434	21.6955	17.2612	0.0282		1.1222	1.1222		1.0463	1.0463		2,721.4906	2,721.4906	0.7229		2,739.5636
Total	**2.1434**	**21.6955**	**17.2612**	**0.0282**		**1.1222**	**1.1222**		**1.0463**	**1.0463**		**2,721.4906**	**2,721.4906**	**0.7229**		**2,739.5636**

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	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
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	0.2511	0.1638	2.2528	6.6700e-003	0.6707	4.9600e-003	0.6756	0.1779	4.5700e-003	0.1824		664.1390	664.1390	0.0179		664.5865
Total	**0.2511**	**0.1638**	**2.2528**	**6.6700e-003**	**0.6707**	**4.9600e-003**	**0.6756**	**0.1779**	**4.5700e-003**	**0.1824**		**664.1390**	**664.1390**	**0.0179**		**664.5865**

3.2 Prep and Concrete Removal - 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	2.1434	21.6955	17.2612	0.0282		1.1222	1.1222		1.0463	1.0463	0.0000	2,721.4906	2,721.4906	0.7229		2,739.5636
Total	**2.1434**	**21.6955**	**17.2612**	**0.0282**		**1.1222**	**1.1222**		**1.0463**	**1.0463**	**0.0000**	**2,721.4906**	**2,721.4906**	**0.7229**		**2,739.5636**

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	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
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	0.2511	0.1638	2.2528	6.6700e-003	0.6707	4.9600e-003	0.6756	0.1779	4.5700e-003	0.1824		664.1390	664.1390	0.0179		664.5865
Total	**0.2511**	**0.1638**	**2.2528**	**6.6700e-003**	**0.6707**	**4.9600e-003**	**0.6756**	**0.1779**	**4.5700e-003**	**0.1824**		**664.1390**	**664.1390**	**0.0179**		**664.5865**

3.3 Pipeline Install - 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	1.7258	17.1142	13.9215	0.0223		1.0086	1.0086		0.9279	0.9279		2,163.3364	2,163.3364	0.6997		2,180.8281
Total	**1.7258**	**17.1142**	**13.9215**	**0.0223**		**1.0086**	**1.0086**		**0.9279**	**0.9279**		**2,163.3364**	**2,163.3364**	**0.6997**		**2,180.8281**

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	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
Vendor	2.8100e-003	0.0958	0.0233	2.5000e-004	6.4000e-003	2.0000e-004	6.5900e-003	1.8400e-003	1.9000e-004	2.0300e-003		27.0744	27.0744	1.6700e-003		27.1162
Worker	0.2511	0.1638	2.2528	6.6700e-003	0.6707	4.9600e-003	0.6756	0.1779	4.5700e-003	0.1824		664.1390	664.1390	0.0179		664.5865
Total	**0.2539**	**0.2596**	**2.2761**	**6.9200e-003**	**0.6771**	**5.1600e-003**	**0.6822**	**0.1797**	**4.7600e-003**	**0.1845**		**691.2133**	**691.2133**	**0.0196**		**691.7027**

3.3 Pipeline Install - 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	1.7258	17.1142	13.9215	0.0223		1.0086	1.0086		0.9279	0.9279	0.0000	2,163.3364	2,163.3364	0.6997		2,180.8281
Total	**1.7258**	**17.1142**	**13.9215**	**0.0223**		**1.0086**	**1.0086**		**0.9279**	**0.9279**	**0.0000**	**2,163.3364**	**2,163.3364**	**0.6997**		**2,180.8281**

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	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
Vendor	2.8100e-003	0.0958	0.0233	2.5000e-004	6.4000e-003	2.0000e-004	6.5900e-003	1.8400e-003	1.9000e-004	2.0300e-003		27.0744	27.0744	1.6700e-003		27.1162
Worker	0.2511	0.1638	2.2528	6.6700e-003	0.6707	4.9600e-003	0.6756	0.1779	4.5700e-003	0.1824		664.1390	664.1390	0.0179		664.5865
Total	**0.2539**	**0.2596**	**2.2761**	**6.9200e-003**	**0.6771**	**5.1600e-003**	**0.6822**	**0.1797**	**4.7600e-003**	**0.1845**		**691.2133**	**691.2133**	**0.0196**		**691.7027**

3.4 Cover and Fill - 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	0.9763	9.0104	9.9190	0.0160		0.4646	0.4646		0.4322	0.4322		1,470.8671	1,470.8671	0.4292		1,481.5965
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9763**	**9.0104**	**9.9190**	**0.0160**		**0.4646**	**0.4646**		**0.4322**	**0.4322**		**1,470.8671**	**1,470.8671**	**0.4292**		**1,481.5965**

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	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
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	0.2511	0.1638	2.2528	6.6700e-003	0.6707	4.9600e-003	0.6756	0.1779	4.5700e-003	0.1824		664.1390	664.1390	0.0179		664.5865
Total	**0.2511**	**0.1638**	**2.2528**	**6.6700e-003**	**0.6707**	**4.9600e-003**	**0.6756**	**0.1779**	**4.5700e-003**	**0.1824**		**664.1390**	**664.1390**	**0.0179**		**664.5865**

3.4 Cover and Fill - 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	0.9763	9.0104	9.9190	0.0160		0.4646	0.4646		0.4322	0.4322	0.0000	1,470.8671	1,470.8671	0.4292		1,481.5965
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9763**	**9.0104**	**9.9190**	**0.0160**		**0.4646**	**0.4646**		**0.4322**	**0.4322**	**0.0000**	**1,470.8671**	**1,470.8671**	**0.4292**		**1,481.5965**

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	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
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	0.2511	0.1638	2.2528	6.6700e-003	0.6707	4.9600e-003	0.6756	0.1779	4.5700e-003	0.1824		664.1390	664.1390	0.0179		664.5865
Total	**0.2511**	**0.1638**	**2.2528**	**6.6700e-003**	**0.6707**	**4.9600e-003**	**0.6756**	**0.1779**	**4.5700e-003**	**0.1824**		**664.1390**	**664.1390**	**0.0179**		**664.5865**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

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
User Defined Industrial	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.551391	0.043400	0.201050	0.120272	0.016162	0.005864	0.021029	0.030512	0.002059	0.001866	0.004766	0.000706	0.000924

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	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					
NaturalGas 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
NaturalGas 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

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	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
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Industrial	0	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**

Mitigated

	NaturalGas Use	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
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Industrial	0	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**

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	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Unmitigated	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004

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	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

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	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

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

Riato Storm Drain

South Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	1.50	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	10			**Operational Year**	2021
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 - 11,000 lf x 72"

Construction Phase - Prep and Concrete Removal: 3 months, Trench and Install Pipe: 4 months, Cover and Fill: 3 months

Off-road Equipment - Cover and Fill: 4 mixers, 1 paver, 1 roller, 1 loader/backhoe, 2 compactors

Off-road Equipment - Prep and Concrete Removal: 1 concrete saw, 1 dozer, 3 loader/backhoes, 2 skid steer loaders

Off-road Equipment - Pipeline Install: 1 loader/backhoe, 2 trenchers, 1 forklift, 1 crane, 1 excavator

Trips and VMT - 30 workers-60 trips per day

Construction Off-road Equipment Mitigation -

Riato Storm Drain - South Coast Air Basin, Annual

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	60.00
tblConstructionPhase	NumDays	10.00	60.00
tblConstructionPhase	PhaseEndDate	1/28/2021	3/25/2021
tblConstructionPhase	PhaseEndDate	11/26/2021	10/22/2021
tblConstructionPhase	PhaseStartDate	11/13/2021	8/1/2021
tblLandUse	LotAcreage	0.00	1.50
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	LoadFactor	0.20	0.20
tblOffRoadEquipment	LoadFactor	0.29	0.29
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	OffRoadEquipmentType		Skid Steer Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	WorkerTripNumber	18.00	60.00
tblTripsAndVMT	WorkerTripNumber	25.00	60.00
tblTripsAndVMT	WorkerTripNumber	15.00	60.00

2.0 Emissions Summary

2.1 Overall Construction

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	tons/yr										MT/yr					
2021	0.1877	1.6281	1.5826	2.8600e-003	0.0661	0.0885	0.1545	0.0176	0.0819	0.0995	0.0000	250.9695	250.9695	0.0584	0.0000	252.4283
Maximum	**0.1877**	**1.6281**	**1.5826**	**2.8600e-003**	**0.0661**	**0.0885**	**0.1545**	**0.0176**	**0.0819**	**0.0995**	**0.0000**	**250.9695**	**250.9695**	**0.0584**	**0.0000**	**252.4283**

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	tons/yr										MT/yr					
2021	0.1877	1.6281	1.5826	2.8600e-003	0.0661	0.0885	0.1545	0.0176	0.0819	0.0995	0.0000	250.9692	250.9692	0.0584	0.0000	252.4280
Maximum	**0.1877**	**1.6281**	**1.5826**	**2.8600e-003**	**0.0661**	**0.0885**	**0.1545**	**0.0176**	**0.0819**	**0.0995**	**0.0000**	**250.9692**	**250.9692**	**0.0584**	**0.0000**	**252.4280**

	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**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2021	3-31-2021	0.7289	0.7289
2	4-1-2021	6-30-2021	0.6290	0.6290
3	7-1-2021	9-30-2021	0.3718	0.3718
		Highest	0.7289	0.7289

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	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Energy	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
Mobile	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	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						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**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

2.2 Overall Operational

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	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Energy	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
Mobile	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	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						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**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

	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	Prep and Concrete Removal	Demolition	1/1/2021	3/25/2021	5	60	
2	Pipeline Install	Trenching	4/1/2021	7/21/2021	5	80	
3	Cover and Fill	Paving	8/1/2021	10/22/2021	5	60	

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
Cover and Fill	Plate Compactors	2	7.00	8	0.43
Cover and Fill	Cement and Mortar Mixers	4	6.00	9	0.56
Prep and Concrete Removal	Concrete/Industrial Saws	1	8.00	81	0.73
Prep and Concrete Removal	Skid Steer Loaders	2	8.00	65	0.37
Pipeline Install	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Pipeline Install	Trenchers	2	8.00	78	0.50
Pipeline Install	Forklifts	1	8.00	89	0.20
Cover and Fill	Pavers	1	6.00	130	0.42
Cover and Fill	Rollers	1	7.00	80	0.38
Prep and Concrete Removal	Rubber Tired Dozers	1	8.00	247	0.40
Pipeline Install	Cranes	1	8.00	231	0.29
Pipeline Install	Excavators	1	8.00	158	0.38
Prep and Concrete Removal	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Cover and Fill	Paving Equipment	1	8.00	132	0.36
Cover and Fill	Tractors/Loaders/Backhoes	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
Prep and Concrete Removal	7	60.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Pipeline Install	6	60.00	1.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Cover and Fill	10	60.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Prep and Concrete Removal - 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	tons/yr										MT/yr					
Off-Road	0.0643	0.6509	0.5178	8.5000e-004		0.0337	0.0337		0.0314	0.0314	0.0000	74.0668	74.0668	0.0197	0.0000	74.5587
Total	**0.0643**	**0.6509**	**0.5178**	**8.5000e-004**		**0.0337**	**0.0337**		**0.0314**	**0.0314**	**0.0000**	**74.0668**	**74.0668**	**0.0197**	**0.0000**	**74.5587**

3.2 Prep and Concrete Removal - 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	tons/yr										MT/yr					
Hauling	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	0.0000	0.0000
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	0.0000	0.0000
Worker	7.4800e-003	5.5500e-003	0.0628	1.9000e-004	0.0198	1.5000e-004	0.0199	5.2400e-003	1.4000e-004	5.3800e-003	0.0000	17.2197	17.2197	4.6000e-004	0.0000	17.2313
Total	**7.4800e-003**	**5.5500e-003**	**0.0628**	**1.9000e-004**	**0.0198**	**1.5000e-004**	**0.0199**	**5.2400e-003**	**1.4000e-004**	**5.3800e-003**	**0.0000**	**17.2197**	**17.2197**	**4.6000e-004**	**0.0000**	**17.2313**

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	tons/yr										MT/yr					
Off-Road	0.0643	0.6509	0.5178	8.5000e-004		0.0337	0.0337		0.0314	0.0314	0.0000	74.0668	74.0668	0.0197	0.0000	74.5586
Total	**0.0643**	**0.6509**	**0.5178**	**8.5000e-004**		**0.0337**	**0.0337**		**0.0314**	**0.0314**	**0.0000**	**74.0668**	**74.0668**	**0.0197**	**0.0000**	**74.5586**

3.2 Prep and Concrete Removal - 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	tons/yr										MT/yr					
Hauling	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	0.0000	0.0000
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	0.0000	0.0000
Worker	7.4800e-003	5.5500e-003	0.0628	1.9000e-004	0.0198	1.5000e-004	0.0199	5.2400e-003	1.4000e-004	5.3800e-003	0.0000	17.2197	17.2197	4.6000e-004	0.0000	17.2313
Total	**7.4800e-003**	**5.5500e-003**	**0.0628**	**1.9000e-004**	**0.0198**	**1.5000e-004**	**0.0199**	**5.2400e-003**	**1.4000e-004**	**5.3800e-003**	**0.0000**	**17.2197**	**17.2197**	**4.6000e-004**	**0.0000**	**17.2313**

3.3 Pipeline Install - 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	tons/yr										MT/yr					
Off-Road	0.0690	0.6846	0.5569	8.9000e-004		0.0403	0.0403		0.0371	0.0371	0.0000	78.5018	78.5018	0.0254	0.0000	79.1366
Total	**0.0690**	**0.6846**	**0.5569**	**8.9000e-004**		**0.0403**	**0.0403**		**0.0371**	**0.0371**	**0.0000**	**78.5018**	**78.5018**	**0.0254**	**0.0000**	**79.1366**

3.3 Pipeline Install - 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	tons/yr										MT/yr					
Hauling	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	0.0000	0.0000
Vendor	1.1000e-004	3.8900e-003	9.8000e-004	1.0000e-005	2.5000e-004	1.0000e-005	2.6000e-004	7.0000e-005	1.0000e-005	8.0000e-005	0.0000	0.9712	0.9712	6.0000e-005	0.0000	0.9728
Worker	9.9700e-003	7.4000e-003	0.0838	2.5000e-004	0.0263	2.0000e-004	0.0265	6.9900e-003	1.8000e-004	7.1800e-003	0.0000	22.9597	22.9597	6.2000e-004	0.0000	22.9751
Total	**0.0101**	**0.0113**	**0.0847**	**2.6000e-004**	**0.0266**	**2.1000e-004**	**0.0268**	**7.0600e-003**	**1.9000e-004**	**7.2600e-003**	**0.0000**	**23.9309**	**23.9309**	**6.8000e-004**	**0.0000**	**23.9479**

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	tons/yr										MT/yr					
Off-Road	0.0690	0.6846	0.5569	8.9000e-004		0.0403	0.0403		0.0371	0.0371	0.0000	78.5017	78.5017	0.0254	0.0000	79.1365
Total	**0.0690**	**0.6846**	**0.5569**	**8.9000e-004**		**0.0403**	**0.0403**		**0.0371**	**0.0371**	**0.0000**	**78.5017**	**78.5017**	**0.0254**	**0.0000**	**79.1365**

3.3 Pipeline Install - 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	tons/yr										MT/yr					
Hauling	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	0.0000	0.0000
Vendor	1.1000e-004	3.8900e-003	9.8000e-004	1.0000e-005	2.5000e-004	1.0000e-005	2.6000e-004	7.0000e-005	1.0000e-005	8.0000e-005	0.0000	0.9712	0.9712	6.0000e-005	0.0000	0.9728
Worker	9.9700e-003	7.4000e-003	0.0838	2.5000e-004	0.0263	2.0000e-004	0.0265	6.9900e-003	1.8000e-004	7.1800e-003	0.0000	22.9597	22.9597	6.2000e-004	0.0000	22.9751
Total	**0.0101**	**0.0113**	**0.0847**	**2.6000e-004**	**0.0266**	**2.1000e-004**	**0.0268**	**7.0600e-003**	**1.9000e-004**	**7.2600e-003**	**0.0000**	**23.9309**	**23.9309**	**6.8000e-004**	**0.0000**	**23.9479**

3.4 Cover and Fill - 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	tons/yr										MT/yr					
Off-Road	0.0293	0.2703	0.2976	4.8000e-004		0.0139	0.0139		0.0130	0.0130	0.0000	40.0304	40.0304	0.0117	0.0000	40.3225
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0293**	**0.2703**	**0.2976**	**4.8000e-004**		**0.0139**	**0.0139**		**0.0130**	**0.0130**	**0.0000**	**40.0304**	**40.0304**	**0.0117**	**0.0000**	**40.3225**

3.4 Cover and Fill - 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	tons/yr										MT/yr					
Hauling	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	0.0000	0.0000
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	0.0000	0.0000
Worker	7.4800e-003	5.5500e-003	0.0628	1.9000e-004	0.0198	1.5000e-004	0.0199	5.2400e-003	1.4000e-004	5.3800e-003	0.0000	17.2197	17.2197	4.6000e-004	0.0000	17.2313
Total	**7.4800e-003**	**5.5500e-003**	**0.0628**	**1.9000e-004**	**0.0198**	**1.5000e-004**	**0.0199**	**5.2400e-003**	**1.4000e-004**	**5.3800e-003**	**0.0000**	**17.2197**	**17.2197**	**4.6000e-004**	**0.0000**	**17.2313**

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	tons/yr										MT/yr					
Off-Road	0.0293	0.2703	0.2976	4.8000e-004		0.0139	0.0139		0.0130	0.0130	0.0000	40.0304	40.0304	0.0117	0.0000	40.3224
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0293**	**0.2703**	**0.2976**	**4.8000e-004**		**0.0139**	**0.0139**		**0.0130**	**0.0130**	**0.0000**	**40.0304**	**40.0304**	**0.0117**	**0.0000**	**40.3224**

3.4 Cover and Fill - 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	tons/yr										MT/yr					
Hauling	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	0.0000	0.0000
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	0.0000	0.0000
Worker	7.4800e-003	5.5500e-003	0.0628	1.9000e-004	0.0198	1.5000e-004	0.0199	5.2400e-003	1.4000e-004	5.3800e-003	0.0000	17.2197	17.2197	4.6000e-004	0.0000	17.2313
Total	**7.4800e-003**	**5.5500e-003**	**0.0628**	**1.9000e-004**	**0.0198**	**1.5000e-004**	**0.0199**	**5.2400e-003**	**1.4000e-004**	**5.3800e-003**	**0.0000**	**17.2197**	**17.2197**	**4.6000e-004**	**0.0000**	**17.2313**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	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	tons/yr										MT/yr					
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	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	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

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
User Defined Industrial	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.551391	0.043400	0.201050	0.120272	0.016162	0.005864	0.021029	0.030512	0.002059	0.001866	0.004766	0.000706	0.000924

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	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	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas 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
NaturalGas 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

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	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
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Industrial	0	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**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	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
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Industrial	0	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**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005

6.2 Area by SubCategory

Unmitigated

SubCategory	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
	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	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	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

Mitigated

SubCategory	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
	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	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	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

APPENDIX 3

47 1st Street, Suite 1
Redlands, CA 92373-4601
(909) 915-5900

May 20, 2019

Tom Dodson
Tom Dodson and Associates
2150 N Arrowhead Ave
San Bernardino, CA 92405

RE: Biological Resources Assessment, Jurisdictional Waters Delineation
Rialto Storm Drain, Rialto, CA

Dear Tom:

Jericho Systems, Inc. (Jericho) is pleased to provide this letter report that details the results of a general Biological Resources Assessment/Jurisdictional Waters Delineation (BRA/JD) for a proposed storm drainage system located in the City of Rialto.

Jericho Systems, Inc. (Jericho) is pleased to provide this letter report that details the results of a general Biological Resources Assessment (BRA) that includes habitat suitability assessments for nesting birds, Burrowing owl (*Athene cunicularia*) [BUOW], Delhi sands flower-loving fly (*Rhaphiomidas terminatus abdominalis*) [DSF], small mammals such as the San Bernardino Kangaroo Rat (*Dipodomys merriami parvus*) [SBKR] and Los Angeles Pocket mouse (*Perognathus longimembris brevinasus*) [LAPM] and a Jurisdictional Waters Delineation (JD) for the proposed construction and operation of the Rialto Storm Drain Project (Project).

This report is designed to address potential effects of the proposed Project to designated Critical Habitats and/or any species currently listed or formally proposed for listing as endangered or threatened under the federal Endangered Species Act (ESA) and the California Endangered Species Act (CESA), or species designated as sensitive by the California Department of Fish and Wildlife (CDFW), or the California Native Plant Society (CNPS). Attention was focused sensitive species known to occur locally. This report also addresses resources protected under the Migratory Bird Treaty Act, federal Clean Water Act (CWA) regulated by the U.S. Army Corps of Engineers (USACE) and Regional Water Quality Control Board (RWQCB) respectively; and Section 1602 of the California Fish and Game Code (FCG) administered by the CDFW.

PROJECT LOCATION

The proposed project is located at Cactus Basin (just west of Cactus Avenue and Baseline Road) connecting to Baseline Road south of Cactus Basin and traveling west within Baseline Road to just west of Tamarind Avenue within the City of Rialto, CA. The Project is mostly located within existing roadways, though Cactus Basin (which the proposed project will connect the new storm drain to) is located on land designated for Open Space Resource Use. The project is located in Section 34 Township 1 North, Range 5 West within the Fontana USGS Topo 7.5-minute series maps. The project is primarily

linear with an approximate Lat/Long of 34.124043, -117.388063 at the eastern portion of the project and 34.121298, -117.422797 at the western portion of the project.

PROJECT UNDERSTANDING

The project consists of installing an approximately 2-mile or 11,000 lineal feet (LF) storm drain system within Baseline Road that would capture flows north of Baseline Road. The storm drain line starts at the Tamarind Avenue/Baseline Road intersection and runs along Baseline Road to the outlet at Cactus Basin No. 3. The City of Rialto Master Plan of Drainage was used to size the storm drain system to improve drainage systems In the City of Rialto. The new storm drain will be developed within a reinforced concrete box (RCB) that will vary in size between 6' x 12', 7' x 7', and 3' x 10' depending on the location within the new storm drain alignment. The majority of the storm drain footprint (located within Baseline Road) will be constructed as a 72" reinforced concrete pipe (RCP), though a portion of the easternmost section of the alignment, which leaves from Baseline Road to Cactus Basin, will vary in size as either a 72", 84", 48", 36", or 30" RCP.

The project site corresponds to the proposed storm drain "Line D" as described in the City of Rialto Master Plan of Drainage. The project area is located within the Renaissance Development, which consists of the redevelopment of the Rialto Airport and the surrounding areas. The Renaissance Specific Plan was used to get additional information for Line D and meet drainage facility requirements. Subarea D is bounded by 210 freeway on the north, Baseline Road on the south, Cactus Avenue on the east, and Palmetto Avenue on the west. Overland flow travels in southeastern direction in the southern portion of the Renaissance site before it is captured by Line D and outlets to Cactus Basin No. 3.

Flows leaving Basin No. 3 continue on to Basin 1 and 2 and Rialto Channel, which ultimately discharges to the Santa Ana River. Outflow from the Cactus Basin System are limited due to the poor downstream channel capacities.

The proposed project will install one of three Alternative Alignments that will connect the new Baseline Road storm drain alignment with Cactus Basin. The project will retrofit an existing 36" RCP outlet to the larger structure. Energy dissipation measures (such as rip rap pad, baffle) may be installed at the outlet, to control erosive damage from the higher volume discharged from the new pipeline.

SETTING

The City of Rialto sits at the base of the Cajon Pass, where high winds are common meteorological events within the region. The climate in the region is typically characterized as Mediterranean. Typical rainfall averages approximately 17 inches per year. Hydrologically, the Project site is within the Chino Hydrologic Sub-Area (HSA 801.21) which comprises a 17,765-acre drainage area within the larger Middle Santa Ana River Watershed (HUC 180702030804).

The subject parcel is situated in a developing area of the Inland Valleys ecoregion.

Most of the project occurs along Baseline Road, and the stretch of road consists of residential and commercial development with ornamental vegetation that is regularly gardened. Plots of undeveloped land adjacent to Baseline Road consist primarily of ripgut brome (*Bromus diandrus)* and wild oat (*Avena fatua*). Habitat within and adjacent to the Cactus Basin portion consists of degraded alluvial fan sage scrub.

The stretch that parallels the northbound portion of fence line consists of a steep grade (~70 degree) with evidence of standing water. The northeast portion of the basin consists of a shallow grade (~10 degree).

METHODS

As stated above, the objective of this document is to determine whether the Project area supports special status or otherwise sensitive species and/ or their habitat, and to address the potential effects associated with the Proposed project on those resources. The species and habitats addressed in this document are based on database information and field investigation.

These sources include:

- U.S. Fish and Wildlife (USFWS) threatened and endangered species occurrence GIS overlay;
- USFWS Information for Planning and Consultation System (IPaC);
- California Natural Diversity Database (CNDDB) *Rarefind 5*);
- CNDDB Biogeographic Information and Observation System (BIOS);
- California Native Plant Society Electronic Inventory (CNPSEI) database;
- Calflora Database;
- USDA Natural Resources Conservation Service (NRCS) Web Soil Survey;
- USFWS National Wetland Inventory;
- Environmental Protection Agency (EPA) Water Program "My Waters" data layers
- USFWS Designated Critical Habitat Maps

We also reviewed other available technical information on the biological resources of the site, including previous trapping surveys and discussed recent findings with researchers in the field.

Jericho biologist Christian Nordal conducted a general biological resources assessment on March 1, 2019, with an emphasis on special-status species known to occur in the area. Mr. Nordal has advanced degrees and multiple years of experience surveying biological resources within Southern California. Mr. Nordal conducted the systematic and comprehensive survey during calm weather, between the hours of 77 a.m. and 11 a.m. Weather conditions during the survey consisted of clear skies with temperatures ranging from 65 degrees Fahrenheit (° F) to 73° F and light wind <5 mph.

On March 30, 2019, Jericho ecologist Shay Lawrey performed a follow up site assessment to evaluate the potential to support for DSF, BUOW and small mammals to occur on site, specifically the federally endangered SBKR and State species of special concern LAPM and federally threatened CAGN. Ms. Lawrey has advanced degrees in biology, is permitted to trap and handle SBKR and has two decades of experience with surveying for sensitive small mammals and birds.

Wildlife species were detected during field surveys by sight, calls, tracks, scat, or other sign. In addition to species observed, expected wildlife usage of the site was determined per known habitat preferences of regional wildlife species and knowledge of their relative distributions in the area. The focus of the faunal species surveys was to identify potential habitat for special status wildlife within the project area. Disturbance characteristics and all animal sign encountered on the site are recorded in the results section.

The Project area was also evaluated for the presence of jurisdictional waters, i.e. waters of the U.S. as regulated by the USACE and RWQCB, and/or streambed and associated riparian habitat as regulated by the CDFW. Evaluation of potential federal jurisdiction followed the regulations set forth in 33CFR part 328 and the USACE guidance documents and evaluation of potential State jurisdiction followed guidance

in the Fish and Game Code and A Review of Stream Processes and Forms in Dryland Watersheds (CDFW, 2010).

RESULTS

The project site is primarily a multi-use urban setting, with the Cactus Basin component holding the only vegetation not actively managed by landscaping. The habitat adjacent to the north-bound fencing in Cactus Basin is high disturbance new growth, whereas the habitat in the northeast corner of the project site is high disturbance alluvial fan sage scrub.

Habitat within or adjacent to the north-bound portion on the easternmost part of the Project alignment at Cactus Basin consists primarily of foxtail (*Hordeum murinum*), wild oat (*Avena fatua*), stinging nettle (*Urtica urens*), coastal heron's bill (*Erodium cicutarium*) and common fiddleneck (*Amsinckia intermedia*). Shrubs become increasingly numerous the further north into the basin. Those shrubs are primarily California buckwheat (*Eriogonum fasciculatum*) and California sagebrush (*Artemesia californica*). Adjacent to the northernmost portion of the basin is degraded alluvial fan sage scrub that consists of interspersed California sagebrush, California buckwheat, foxtail, ripgut (*Bromus diandrus*), a single holly-leaf cherry (*Prunus ilicifolia*) shrub, and a single beavertail cactus (*Opuntia basilaris var. basilaris*). Vegetation on or adjacent to all other aspects of the project are ornamental landscaped shrubs or ruderal vegetation composed of ripgut and foxtail.

Common wildlife was observed during survey which included side-blotched lizard (*Uta stansburiana*), western meadowlark (*Sturnella neglecta*), white-crowned sparrow (*Zonotrichia leucophrys*), house finch (*Haemorhous mexicanus*), and American crow (*Corvus brachyrhynchos*).

The soil conditions within the Project are composed of loam and are not Delhi sands. The loamy soils not suitable to support Delhi sands flower-loving fly [DSF]. Further investigation in to DSF is not warranted or recommended.

Due to the habitat conditions at the east end, northbound portion of the alignment that approaches Cactus Basin, and due to previous records of SBKR in Cactus Basins, there remains a moderate potential for occurrence of SBKR and LAPM. Further the Project site at Cactus Basin is potentially suitable for BUOW.

San Bernardino Kangaroo Rat (SBKR)

The SBKR is one of several kangaroo rat species in its range. The Dulzura kangaroo rat (*Dipodomys simulans*), the Pacific kangaroo rat (*Dipodomys agilis*) and the Stephens kangaroo rat (*Dipodomys stephensi*) can occur in areas occupied by the SBKR, but these other species have a wider habitat range. The habitat of the SBKR is confined to primary and secondary alluvial fan scrub habitats, with sandy soils deposited by fluvial (water) rather than aeolian (wind) processes. Burrows are dug in loose soil, usually near or beneath shrubs. SBKR, are confined to inland valley scrub communities, and more particularly, to scrub communities occurring along rivers, streams and drainage. Most of these drainages have been historically altered as a result of flood control efforts and the resulting increased use of river resources, including mining, off-road vehicle uses and road and housing development. This increased use of river resources has resulted in a reduction in both the amount and quality of habitat available for the SBKR. The past habitat losses and potential future losses prompted the emergency listing of the SBKR as an endangered species.

The Cactus Basin aspect of the Project area does contain habitat elements typically associated with SBKR. Further, small mammal burrows were noted of appropriate size, shape or aspect for SBKRs. There are documented occurrences of this species within Cactus Basins. For these reasons absence cannot be presumed without a focused presence/absence survey.

Los Angeles Pocket Mouse (LAPM)

The LAPM is one of two pocket mice found in this area of San Bernardino County. Both the LAPM and the San Diego pocket mouse occupy similar habitats, but the San Diego pocket mouse has a wider range extending south into San Diego County. The habitat of the LAPM is confined to lower elevation grasslands and coast sage scrub habitats, in areas with soils composed of fine sands. The present known distribution of this species extends from Rancho Cucamonga east to Morongo and south to the San Diego County border. LAPM forages in open ground and underneath shrubs. Pocket mice in general dig burrows in loose soil, although this has not been completely documented for this subspecies. The LAPM is listed as a Critical Species of Concern by the CDFW.

The Project site contains habitat marginally suitable habitat for LAPM and there are several documented occurrences of LAPM in the near vicinity of the Cactus Basin. No protocol surveys were conducted as part of this assessment, therefore presence or absence of LAPM was not determined, only their potential to occur. Potential of occurrence for LAPM is moderate. Presence or absence of LAPM cannot be presumed without a focused presence/absence survey..

Burrowing owl (BUOW)

BUOW are known to occur locally within suitable habitat areas. BUOW is a ground-dwelling owl typically found in arid prairies, fields, and open areas where vegetation is sparse and low to the ground. The BUOW depends on the presence of mammal burrows, i.e. ground squirrel burrows to provide shelter from predators, inclement weather and to provide a nesting place. They are also known to make use of human-created structures, such as cement culverts and pipes, for burrows. They feed primarily on insects but will also take small rodents, birds, and reptiles. They are active during the day and night, generally observed in the early morning hours or at twilight. The breeding season for BUOW is February 1 through August 31. The BUOW is not listed under the State or Federal Endangered Species Act but is considered both a State and federal SSC. The BUOW is a protected by the international treaty under the Migratory Bird Treaty Act (MBTA) of 1918 and by State law under the California Fish and Game Code (CDFG Code #3513 & #3503.5).

Per the definition provided in the *2012 CDFG Staff Report on Burrowing Owl Mitigation*, "Burrowing owl habitat generally includes, but is not limited to, short or sparse vegetation (at least at some time of year), presence of burrows, burrow surrogates or presence of fossorial mammal dens, well-drained soils, and abundant and available prey." Therefore, the Cactus Basin aspect of the Project area and immediate vicinity contains suitable habitat for this species.

No evidence of BUOW was found in the survey area. No burrows of appropriate shape size or aspect for BUOW or BUOW pellets, feathers or whitewash were found on site. No BUOW individuals were observed. Therefore, BUOW are considered absent from the site at the time of surveys.

Nesting Birds and Raptors

The site is suitable for use by raptors for foraging purposes. The project site and immediate surrounding areas do contain habitat suitable for nesting birds in general, including the shrubs on site.

Nesting birds are protected under the MBTA which provides protection for nesting birds that are both residents and migrants whether they are considered sensitive by resource agencies. The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed under 50 CFR 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR 21). The direct injury or death of a migratory bird, due to construction activities or other construction-related disturbance that causes nest abandonment, nestling abandonment, or forced fledging would be considered take under federal law. The USFWS, in coordination with the CDFW administers the MBTA. CDFW's authoritative nexus to MBTA is provided in FGC Sections 3503.5 which protects all birds of prey and their nests and FGC Section 3800 which protects all non-game birds that occur naturally in the State.

Jurisdiction Waters

Cactus Basin is a jurisdictional water subject to Sections 404 and 401 of the CWA and Section 1600 of the FGC. Modifications within the basin will likely require permits from the USACE, RWQCB and CDFW.

CONCLUSIONS

Several occurrences of SBKR and LAPM are documented in the immediate vicinity of the east end of the Project area. Although the habitat conditions are marginal for these species, absence of either species cannot be determined without focused survey.

Habitat suitability of BUOW is marginal along the alignment where there is vacant land. This species was not observed during survey and no sign of the presence was found. Prior to construction a 30-day survey is warranted and recommended..

The vegetation on site does have a potential to support nesting birds and foraging raptors such as red-tailed hawks. Therefore, to reduce the potential impacts to nesting birds, the following is recommended:

- Bird nesting season generally extends from February 1 through September 15 in southern California and specifically, April 15 through August 31 for migratory passerine birds. To avoid impacts to nesting birds (common and special status) during the nesting season, a qualified Avian Biologist will conduct pre-construction Nesting Bird Surveys (NBS) prior to project-related disturbance to nestable vegetation to identify any active nests. If no active nests are found, no further action will be required. If an active nest is found, the biologist will set appropriate no-work buffers around the nest which will be based upon the nesting species, its sensitivity to disturbance, nesting stage and expected types, intensity and duration of disturbance. The nests and buffer zones shall be field checked weekly by a qualified biological monitor. The approved no-work buffer zone shall be clearly marked in the field, within which no disturbance activity shall commence until the qualified biologist has determined the young birds have successfully fledged and the nest is inactive.

Jericho appreciates the opportunity to continue to be of service. If you have any questions or need any clarifications, feel free to contact me at (909) 915-5900 or at shay@jericho-systems.com

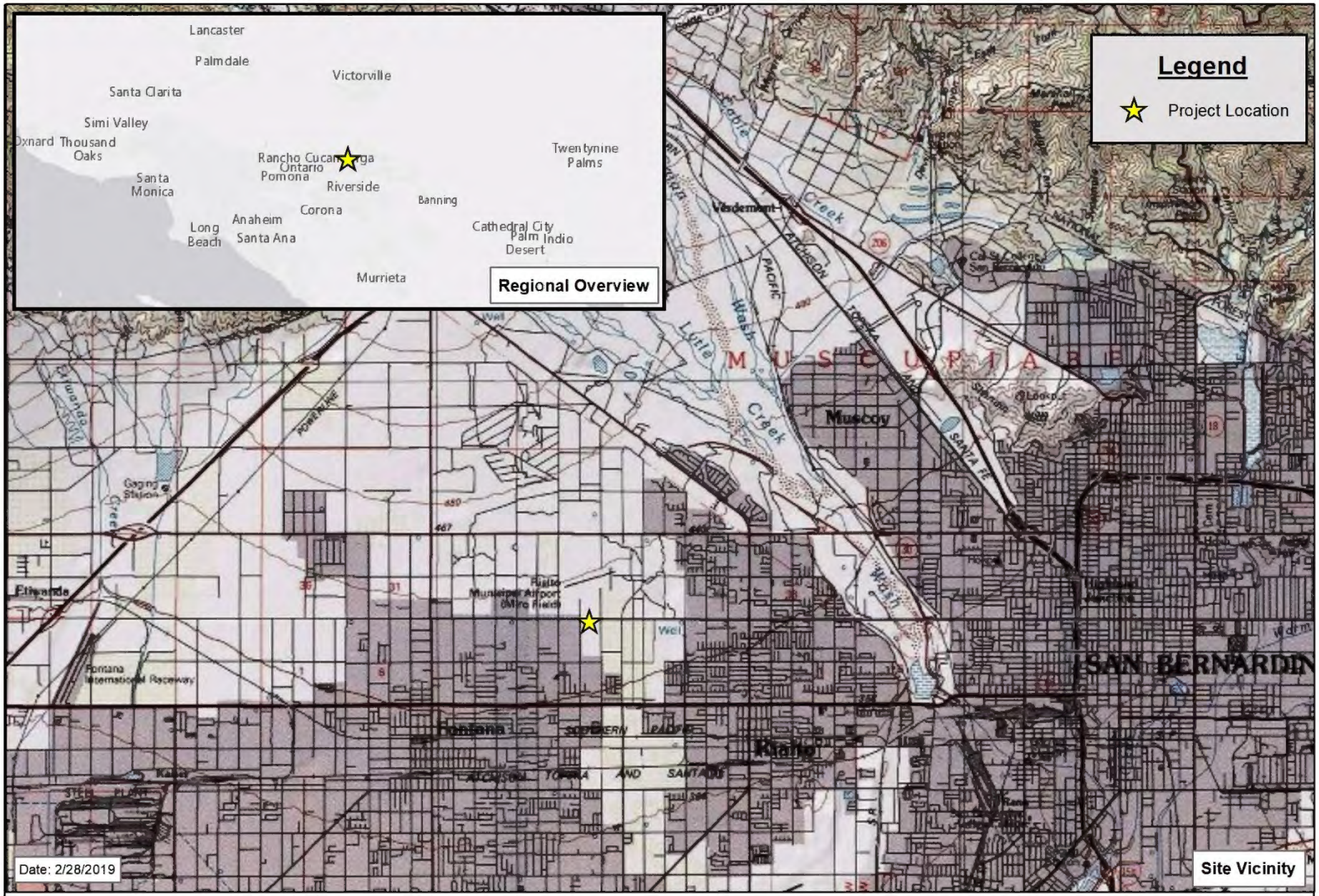
Sincerely,

Shay Lawrey, President

Attachments:

Attachment 1 - Figures
Attachment 2 – Table of Potential to Occur
Attachment 3 – Site Photos

Ton Dodson
Rialto Storm Drain
BRA/JD



Ton Dodson
Rialto Storm Drain
BRA/JD

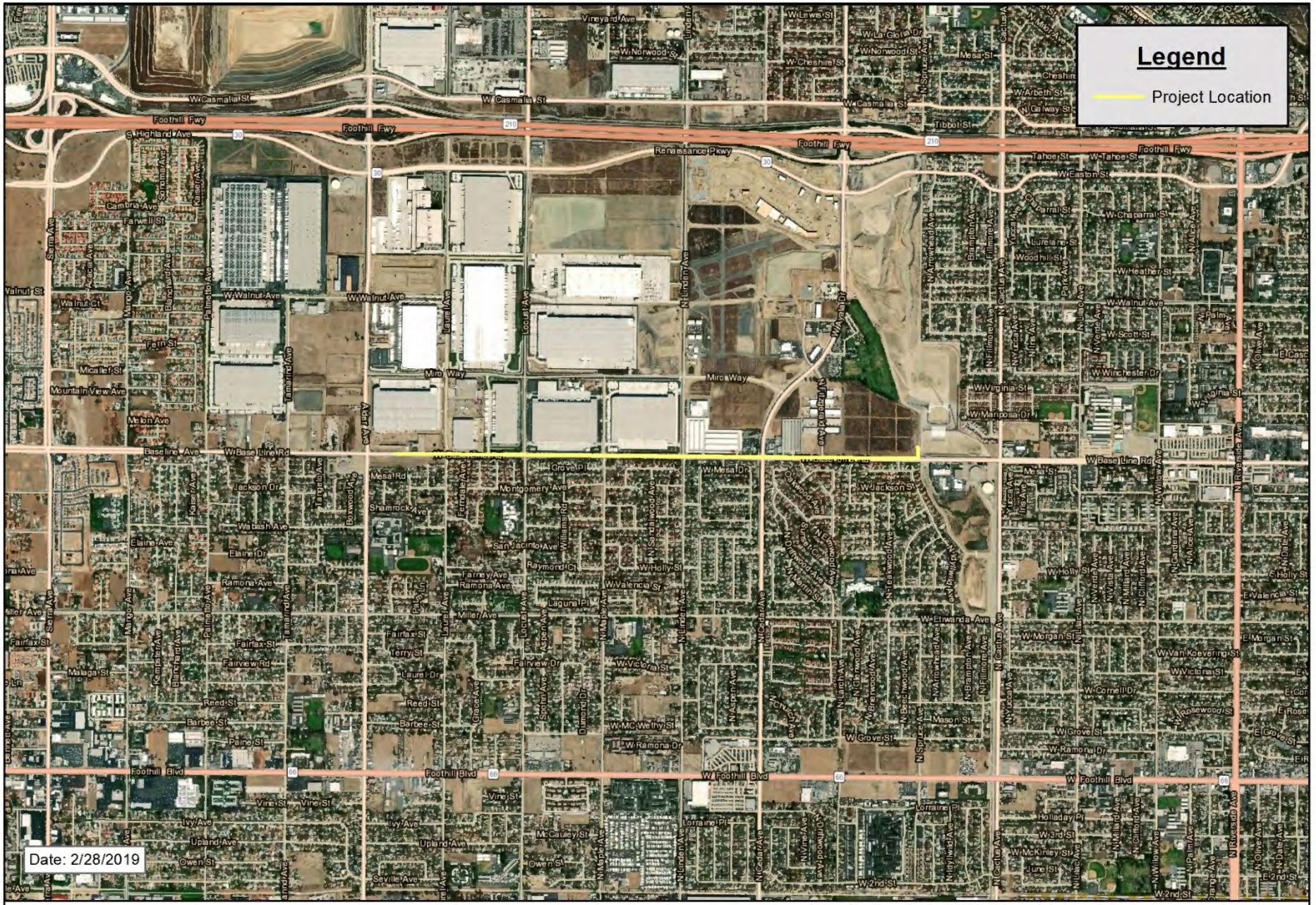


Figure 2
Project Location

Rialto Baseline Storm Drain
City of Rialto

Ton Dodson
Rialto Storm Drain
BRA/JD

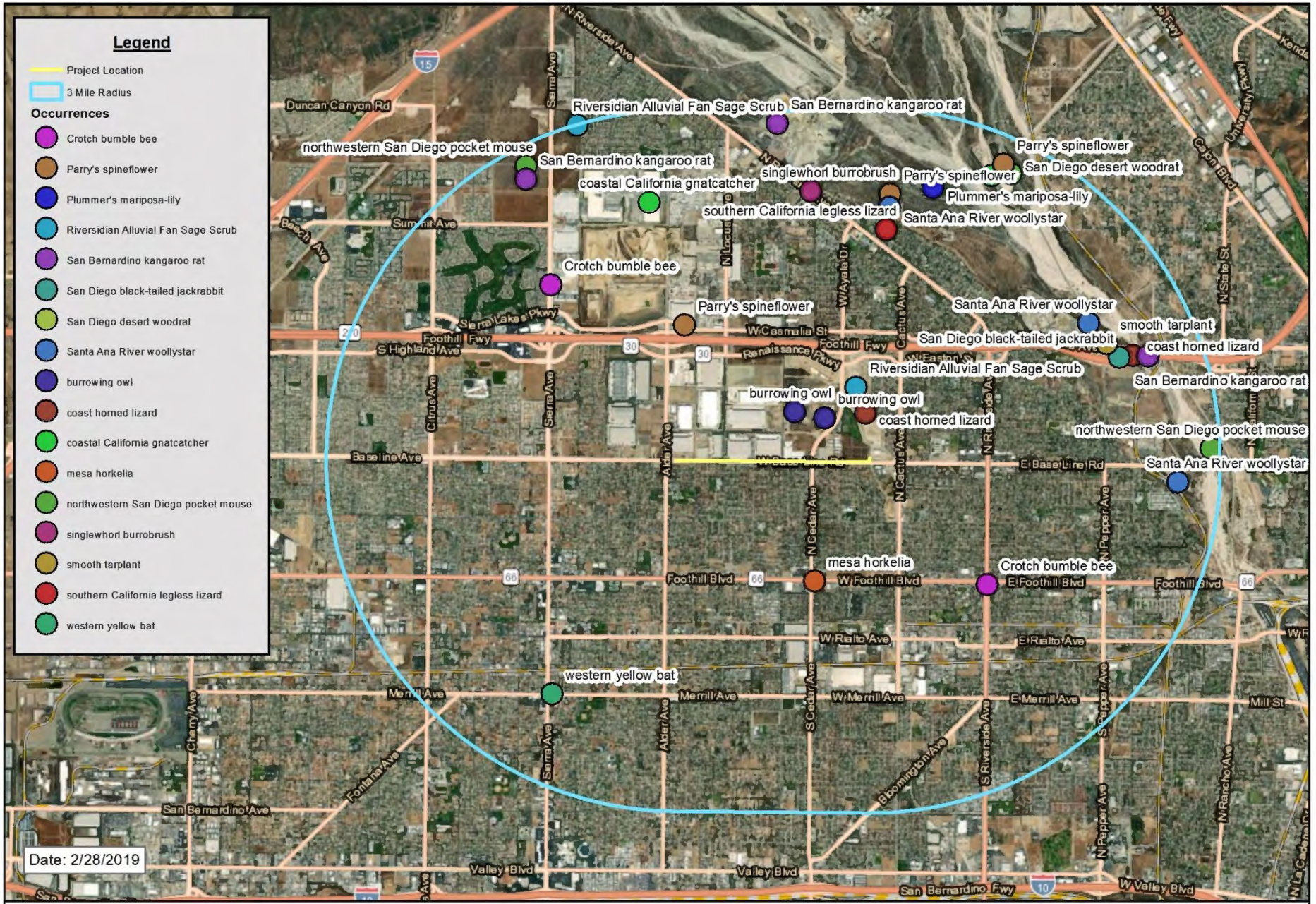


Figure 3
3 Mile CNDDB Occurrences

Rialto Baseline Storm Drain
City of Rialto

Ton Dodson
Rialto Storm Drain
BRA/JD

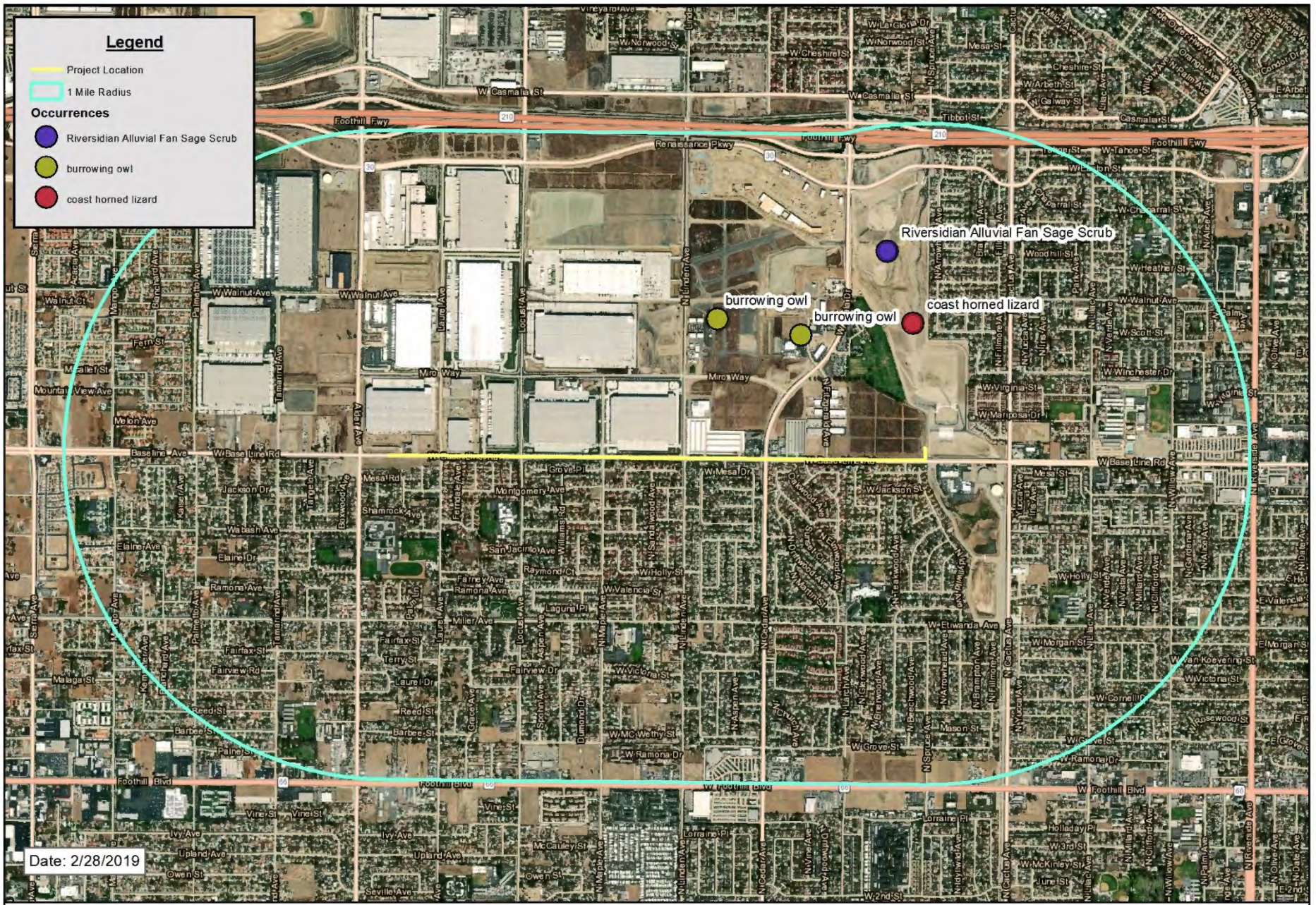


Figure 3.2
1 Mile CNDDB Occurrences

Rialto Baseline Storm Drain
City of Rialto

Ton Dodson
Rialto Storm Drain
BRA/JD

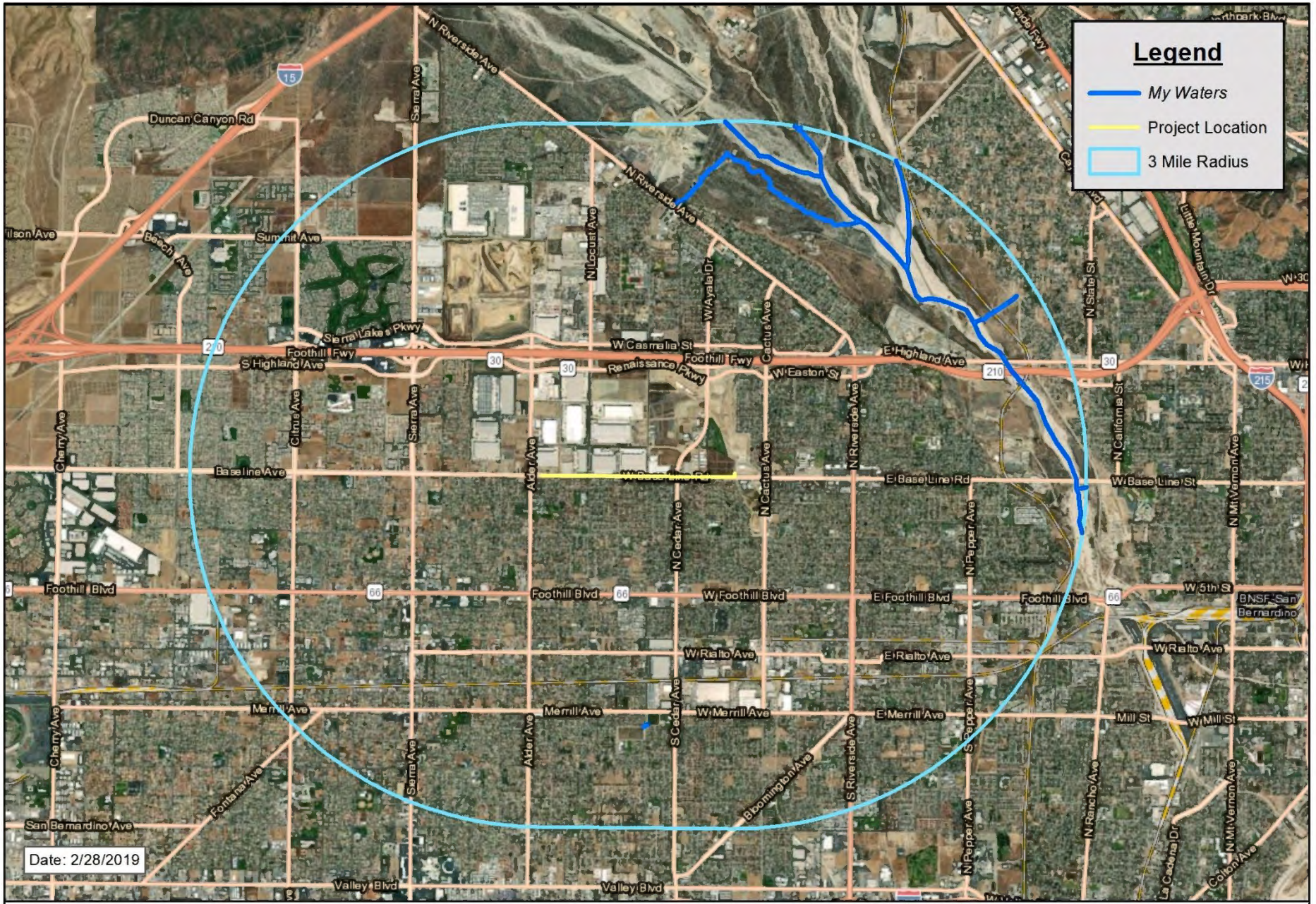
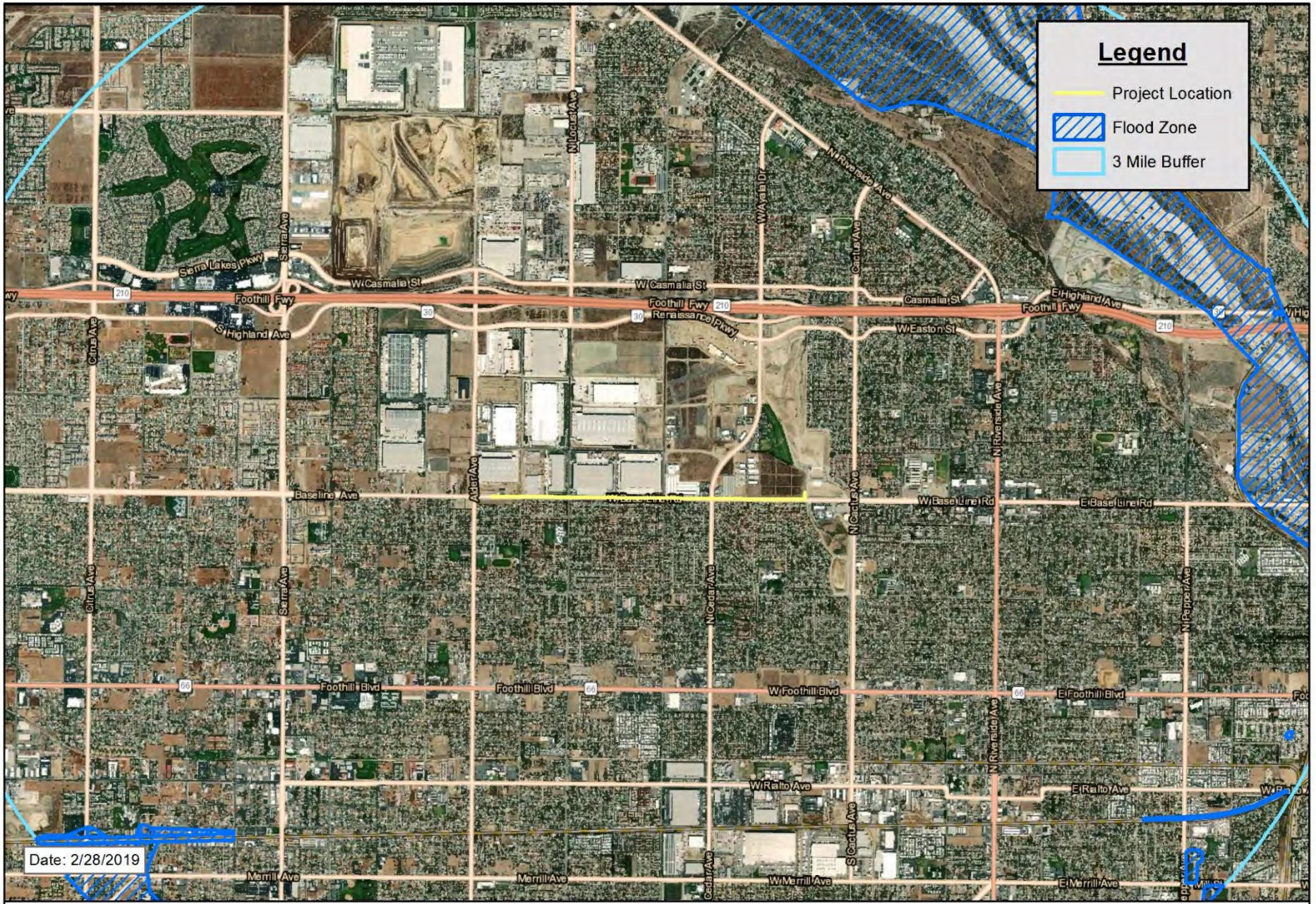


Figure 4
***My Waters* Overlay**

Rialto Baseline Storm Drain
City of Rialto

Ton Dodson
Rialto Storm Drain
BRA/JD



Scientific Name	Common Name	State/Federal Ranking	Habitat	Potential to Occur
Agelaius tricolor	tricolored blackbird	None/ Candidate Endangered	Highly colonial species, most numerous in Central Valley & vicinity. Largely endemic to California. Requires open water, protected nesting substrate, and foraging area with insect prey within a few km of the colony.	Suitable habitat to support this species does not occur onsite. Potential to occur is **low**.
Ambrosia monogyra	singlewhorl burrobrush	None/None	Chaparral, Sonoran desert scrub. Sandy soils. 5-475 m.	Suitable habitat to support this species does not occur onsite. Potential to occur is **low**.
Anniella stebbinsi	southern California legless lizard	None/None	Generally south of the Transverse Range, extending to northwestern Baja California. Occurs in sandy or loose loamy soils under sparse vegetation. Disjunct populations in the Tehachapi and Piute Mountains in Kern County. Variety of habitats; generally in moist, loose soil. They prefer soils with a high moisture content.	Suitable habitat to support this species does not occur onsite. Potential to occur is **low**.
Arenaria paludicola	marsh sandwort	Endangered/ Endangered	Marshes and swamps. Growing up through dense mats of *Typha, Juncus, Scirpus*, etc. in freshwater marsh. Sandy soil. 3-170 m.	Suitable habitat to support this species does not occur onsite. Potential to occur is **low**.
Arizona elegans occidentalis	California glossy snake	None/None	Patchily distributed from the eastern portion of San Francisco Bay, southern San Joaquin Valley, and the Coast, Transverse, and Peninsular ranges, south to Baja California. Generalist reported from a range of scrub and grassland habitats, often with loose or sandy soils.	Suitable habitat to support this species does not occur onsite. Potential to occur is **low**.
Artemisiospiza belli belli	Bell's sage sparrow	None/None	Nests in chaparral dominated by fairly dense stands of chamise. Found in coastal sage scrub in south of range. Nest located on the ground beneath a shrub or in a shrub 6-18 inches above ground. Territories about 50 yds apart.	Suitable habitat to support this species does not occur onsite. Potential to occur is **low**.
Athene cunicularia	burrowing owl	None/None	Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	Marginally suitable habitat to support this species occurs within the Project area at Cactus Basin and within the vacant parcels bordering the alignment. This species or sign of BUOW was not observed during survey. Potential to occur is **low to moderate**.

Scientific Name	Common Name	State/Federal Ranking	Habitat	Potential to Occur
Batrachoseps gabrieli	San Gabriel slender salamander	None/None	Known only from the San Gabriel Mountains. Found under rocks, wood, and fern fronds, and on soil at the base of talus slopes. Most active on the surface in winter and early spring.	Suitable habitat to support this species does not occur onsite. Potential to occur is **low**.
Bombus crotchii	Crotch bumble bee	None/None	Coastal California east to the Sierra-Cascade crest and south into Mexico. Food plant genera include *Antirrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia*, and *Eriogonum*.	Marginally suitable habitat to support this species occurs within the Project area at Cactus Basin. This species was not observed during survey. Potential to occur is **low to moderate**.
Calochortus plummerae	Plummer's mariposa-lily	None/None	Coastal scrub, chaparral, valley and foothill grassland, cismontane woodland, lower montane coniferous forest. Occurs on rocky and sandy sites, usually of granitic or alluvial material. Can be very common after fire. 60-2500 m.	Marginally suitable habitat to support this species occurs within the Project area at Cactus Basin. This species was not observed during survey. Potential to occur is **low to moderate**.
Catostomus santaanae	Santa Ana sucker	Threatened/ None	Endemic to Los Angeles Basin south coastal streams. Habitat generalists, but prefer sand-rubble-boulder bottoms, cool, clear water, and algae.	Suitable habitat to support this species does not occur onsite. Potential to occur is **low**.
Chaetodipus fallax fallax	northwestern San Diego pocket mouse	None/None	Coastal scrub, chaparral, grasslands, sagebrush, etc. in western San Diego County. Sandy, herbaceous areas, usually in association with rocks or coarse gravel.	Suitable habitat to support this species occurs within the Project area at Cactus Basin. Potential to occur is **moderate**.
Chaetodipus fallax pallidus	pallid San Diego pocket mouse	None/None	Desert border areas in eastern San Diego County in desert wash, desert scrub, desert succulent scrub, pinyon-juniper, etc. Sandy, herbaceous areas, usually in association with rocks or coarse gravel.	Suitable habitat to support this species does not occur onsite. Potential to occur is **low**.
Chloropyron maritimum ssp. *maritimum*	salt marsh bird's-beak	Endangered/ Endangered	Marshes and swamps, coastal dunes. Limited to the higher zones of salt marsh habitat. 0-10 m.	Suitable habitat to support this species does not occur onsite. Potential to occur is **low**.
Chorizanthe parryi var. *parryi*	Parry's spineflower	None/None	Coastal scrub, chaparral, cismontane woodland, valley and foothill grassland. Dry slopes and flats; sometimes at interface of 2 vegetation types, such as chaparral and oak woodland. Dry, sandy soils. 90-1220 m.	Suitable habitat to support this species does not occur onsite. Potential to occur is **low**.
Chorizanthe xanti var. *leucotheca*	white-bracted spineflower	None/None	Mojavean desert scrub, pinyon and juniper woodland, coastal scrub (alluvial fans). Sandy or gravelly places. 365-1830 m.	Suitable habitat to support this species does not occur onsite. Potential to occur is **low**.

Scientific Name	Common Name	State/Federal Ranking	Habitat	Potential to Occur
Cicindela tranquebarica viridissima	greenest tiger beetle	None/None	Inhabits the woodlands adjacent to the Santa Ana River basin. Usually found in open spots between trees.	Suitable habitat to support this species does not occur onsite. Potential to occur is **low**.
Dipodomys merriami parvus	San Bernardino kangaroo rat	Endangered/ None	Alluvial scrub vegetation on sandy loam substrates characteristic of alluvial fans and flood plains. Needs early to intermediate seral stages.	Marginally suitable habitat to support this species occurs within the Project area at Cactus Basin. Potential to occur is **low to moderate**.
Dodecahema leptoceras	slender-horned spineflower	Endangered/ Endangered	Chaparral, cismontane woodland, coastal scrub (alluvial fan sage scrub). Flood deposited terraces and washes; associates include *Encelia, Dalea, Lepidospartum*, etc. Sandy soils. 200-765 m.	Suitable habitat to support this species does not occur onsite. Potential to occur is **low**.
Eriastrum densifolium ssp. *sanctorum*	Santa Ana River woollystar	Endangered/ Endangered	Coastal scrub, chaparral. In sandy soils on river floodplains or terraced fluvial deposits. 180-705 m.	Suitable habitat to support this species does not occur onsite. Potential to occur is **low**.
Gila orcuttii	arroyo chub	None/None	Native to streams from Malibu Creek to San Luis Rey River basin. Introduced into streams in Santa Clara, Ventura, Santa Ynez, Mojave & San Diego river basins. Slow water stream sections with mud or sand bottoms. Feeds heavily on aquatic vegetation and associated invertebrates.	Suitable habitat to support this species does not occur onsite. Potential to occur is **low**.
Horkelia cuneata var. *puberula*	mesa horkelia	None/None	Chaparral, cismontane woodland, coastal scrub. Sandy or gravelly sites. 15-1645 m.	Suitable habitat to support this species does not occur onsite. Potential to occur is **low**.
Lasiurus xanthinus	western yellow bat	None/None	Found in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats. Roosts in trees, particularly palms. Forages over water and among trees.	Suitable habitat to support this species does not occur onsite. Potential to occur is **low**.
Lepidium virginicum var. *robinsonii*	Robinson's pepper-grass	None/None	Chaparral, coastal scrub. Dry soils, shrubland. 4-1435 m.	Suitable habitat to support this species does not occur onsite. Potential to occur is **low**.
Lepus californicus bennettii	San Diego black-tailed jackrabbit	None/None	Intermediate canopy stages of shrub habitats & open shrub / herbaceous & tree / herbaceous edges. Coastal sage scrub habitats in Southern California.	Suitable habitat to support this species does not occur onsite. Potential to occur is **low**.
Lilium parryi	lemon lily	None/None	Lower montane coniferous forest, meadows and seeps, riparian forest, upper montane coniferous forest. Wet, mountainous terrain;	Suitable habitat to support this species does not occur onsite. Potential to occur is **low**.

Scientific Name	Common Name	State/Federal Ranking	Habitat	Potential to Occur
			generally in forested areas; on shady edges of streams, in open boggy meadows & seeps. 625-2930 m.	
Lycium parishii	Parish's desert-thorn	None/None	Coastal scrub, Sonoran desert scrub. 135-1000 m.	Suitable habitat to support this species does not occur onsite. Potential to occur is **low**.
Malacothamnus parishii	Parish's bush-mallow	None/None	Chaparral, coastal sage scrub. In a wash. 305-455 m.	Suitable habitat to support this species does not occur onsite. Potential to occur is **low**.
Monardella pringlei	Pringle's monardella	None/None	Coastal scrub. Sandy hills. 300-400 m.	Suitable habitat to support this species does not occur onsite. Potential to occur is **low**.
Nyctinomops femorosaccus	pocketed free-tailed bat	None/None	Variety of arid areas in Southern California; pine-juniper woodlands, desert scrub, palm oasis, desert wash, desert riparian, etc. Rocky areas with high cliffs.	Suitable habitat to support this species does not occur onsite. Potential to occur is **low**.
Oncorhynchus mykiss irideus pop. 10	steelhead - southern California DPS	Endangered/ None	Federal listing refers to populations from Santa Maria River south to southern extent of range (San Mateo Creek in San Diego County). Southern steelhead likely have greater physiological tolerances to warmer water and more variable conditions.	Suitable habitat to support this species does not occur onsite. Potential to occur is **low**.
Opuntia basilaris var. *brachyclada*	short-joint beavertail	None/None	Chaparral, Joshua tree woodland, Mojavean desert scrub, pinyon-juniper woodland. Sandy soil or coarse, granitic loam. 425-1800 m.	Suitable habitat to support this species does not occur onsite. Potential to occur is **low**.
Perognathus longimembris brevinasus	Los Angeles pocket mouse	None/None	Lower elevation grasslands and coastal sage communities in and around the Los Angeles Basin. Open ground with fine, sandy soils. May not dig extensive burrows, hiding under weeds and dead leaves instead.	Marginally suitable habitat to support this species occurs within the Project area at Cactus Basin. Potential to occur is **low to moderate**.
Phrynosoma blainvillii	coast horned lizard	None/None	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Open areas for sunning, bushes for cover, patches of loose soil for burial, and abundant supply of ants and other insects.	Marginally suitable habitat to support this species occurs within the Project area at Cactus Basin. Potential to occur is **low to moderate**.
Polioptila californica californica	coastal California gnatcatcher	Threatened/ None	Obligate, permanent resident of coastal sage scrub below 2500 ft in Southern California. Low, coastal sage scrub in arid washes, on	Suitable habitat to support this species does not occur onsite. Potential to occur is **low**.

Scientific Name	Common Name	State/Federal Ranking	Habitat	Potential to Occur
			mesas and slopes. Not all areas classified as coastal sage scrub are occupied.	
Rana muscosa	southern mountain yellow-legged frog	Endangered/ Endangered	Federal listing refers to populations in the San Gabriel, San Jacinto and San Bernardino mountains (southern DPS). Northern DPS was determined to warrant listing as endangered, Apr 2014, effective Jun 30, 2014. Always encountered within a few feet of water. Tadpoles may require 2 - 4 years to complete their aquatic development.	Suitable habitat to support this species does not occur onsite. Potential to occur is **low**.
Rhaphiomidas terminatus abdominalis	Delhi Sands flower-loving fly	Endangered/ None	Found only in areas of the Delhi Sands formation in southwestern San Bernardino & northwestern Riverside counties. Requires fine, sandy soils, often with wholly or partly consolidated dunes & sparse vegetation. Oviposition req. shade.	No Delhi sands or host plant species on site. Suitable habitat to support this species does not occur onsite. Potential to occur is **low**.
Rhinichthys osculus ssp. 3	Santa Ana speckled dace	None/None	Headwaters of the Santa Ana and San Gabriel rivers. May be extirpated from the Los Angeles River system. Requires permanent flowing streams with summer water temps of 17-20 C. Usually inhabits shallow cobble and gravel riffles.	Suitable habitat to support this species does not occur onsite. Potential to occur is **low**.
Riversidian Alluvial Fan Sage Scrub		None/None	*Habitat Type*	Present within Cactus Basin.
Senecio aphanactis	chaparral ragwort	None/None	Chaparral, cismontane woodland, coastal scrub. Drying alkaline flats. 20-855 m.	Suitable habitat to support this species does not occur onsite. Potential to occur is **low**.
Southern Riparian Forest		None/None	*Habitat Type*	Habitat type **does not occur** onsite.
Southern Sycamore Alder Riparian Woodland		None/None	*Habitat Type*	Habitat type **does not occur** onsite.
Sphenopholis obtusata	prairie wedge grass	None/None	Cismontane woodland, meadows and seeps. Open moist sites, along rivers and springs, alkaline desert seeps. 15-2625 m.	Suitable habitat to support this species does not occur onsite. Potential to occur is **low**.
Streptanthus bernardinus	Laguna Mountains jewelflower	None/None	Chaparral, lower montane coniferous forest. Clay or decomposed granite soils; sometimes in disturbed areas such as streamsides or roadcuts. 1440-2500 m.	Suitable habitat to support this species does not occur onsite. Potential to occur is **low**.

Scientific Name	Common Name	State/Federal Ranking	Habitat	Potential to Occur
Symphyotrichum defoliatum	San Bernardino aster	None/None	Meadows and seeps, cismontane woodland, coastal scrub, lower montane coniferous forest, marshes and swamps, valley and foothill grassland. Vernally mesic grassland or near ditches, streams and springs; disturbed areas. 3-2045 m.	Suitable habitat to support this species does not occur onsite. Potential to occur is **low**.
Vireo bellii pusillus	least Bell's vireo	Endangered/ Endangered	Summer resident of Southern California in low riparian in vicinity of water or in dry river bottoms; below 2000 ft. Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, *Baccharis*, mesquite.	Suitable habitat to support this species does not occur onsite. Potential to occur is **low**.

Source: USFWS/NMFS- 2019 IPaC species list; CNDDB 2019; CNPS 2019.

Status Codes:

E = endangered;
T = threatened;
P = proposed for listing;
C = candidate for listing; and
CH = designated critical habitat
CP = CA state proposed for listing;
FP = CDFW fully protected

Kaitlyn Dodson
for BRA/JD – Coachella Travel Center
February 14, 2019
Attachment C – Site Photos

Photo 1 – Vantage point facing north into Cactus Basin from Baseline Rd

Photo 2 – Photo depicting the conditions east at any location within the fence line stretch of the project as well as the levee that separates the concrete wash from adjacent land

Photo 3 – Photo taken facing southwest from the northeast corner of the project site depicting the alluvial fan sage scrub

Photo 4 – Photo taken facing northeast from the southwest corner of the project site depicting the alluvial fan sage scrub

Kaitlyn Dodson
for BRA/JD – Coachella Travel Center
February 14, 2019
Attachment C – Site Photos

Photo 5 – West-facing picture of the vegetation of the hillside near the entrance of the project site from Baseline Rd

Photo 6 – West-facing picture of the vegetation of the hillside midway between the alluvial fan sage scrub and Baseline Rd

Photo 7 – West-facing picture of the vegetation of the hillside as the community transitions to alluvial fan sage scrub

APPENDIX 4

HISTORICAL/ARCHAEOLOGICAL RESOURCES SURVEY REPORT

RIALTO BASELINE STORM DRAIN PROJECT

City of Rialto
San Bernardino County, California

For Submittal to:

City of Rialto
Public Works/Engineering Division
335 W. Rialto Avenue
Rialto, CA 92376

Prepared for:

Tom Dodson & Associates
2150 N. Arrowhead Avenue
San Bernardino, CA 92405

Prepared by:

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

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

May 16, 2019
CRM TECH Contract No. 3454

Title: Historical/Archaeological Resources Survey Report: Rialto Baseline Storm Drain Project, City of Rialto, San Bernardino County, California

Author(s): Bai "Tom" Tang, Principal Investigator/Historian
Ben Kerridge, Archaeologist/Report Writer
Daniel Ballester, Archaeologist/Field Director
Nina Gallardo, Archaeologist/Native American Liaison

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

Date: May 16, 2019

For Submittal to: City of Rialto
Public Works/Engineering Division
335 W. Rialto Avenue
Rialto, CA 92376
(909) 421-7210

Prepared for: Kaitlyn Dodson, Vice President
Tom Dodson & Associates
2150 N. Arrowhead Avenue
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(909) 882-3612

USGS Quadrangle: Fontana, Calif., 7.5' quadrangle (Sections 32-34, T1N R5W, and 3-5, T1S R5W, San Bernardino Baseline and Meridian)

Project Size: Approximately 2.25 linear miles

Keywords: Eastern San Bernardino Valley; Phase I historical/archaeological resources survey; Site 36-015497 (San Bernardino Baseline/Baseline Road); no "historical resources" under CEQA

MANAGEMENT SUMMARY

Between March and May 2019, at the request of Tom Dodson & Associates, CRM TECH performed a cultural resources study for the proposed Rialto Baseline Storm Drain Project in the City of Rialto, San Bernardino County, California. The project seeks to upgrade current drainage infrastructure along Baseline Road from a retention basin known as Cactus Basin No. 3 west to the intersection with Tamarind Avenue. The subject property of the study consists of approximately 2.25 linear miles of storm drain right-of-way lying mostly within the existing right-of-way of Baseline Road, in Sections 32-34 of T1N R5W and Sections 3-5 of T1S R5W, San Bernardino Baseline and Meridian.

The study is part of the environmental review process for the project. The City of Rialto, as the project sponsor and the lead agency, required the study in compliance with the California Environmental Quality Act (CEQA). 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 near the project area. In order to identify such resources, CRM TECH conducted a historical/archaeological resources records search, pursued historical background research, consulted with the Native American representatives, and carried out a systematic field survey.

The results of the records search indicate that five historical/archaeological sites were previously recorded within or adjacent to the project area:

36-010659 (CA-SBR-10659H)	sparse refuse scatter
36-010908 (CA-SBR-10908H)	structural foundation, standpipe, and refuse scatter
36-015497 (CPHI SBr-012)	San Bernardino Baseline (Baseline Road)
36-021612	three early 20th century bungalows
36-029057 (CA-SBR-29057H)	multi-origin refuse dumping site

The field survey and the historical background research reveal that four of these five sites are no longer extant today, having evidently been removed during subsequent residential and commercial developments at their former locations. The remaining site, 36-015497, represents the San Bernardino Baseline, embodied by Baseline Road in the project vicinity. As a part of the basis for all land surveys and titles in southern California since 1853, the San Bernardino Baseline was officially designated a California Point of Historical Interest (CPHI-SBr-12) in 1973. As such, Site 36-015497 meets the definition of a "historical resource" under CEQA provisions.

The historic value of Site 36-015497, however, is symbolic in nature and is derived from the conceptual line across the landscape instead of the existing roadway, a heavily traveled major thoroughfare of entirely modern character and appearance. Therefore, the current configuration and physical features of Baseline Road do not contribute to the historic significance of the site. Since Site 36-015497 exists in the project area largely on paper only, this study concludes that the proposed project has no potential to affect the significance or integrity of this "historical resource."

During the course of the Native American contacts, the State of California Native American Heritage Commission reported the presence of unspecified Native American cultural resource(s) in the project vicinity but referred further inquiries to the Gabrieleño Band of Mission Indians–Kizh Nation. In subsequent correspondence, however, the Gabrieleño Band of Mission Indians–Kizh Nation did not provide any further information on such resources. According to CEQA guidelines, the identification of potential "tribal cultural resources" is beyond the scope of this study and needs to be addressed through government-to-government consultations between the City of Rialto and the pertinent Native American groups pursuant to Assembly Bill 52.

Based on these findings, CRM TECH recommends to the City of Rialto a preliminary conclusion of *No Impact* on cultural resources, pending the completion of the City's government-to-government consultation process with local Native American tribes. No additional 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 encountered inadvertently during any earth-moving operations associated with the project, all work within 50 feet of the discovery should be halted or diverted until a qualified archaeologist can evaluate the nature and significance of the finds.

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INTRODUCTION

Between March and May 2019, at the request of Tom Dodson & Associates, CRM TECH performed a cultural resources study for the proposed Rialto Baseline Storm Drain Project in the City of Rialto, San Bernardino County, California (Figure 1). The project seeks to upgrade current drainage infrastructure along Baseline Road from a retention basin known as Cactus Basin No. 3 west to the intersection with Tamarind Avenue. The subject property of the study consists of approximately 2.25 linear miles of storm drain right-of-way lying mostly within the existing right-of-way of Baseline Road, in Sections 32-34 of T1N R5W and Sections 3-5 of T1S R5W, San Bernardino Baseline and Meridian (Figures 2, 3).

The study is part of the environmental review process for the project. The City of Rialto, as the project sponsor and the lead agency, required the study in compliance with the California Environmental Quality Act (CEQA; PRC §21000, et seq.). 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 near the project area.

In order to identify such resources, CRM TECH conducted a historical/archaeological resources records search, pursued historical background research, consulted with the Native American representatives, and carried out a systematic field survey. 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.

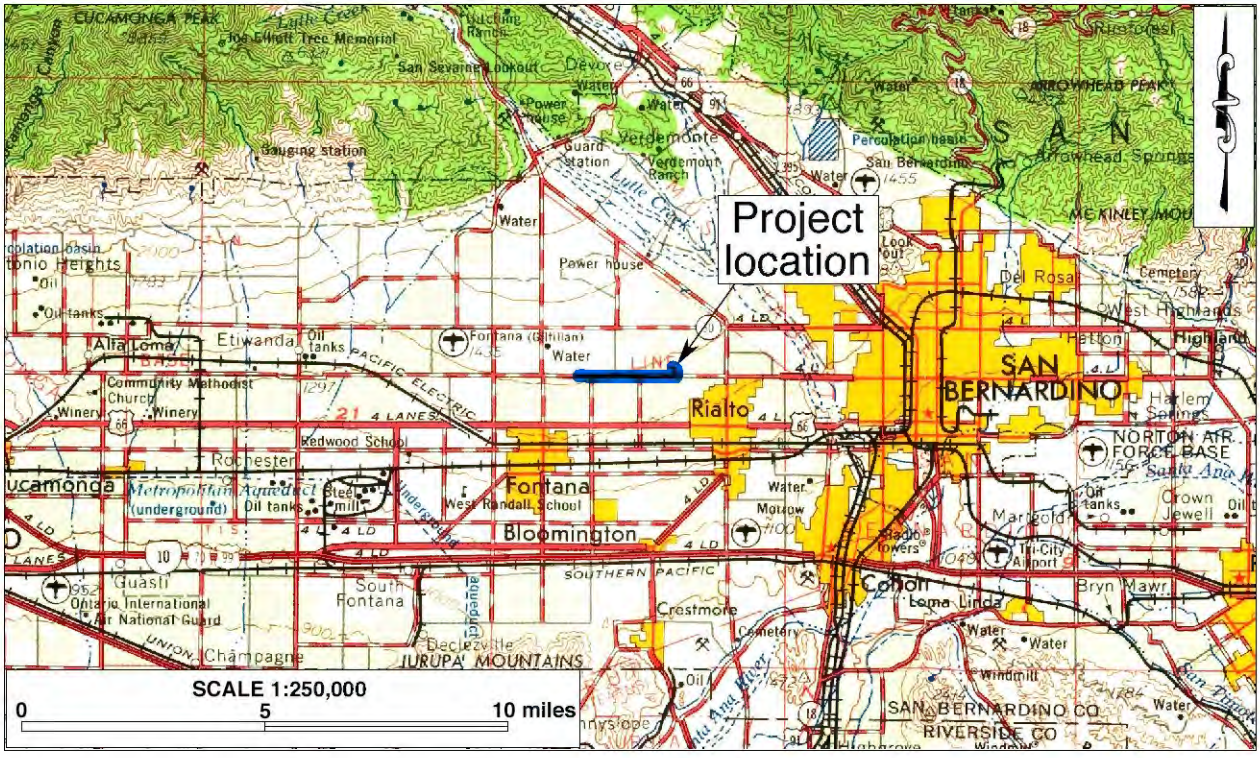

Figure 1. Project vicinity. (Based on USGS San Bernardino, Calif., 60'x30' quadrangle [USGS 1969])

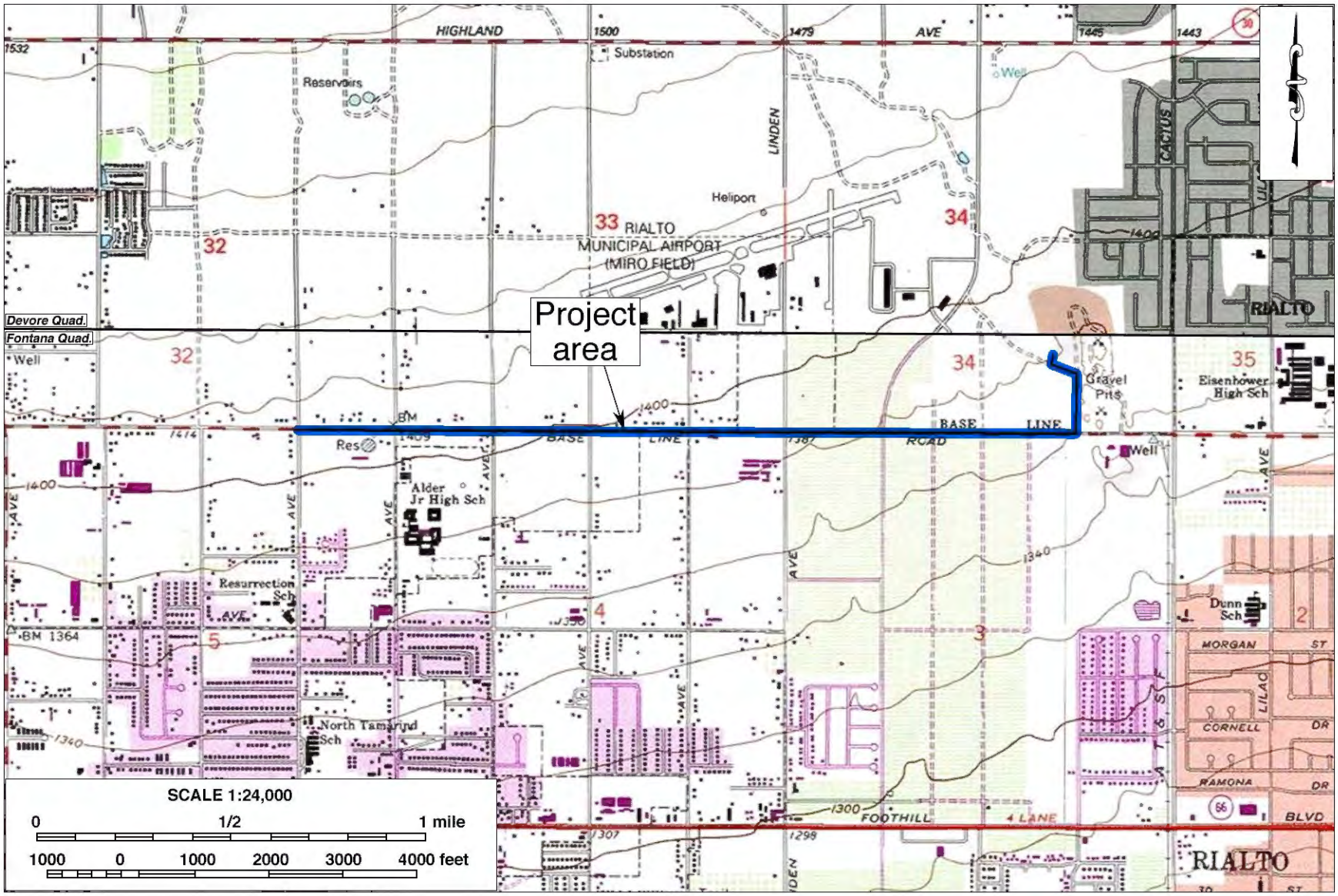

Figure 2. Project location. (Based on USGS Fontana and Devore, Calif., 7.5' quadrangle [USGS 1980; 1988])

Figure 3. Recent aerial photograph of the project area. (Based on Google Earth imagery)

SETTING

CURRENT NATURAL SETTING

The City of Rialto is situated in the eastern portion of the San Bernardino Valley, a broad inland valley defined by the San Gabriel and San Bernardino Mountain Ranges on the north and a series of low rocky hills on the south. The environment of the region is characterized by its temperate Mediterranean climate, with the average maximum temperature in July reaching above 90 degrees Fahrenheit and the average minimum temperature in January hovering around 35 degrees. Annual rainfall is typically less than 20 inches, most of which occurs between November and March.

As mentioned above, most of the project alignment lies within the Baseline Road right-of-way, while the easterly end of the project, from Baseline Road to the Cactus Basins, follows the course of an unpaved access road (Figure 3). This segment of Baseline Road, a heavily traveled local thoroughfare, is lined predominantly by suburban residential neighborhoods on the south and by recent commercial and warehouse developments on the north, with some vacant land and a few older residences of rural character still present (Figures 3, 4).

The terrain in the vicinity is relatively level, with a slight incline to the west, and the elevations in the project area range approximately from 1,360 feet to 1,415 feet above mean sea level. Virtually the entire project area has been disturbed by past construction activities associated with Baseline Road, the retention basins, the access road, underground utilities, nearby buildings, and other urban development. The existing vegetation in and around the project area consisted mainly of landscaping plants with some small grasses and shrubs, and little vestige of the native landscape remains (Figure 4).

Figure 4. Typical landscape in the project area. Photograph taken on March 22, 2019, along Baseline Road near the intersection of Ayala Drive; view to the west.

CULTURAL SETTING

Prehistoric Context

The earliest evidence of human occupation in inland southern California 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, 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 the works of Chartkoff and Chartkoff (1984), Warren (1984), and others. The prehistory of Riverside County specifically 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 inland southern California can be divided 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

Ethnographically, the present-day Rialto area lies between the traditional territories of the Serrano and the Gabrielino, which adjoined and overlapped with each other, at least during the Late Prehistoric and Protohistoric Periods. The homeland of the Gabrielinos, probably the most influential Native American group in aboriginal southern California (Bean and Smith 1978a:538), was centered in the Los Angeles Basin and reached as far east as the San Bernardino-Riverside area.

The homeland of the Serranos was centered in the San Bernardino Mountains but also included the slopes and lowlands on the flanks of the mountain range and the southern portion of the Mojave Desert.

Whatever the linguistic affiliation, Native Americans in and around the Rialto area 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 mortars. During their seasonal rounds to exploit plant resources, small groups would migrate within their traditional territory 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.

As early as 1542, the Gabrielino were in contact with the Spanish during the historic expedition of Juan Rodríguez Cabrillo, but it was not until 1769 that the Spaniards took steps to colonize Gabrielino territory. Shortly afterwards, most of the Gabrielino people were incorporated into Mission San Gabriel and other missions in southern California. The Serrano were brought into the mission system during the 1810s, when an *asistencia* of Mission San Gabriel was established in present-day Loma Linda. Due to introduced diseases, dietary deficiencies, and forceful reduction, Gabrielino and Serrano population dwindled rapidly. By 1900, the Gabrielino had almost ceased to exist as a culturally identifiable group (Bean and Smith 1978a:540). The Serrano, meanwhile, were mostly settled on the San Manuel and the Morongo Indian Reservations (Bean and Smith 1978b:573).

Historic Context

In 1772, three years after the beginning of Spanish colonization of Alta California, Pedro Fages, *comandante* of the new province, and a small force of soldiers under his command became the first Europeans to set foot in the San Bernardino Valley (Beck and Haase 1974:15). They were followed in the next few years by two other famed Spanish explorers, Juan Bautista de Anza and Francisco Garcés, who traveled through the valley in the mid-1770s (*ibid.*). Despite these early visits, for the next 40 years the inland valley received little impact from the Spanish colonization activities in Alta California, which were concentrated predominantly in the coastal regions.

Following the establishment of Mission San Gabriel in 1771, the San Bernardino Valley became nominally a part of the landholdings of that mission. The name "San Bernardino" was bestowed on the region at least by 1819, when a mission *asistencia* and an associated rancho were officially established under that name in the eastern end of the valley (Lerch and Haenszel 1981). After gaining independence from Spain in 1821, the Mexican government began in 1834 the process of secularizing the mission system in Alta California, which in practice meant the confiscation of the Franciscan missions' vast land holdings, to be distributed later among prominent citizens of the province. During the 1830s and 1840s, several large land grants were made around present-day Rialto (Beck and Haase 1974:38). However, most of what is now the City of Rialto, including the project area, was not included in any of these land grants, and thus remained unclaimed public land when California was annexed by the U.S. in 1848.

Used primarily as cattle ranches, the area around Rialto saw little development until the mid-19th century, when a group of Mormon settlers from Salt Lake City founded the town of San Bernardino in 1851. After the completion of the Southern Pacific Railroad and the competing Atchison, Topeka

and Santa Fe Railway in the 1870s-1880s, a phenomenal land boom swept through much of southern California, ushering in a number of new settlements in the San Bernardino Valley. In 1887, the Semi-Tropic Land and Water Company purchased a large tract of land near the mouth of Lytle Creek, together with the necessary water rights to the creek, and laid out the townsites of Rialto, Bloomington, and Rosena (now Fontana; Ingersoll 1904:619; Brown and Boyd 1922:249-250).

With the collapse of the 1880s land boom, the Semi-Tropic Land and Water Company lost its holdings to its creditors in 1896, and the entire enterprise was thrown into financial turmoil (Schuiling 1984:90, 102). The community of Rialto survived, thanks largely to the newly established citrus industry. Throughout the late 19th and early 20th centuries, Rialto grew steadily as one of San Bernardino Valley's "citrus showcases," with most of its residents devoted primarily to the cultivation of the navel orange (Brown and Boyd 1922:249-250). Since the mid-20th century, the Rialto area became increasingly urbanized—and its economic livelihood diversified—along with the rest of southern California. Today, the area's once thriving citrus industry is more a part of its cultural heritage than a force in the local economy.

RESEARCH METHODS

RECORDS SEARCH

On March 20, 2019, CRM TECH archaeologist Ben Kerridge completed the historical/ archaeological resources records search at the South Central Coastal Information Center (SCCIC), California State University, Fullerton. During the records search, Kerridge examined maps, records, and electronic databases at the SCCIC for previously identified cultural resources and existing cultural resources reports within a one-mile radius of the project area. Previously identified cultural resources include properties designated as California Historical Landmarks, Points of Historical Interest, or San Bernardino County Historical 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 BACKGROUND RESEARCH

Historical background research on the project area was conducted by CRM TECH principal investigator/historian Bai "Tom" Tang on the basis of published literature in local and regional history, U.S. General Land Office (GLO) land survey plat maps dated 1856-1875, U.S. Geological Survey (USGS) topographic maps dated 1901-1988, and aerial photographs taken in 1938-2018. 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 CONSULTATION

On March 14, 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. Following the NAHC's recommendations and previously established consultation protocol, CRM TECH further contacted a total of nine nearby tribes in writing on March 28 for additional information on potential Native American cultural resources in the vicinity. Correspondence between CRM TECH and the Native American representatives is summarized below and attached to this report in Appendix 2.

FIELD SURVEY

On March 22, 2019, CRM TECH archaeologist Daniel Ballester carried out the field survey of the project area. The portion of the project area along the dirt access road between the Cactus Basins and Baseline Road was surveyed at an intensive level by walking two parallel transects placed on either side of the alignment, and the rest of the project area, lying within the Baseline Road right-of-way, was surveyed at a reconnaissance level from a slow-moving motor vehicle. In this way, the ground surface in the entire project area was systematically examined for any evidence of human activities dating to the prehistoric or historic period (i.e., 50 years or older). Visibility of the native ground surface was poor within the Baseline Road right-of-way but good (80 percent) along the dirt access road.

RESULTS AND FINDINGS

RECORDS SEARCH

According to SCCIC records, five previous cultural resources studies completed between 1995 and 2016 have evidently included various portions of the project area (Figure 5). As a result of these studies, one historical/archaeological site, designated 36-015497 in the California Historical Resources Inventory, was previously recorded as lying partially within the project area. The site represents the San Bernardino Baseline, which is embodied by Baseline Road in the project vicinity, and was officially designated a California Point of Historical Interest (CPHI-SBr-12) in 1973 (OHP 1973). In addition to 36-015497, four other sites were previously recorded on properties adjacent to the project area. The four adjacent sites are listed below:

36-010659 (CA-SBR-10659H)	sparse refuse scatter
36-010908 (CA-SBR-10908H)	structural foundation, standpipe, and refuse scatter
36-021612	three early 20th century bungalows
36-029057 (CA-SBR-29057H)	multi-origin refuse dumping site

Outside the project area but within the one-mile radius, SCCIC records show more than 20 other studies on various tracts of land and linear features, including at least four studies on adjacent properties (Figure 5). In all, approximately 75 percent of the land within the scope of the records search has been surveyed, resulting in the identification of seven additional sites. Like the five sites within or adjacent to the project boundaries, all of these sites dated to the historic period. Among them were buildings, structural foundations, water storage tanks, refuse scatters, and the former Rialto Municipal Airport. None of these seven sites was found in the immediate vicinity of the project area. Therefore, none of them requires further consideration during this study.

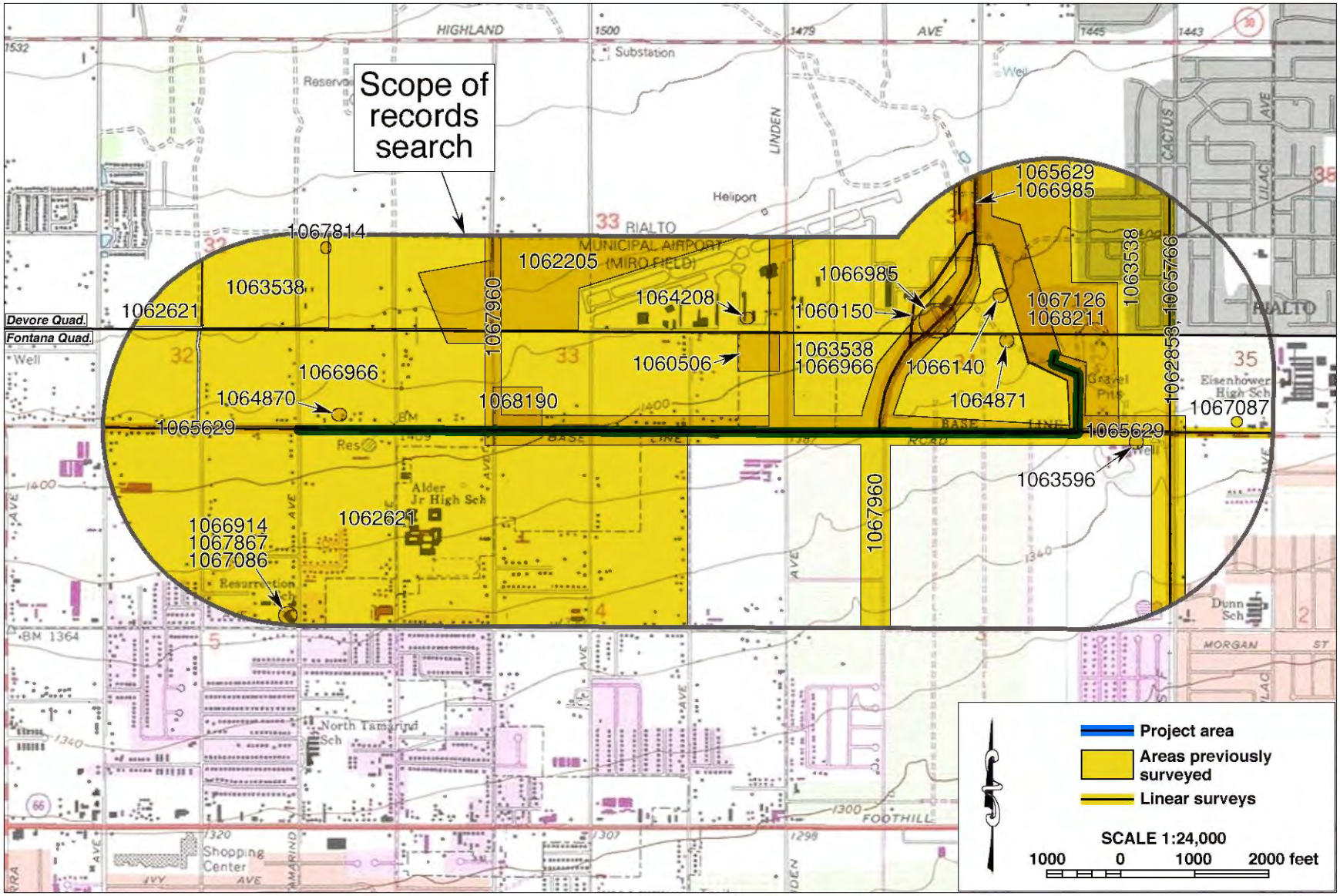

Figure 5. Previous cultural resources studies in the vicinity of the project area, listed by SCCIC file number. Locations of historical/archaeological sites are not shown as a protective measure.

HISTORICAL BACKGROUND RESEARCH

Historical maps demonstrate that in the mid-19th century, when the U.S. government conducted the earliest systematic land surveys in the San Bernardino Valley, the only man-made features known to be present in the project vicinity were a few winding roads (Figure 6). The most notable among these was the forerunner of present-day Baseline Road, which was then a part of a main thoroughfare between San Bernardino and Los Angeles. The road was blazed by the Mormon settlers in San Bernardino in the mid-1850s and was laid out generally along the San Bernardino Baseline (Haenszel 1979:31). In the vicinity of the project area, however, the actual route of that road was roughly a half-mile south of the baseline and well outside the project area (Figure 6).

By the late 19th century, the early roads had been replaced by a grid of widely spaced roads lined by scattered buildings, in a settlement pattern that was typical of rural southern California at the time (Figure 7). The current alignments of Baseline Road and some of the intersecting streets across the project area dated to that period. Between the 1890s and the 1940s, a few buildings, presumably farmsteads, were noted along the segment of Baseline Road in the project area, but most of the land was used as agricultural fields, including citrus groves or other types of orchards (Figure 8; NETR Online 1938; 1948).

In the early days of the post-World War II boom, the number of building along the project route began to rise, but the rural character of the area did not change until the 1966-1980 era, when the first suburban residential tract developments occurred on the south side of Baseline Road (Figure 9; NETR Online 1948-1980). To the east of the project area, a gravel quarry was in operation in the

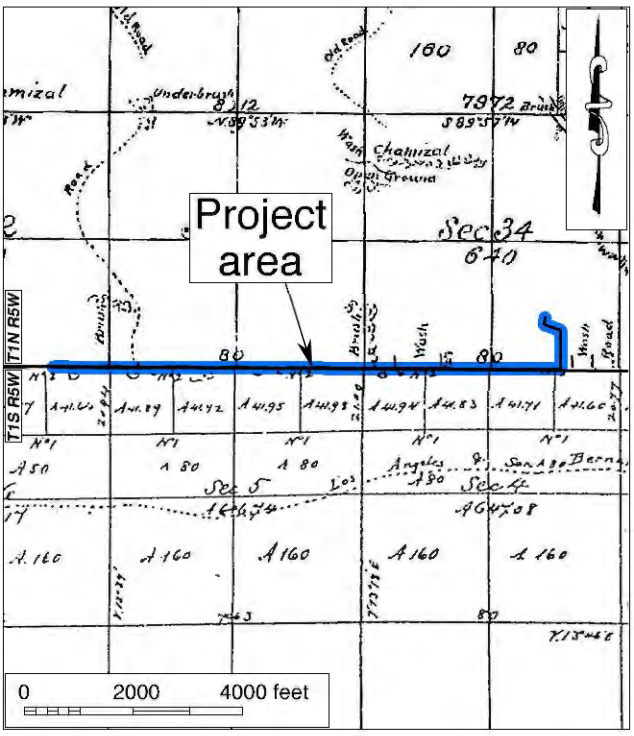

Figure 6. The project area and vicinity in 1852-1874 (Source: GLO 1856; 1875)

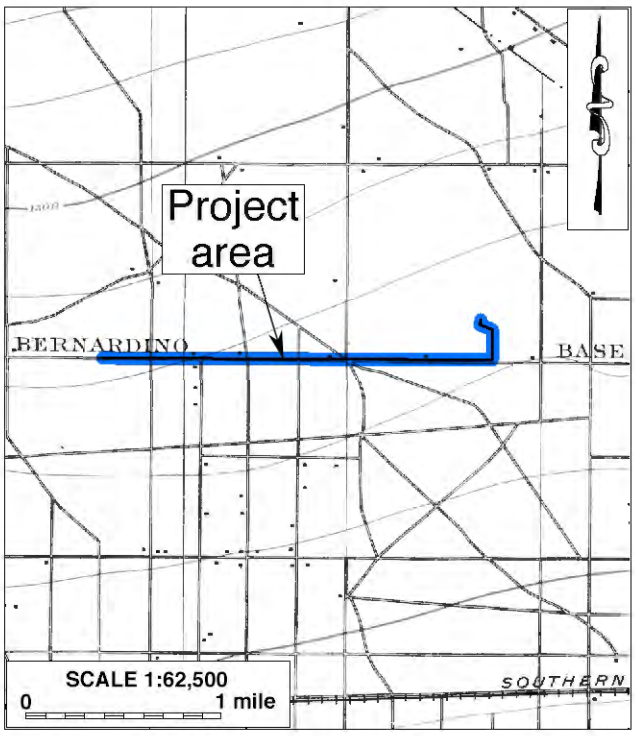

Figure 7. The project area and vicinity in 1893-1894 (Source: USGS 1901)

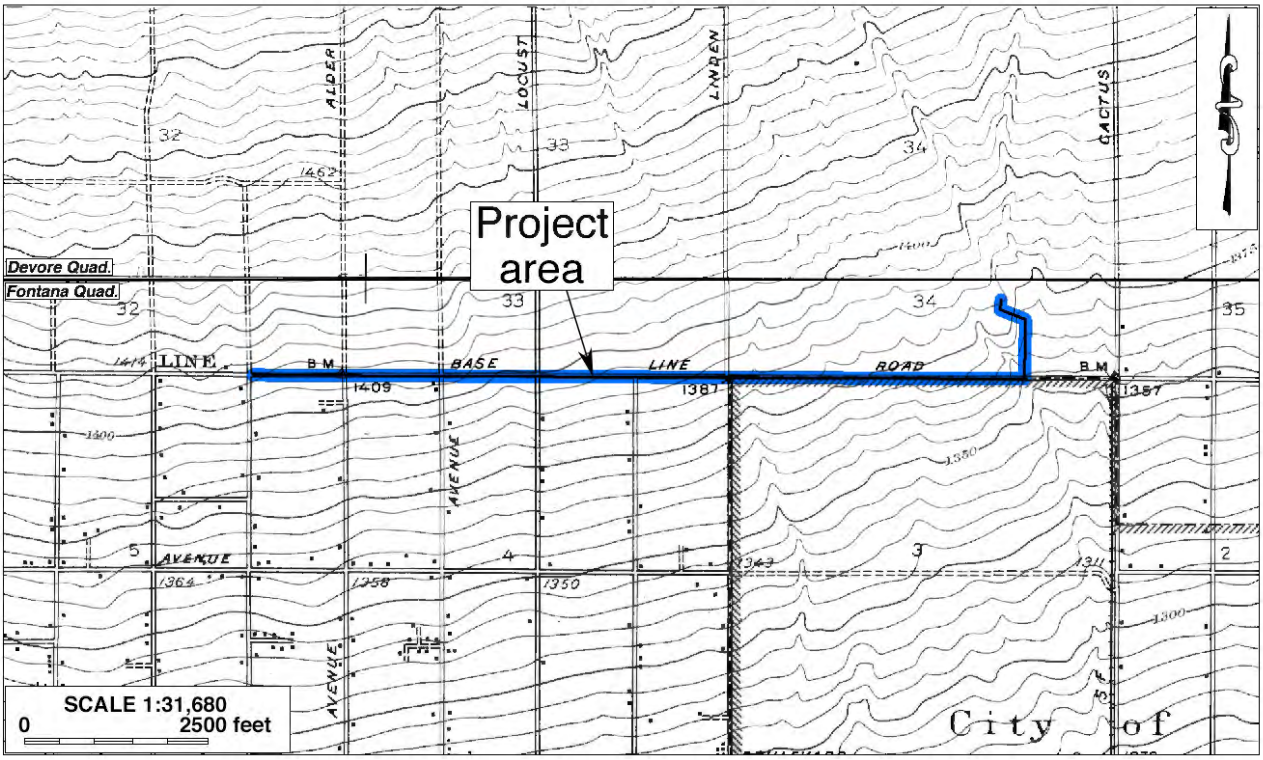

Figure 8. The project area and vicinity in 1936-1938. (Source: USGS 1941; 1943)

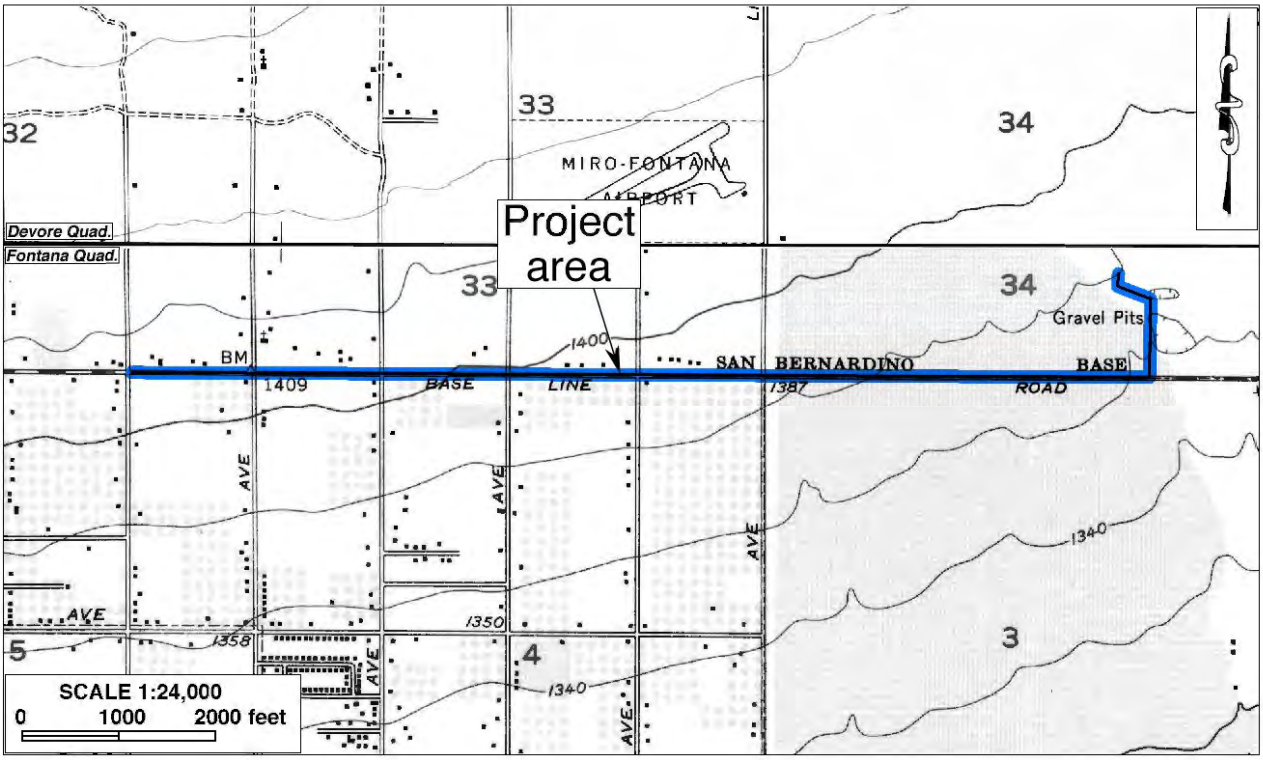

Figure 9. The project area and vicinity in 1952-1954. (Source: USGS 1953; 1954)

area of the present-day Cactus Basins during the 1940s-1970s (Figure 9; NETR Online 1948-1980). The retention basins adjacent to the project area today, namely Cactus Basins No. 3 and No. 3A, were built sometime between 1980 and 1994, after the quarry ceased operation (NETR Online 1980; 1994).

By the mid-1990s, most of the land along the south side of Baseline Road had been developed into residential neighborhoods (NETR Online 1994; Google Earth 1994; 1995). The final infill development, along Grove Place between Maple Avenue and Locus Avenue, was completed between 2005 and 2009 (Google Earth 2002-2009). On the north side of Baseline Road, the rural land uses persisted well into the 1990s before the construction of two self-storage facilities near the eastern end of the project area began to transform the landscape, followed by two strip malls at the intersection of Ayala Road in 2004-2005 (Google Earth 1994-2005).

The large warehouses that dominate the land use on that side of Baseline Road is the most recent development along the project route, dating only to 2013-2018 (Google Earth 2005-2018). With the accelerated residential and commercial development along its course since the 1980s, the character and configuration of Baseline Road itself have also been significantly altered, most notably with the addition of curbs, sidewalks and, during the current decade, landscaped medians (NETR Online 1968-1994; Google Earth 1994-2018).

NATIVE AMERICAN CONSULTATION

In response to CRM TECH's request, the NAHC reported in a letter dated March 26, 2019, that the sacred Lands Record File indicated the presence of Native American cultural resource(s) in the project vicinity but referred further inquiries to the Gabrieleño Band of Mission Indians–Kizh Nation. In the meantime, the NAHC also recommended that other local Native American groups be contacted for further information and provided a list of potential contacts in the region (see Appendix 2).

Upon receiving the NAHC's reply, CRM TECH sent written requests for comments to all nine tribal organizations on the referral list (see Appendix 2). For some of the tribes, the designated spokespersons on cultural resources issues were contacted in lieu of the tribal political leaders on the referral list, as recommended in the past by the pertinent tribal government staff. The nine tribal representatives contacted during this study are listed below:

- Andy Salas, Chairperson, Gabrieleño Band of Mission Indians–Kizh Nation;
- Sandonne Goad, Chairperson, Gabrielino/Tongva Nation;
- Anthony Morales, Chairperson, Gabrieleno/Tongva San Gabriel Band of Mission Indians;
- Robert Dorame, Chairperson, Gabrielino Tongva Indians of California Tribal Council;
- Charles Alvarez, Chairperson, Gabrielino Tongva Tribe;
- Travis Armstrong, Tribal Historic Preservation Officer, Morongo Band of Mission Indians;
- Donna Yocum, Chairperson, San Fernando Band of Mission Indians;
- Jessica Mauck, Cultural Resources Analyst, San Manuel Band of Mission Indians;
- Mark Cochrane, Chairperson, Serrano Nation of Mission Indians.

As of this time, three of the nine tribes have responded in writing (see Appendix 2). Travis Armstrong of the Morongo Band and Jessica Mauck of the San Manuel Band stated that their respective tribes have no additional information to provide for this study. Ms. Mauck indicated that the San Manuel Band "is unlikely to have concerns during formal consultation with the lead agency," while Mr. Armstrong indicated that the Morongo Band "may provide other information to the lead agency during the AB 52 consultation process."

On behalf of the Gabrieleño Band of Mission Indians–Kizh Nation, Brandy Salas, Tribal Administrative Specialist, replied that the tribe would like to pursue government-to-government consultation with the City of Rialto. She did not, however, provide any further information on Native American cultural resource(s) that may exist in the project vicinity.

FIELD SURVEY

The results of the field survey indicate that all four of the historical/archaeological sites previously recorded on properties adjacent to the project area (36-010659, 36-010908, 36-021612, and 36-029057) have been removed. Their former locations are now occupied by the residential neighborhood along Grove Place and the warehouses between Maple Avenue and Laurel Avenue, which were built in 2005-2009 and 2013-2018, respectively (Google Earth 2005-2018).

Baseline Road, the physical embodiment of Site 36-015497 (San Bernardino Baseline), remains in heavy use today as a local thoroughfare. As a result of continuous alterations in response to the gradual urbanization of the area along its course, this segment of the road is now entirely modern in appearance and demonstrates no historical characteristics despite its 19th century origin (Figure 4). No other potential "historical resources" were encountered within the project area throughout the course of the survey.

DISCUSSION

The purpose of this study is to identify any cultural resources within or adjacent to the project area and assist the City of Rialto in determining whether such resources meet the official definition of "historical resources" or as provided in the California Public Resources Code, in particular CEQA. 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 properties 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)). In other words, buildings, structures, sites, or districts that belong to one or more of the following three categories are to be considered "historical resources" for the purposes of CEQA compliance (160 Cal. App. 4th 1051):

- Mandatory historical resources: properties that are listed in or formally determined to be eligible for listing in the California Register of Historical Resources;

- Presumptive historical resources: properties that are designated in an officially established local register, recognized by local ordinance, resolution, or general plan, or identified in a local survey prepared in accordance with PRC §5024.1(g), unless determined not to be historically or culturally significant by the lead agency upon a preponderance of the evidence;
- Discretionary historical resources: properties that are determined to be historically significant in the lead agency's discretion, independent of any decision to list or designate them in a national, state, or local register of historical resources.

In summary of the research results presented above, five historical/archaeological sites were previously recorded within or adjacent to the project area, but four of them, 36-010659, 36-010908, 36-021612, and 36-029057, are no longer extant today. The remaining site, 36-015497, represents the San Bernardino Baseline, which is embodied by Baseline Road in the project vicinity. As a part of the basis for all land surveys and titles in southern California since 1853, the San Bernardino Baseline has been designated a California Point of Historical Interest (CPHI-SBr-12). As a property included in a state-wide register of local historical resources, Site 36-015497 clearly meets the definition of a "historical resource" in the category of "presumptive historical resources."

The historic value of Site 36-015497, however, is symbolic in nature and is derived from the conceptual line across the landscape instead of the existing roadway. The current configuration and physical features of Baseline Road, which are modern and in fact quite recent in origin, do not contribute to the historic significance of the site. Since Site 36-015497 exists in the project area largely on paper only, CRM TECH concludes that the proposed project has no potential to affect the significance or integrity of this "historical resource." As no other potential "historical resources" were identified within the project area, CRM TECH further concludes that no "historical resources" will be impacted by the project.

CONCLUSION AND RECOMMENDATIONS

CEQA establishes that a project that may cause a substantial adverse change in the significance of a "historical resource" or a "tribal cultural resource" is a project that may have a significant effect on the environment (PRC §21084.1-2). "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, the results of the present study indicate that no "historical resources" will be impacted by the proposed project. However, the NAHC reported the presence of unspecified Native American cultural resource(s) in the project vicinity and referred further inquiries to the Gabrieleño Band of Mission Indians–Kizh Nation, who did not provide any information on such resources during this study. According to CEQA guidelines, the identification of potential "tribal cultural resources" is beyond the scope of this study and needs to be addressed through government-to-government consultations between the City of Rialto and the pertinent Native American groups pursuant to Assembly Bill 52.

Based on these findings, CRM TECH presents the following recommendations to the City of Rialto:

- A preliminary conclusion of *No Impact* on cultural resources appears to be appropriate for this project, pending the completion of the City's government-to-government consultation process with local Native American tribes to ensure the proper identification of potential "tribal cultural resources."
- No additional cultural resources investigation will be necessary for the project unless construction plans undergo such changes as to include areas not covered by this study.
- If buried cultural materials are encountered inadvertently during any earth-moving operations associated with the project, all work within 50 feet of the discovery should be halted or diverted until a qualified archaeologist can evaluate the nature and significance of the finds.

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1969 Map: San Bernardino, Calif. (1:250,000); 1958 edition revised.
1980 Map: Fontana, Calif. (7.5', 1:24,000); 1967 edition photorevised in 1978.
1988 Map: Devore, Calif. (7.5', 1:24,000); 1966 edition photorevised in 1985.

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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/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.
2011-2012	GIS Specialist for Caltrans District 8 Project, Garcia and Associates, San Anselmo, California.
2009-2010	Field Crew Chief, Garcia and Associates, San Anselmo, California.
2009-2010	Field Crew, ECorp, Redlands.
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.

PROJECT ARCHAEOLOGIST/NATIVE AMERICAN LIAISON
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.

PROJECT ARCHAEOLOGIST/REPORT WRITER
Ben Kerridge, M.A.

Education

2014	Archaeological Field School, Institute for Field Research, Kephallenia, Greece.
2010	M.A., Anthropology, California State University, Fullerton.
2009	Project Management Training, Project Management Institute/CH2M HILL, Santa Ana, California.
2004	B.A., Anthropology, California State University, Fullerton.

Professional Experience

2015-	Project Archaeologist/Report Writer, CRM TECH, Colton, California.
2015	Teaching Assistant, Institute for Field Research, Kephallenia, Greece.
2009-2014	Publications Delivery Manager, CH2M HILL, Santa Ana, California.
2010-	Naturalist, Newport Bay Conservancy, Newport Beach, California.
2006-2009	Technical Publishing Specialist, CH2M HILL, Santa Ana, California.
2002-2006	English Composition/College Preparation Tutor, various locations, California.

Papers Presented

- Geomorphological Survey of Tracts T126–T151 to Support Archaeological Shoreline Research Project. Institute for Field Research, Kephallenia, Greece, 2014.
- The Uncanny Valley of the Shadow of Modernity: A Re-examination of Anthropological Approaches to Christianity. Graduate Thesis, California State University, Fullerton, 2010.
- Ethnographic Endeavors into the World of Counterstrike. 74th Annual Conference of the Southwestern Anthropological Association, 2003.

Cultural Resources Management Reports

Co-author and contributor to numerous cultural resources management reports since 2013.

Memberships

Society for California Archaeology; Pacific Coast Archaeological Society.

APPENDIX 2

CORRESPONDENCE WITH NATIVE AMERICAN REPRESENTATIVES*

* Nine local Native American representatives were contacted; a sample letter is included in this report.

SACRED LANDS FILE & NATIVE AMERICAN CONTACTS LIST REQUEST

NATIVE AMERICAN HERITAGE COMMISSION
1550 Harbor Boulevard, Suite 100
West Sacramento, CA 95691
(916)373-3710
(916)373-5471 (Fax)
nahc@nahc.ca.gov

Project: Proposed Rialto Baseline Storm Drain Project (CRM TECH No. 3454)

County: San Bernardino

USGS Quadrangle Name: Devore and Fontana, Calif.

Township 1 North **Range** 5 West SB **BM; Section(s)**: 32-34

Township 1 South **Range** 5 West SB **BM; Section(s)**: 3-5

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 install 2.25 linear miles of new storm drain system that runs south from the existing Cactus Basin to Baseline Road and then west within the Baseline Road right-of way to Tamarind Avenue, in the City of Rialto, San Bernardino County, California.

March 14, 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

March 26, 2019

Nina Gallardo
CRM Tech

VIA Email to: ngallardo@crmtech.us

RE: Proposed Rialto Baseline Storm Drain Project, San Bernardino 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 positive. Please contact the Gabrieleno Band of Mission Indians – Kizh Nation on the attached list for more information. 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
San Bernardino County
3/26/2019

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

Morongo Band of Mission Indians
Robert Martin, Chairperson
12700 Pumarra Rroad — Cahuilla, Serrano
Banning, CA, 92220
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, Serrano
Banning, CA, 92220
Phone: (951) 849 - 8807
Fax: (951) 922-8146
dtorres@morongo-nsn.gov

San Fernando Band of Mission Indians
Donna Yocum, Chairperson
P.O. Box 221838 — Kitanemuk, Vanyume, Tataviam
Newhall, CA, 91322
Phone: (503) 539 - 0933
Fax: (503) 574-3308
ddyocum@comcast.net

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

Serrano Nation of Mission Indians
Goldie Walker, Chairperson
P.O. Box 343 — Serrano
Patton, CA, 92369
Phone: (909) 528 - 9027

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 Proposed Rialto Baseline Storm Drain Project, San Bernardino County.

From: Nina Gallardo <ngallardo@crmtech.us>
Sent: Thursday, March 28, 2019 12:27 PM
To: admin@gabrielenoindians.org
Subject: NA Scoping Letter for the Proposed Rialto Baseline Storm Drain Project in the City of Rialto, San Bernardino County (CRM TECH #3454)

Hello Mr. Salas,

I'm emailing to inform you that CRM TECH will be conducting a cultural study for the proposed Rialto Baseline Storm Drain Project in the City of Rialto, San Bernardino County (CRM TECH #3454). We have received the Native American Heritage Commission (NAHC) SLF response and NA contact list. The NAHC reports that SLF indicates the presence of Native American cultural resources in the project area and recommends that the Gabrieleno Band of Mission Indians - Kizh Nation be contacted for further information (see attached).

I'm contacting you to see if the Gabrieleno Band of Mission Indians - Kizh Nation has any specific information regarding cultural sites located in the project area. I'm also attaching the NA scoping letter, a copy of the NAHC response letter, and a project area map.

Thanks for your time and input on this project.

Nina Gallardo
Project Archaeologist/Native American liaison
CRM TECH
1016 E. Cooley Drive Ste. A/B
Colton, CA 92324
(909) 824-6400

March 28, 2019

Sandonne Goad, Chairperson
Gabrielino/Tongva Nation
P.O. Box 86908
Los Angeles, CA 90086

RE: Proposed Rialto Baseline Storm Drain Project
2.25 Linear Miles of Pipeline Alignment in the City of Rialto
San Bernardino County, California
CRM TECH Contract #3454

Dear Ms. Goad:

I am writing to bring your attention to an ongoing CEQA-compliance study for the proposed project referenced above. The project entails the installation of approximately 2.25 linear miles of new storm drain pipeline from the existing Cactus Basins south to Baseline Road and then west within the Baseline Road right-of-way to Tamarind Avenue. The accompanying map, based on USGS

Devore and Fontana, Calif., 7.5' quadrangles, depicts the location of the project area in Sections 32-34, T1N R5W, and Sections 3-5, T1S R5W, SBBM.

Records on file at the South Central Coastal Information Center (SCCIC) report that Baseline Road (Site 36-015497) is the only known historical/archaeological site in the project area. However, the Native American Heritage Commission Sacred Lands File indicates the presence of Native American cultural resources in the project area, and the commission recommends that the Gabrieleno Band of Mission Indians - Kizh Nation and other local tribes 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 on potential Native American cultural resources in or near the project area.

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 Rialto.

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
Email: ngallardo@crmtech.us

Encl.: NAHC response letter and project location map

From: Tribal Historic Preservation Office <thpo@morongo-nsn.gov>
Sent: Thursday, March 28, 2019 3:44 PM
To: 'ngallardo@crmtech.us'
Subject: RE: NA Scoping Letter for the Proposed Rialto Baseline Storm Drain Project in the City of Rialto, San Bernardino County (CRM TECH #3454)

Hello,

Regarding the above referenced project, 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: Friday, March 29, 2019 4:08 PM
To: ngallardo@crmtech.us
Subject: RE: NA Scoping Letter for the Proposed Rialto Baseline Storm Drain Project in the City of Rialto, San Bernardino County (CRM TECH #3454)

Hi Nina,

Thank you for contacting the San Manuel Band of Mission Indians (SMBMI) regarding the above referenced project. SMBMI appreciates the opportunity to review the project documentation, which was received by our Cultural Resources Management Department on 28 March 2019. While SMBMI consults on projects within the City of Rialto, this particular area has not historically been of major concern. Additionally, based on recent information obtained by the Tribe, I am going to start pulling back on the nearby areas for which SMBMI previously expressed concern. As such, SMBMI does not have information to provide for the study and is unlikely to have concerns during formal consultation with the lead agency.

Thank you,

Jessica Mauck
CULTURAL RESOURCES ANALYST
O: (909) 864-8933 x3249
M: (909) 725-9054
26569 Community Center Drive Highland California 92346

From: Administration Gabrieleno <admin@gabrielenoindians.org>
Sent: Tuesday, April 2, 2019 1:34 PM
To: Nina Gallardo
Subject: Re: NA Scoping Letter for the Proposed Rialto Baseline Storm Drain Project in the City of Rialto, San Bernardino County (CRM TECH #3454)

Hello Nina

Thank you for your letter dated March 28, 2018. If there will be any ground disturbance taking place regarding the project our Tribal government would like to consult with the lead agency. Can you please provide us with the lead agency contact info.

Thank you

Sincerely,

Brandy Salas

Admin Specialist
Gabrieleno Band of Mission Indians - Kizh Nation
PO Box 393
Covina, CA 91723
Office: 844-390-0787
website: www.gabrielenoindians.org