COMMUNITY & ECONOMIC DEVELOPMENT DEPARTMENT

Planning Division

~~Draft~~ Final Mitigated Negative Declaration

WARD: 1

1. **Case Numbers:** P17-0506 (Design Review), P17-0507 (Grading Exception), P17-0747 (Summary Vacation), P17-0748 (Grading Exception) & P17-0749 (Variance)

2. **Project Title:** 750 Marlborough Avenue Warehouse

3. **Meeting Date:** May 2, 2018

4. **Lead Agency:** City of Riverside
Community & Economic Development Department
Planning Division
3900 Main Street, 3rd Floor
Riverside, CA 92522

5. **Contact Person:** Candice Assadzadeh, Associate Planner, (951) 826-5667

6. **Project Location:** 750 Marlborough Avenue and 1550 Research Park Drive, situated at the eastern terminus of Marlborough Avenue and the southwestern terminus of Research Park Drive. APNs: 257-060-002 and 257-030-042 (Figure 1).

7. **Project Applicant/Project Sponsor's Name and Address:** Guthrie Pericles, LLC
Attn: Douglas Thompson and Jim Guthrie
1451 Research Park Drive, Suite 200
Riverside, California 92507-2154

8. **General Plan Designation:** Business/Office Park (B/OP)

9. **Zoning Designation:** BMP-SP – Business and Manufacturing Park and Specific Plan (Hunter Business Park) Overlay Zones

10. **Description of Project:** The proposed project involves construction of a 346,330 square foot industrial building comprised of approximately 339,510 square feet of unrefrigerated warehouse space and 6,820 square feet of office space, on an approximately 22.34 gross-acre site (APNs 257-060-002 and 257-030-042). The gross-acreage includes the addition of approximately 0.3 acres from the property to the north (APN 257-030-016) as a result of a lot line adjustment, to be recorded prior to the issuance of grading permits. Additionally, the existing Marlborough Avenue right-of-way currently continues across the Gage Canal and transitions to a partially dedicated cul-de-sac on the project property. The proposed project would revise the existing right-way to have an off-set cul-de-sac across the Gage Canal, partially within the subject property, partially within an offsite parcel, and would vacate the existing partially dedicated cul-de-sac right-of-way within the project property. A legal description and plat map have been prepared for this summary vacation in conjunction with the proposed project.

    The Hunter Business Park Specific Plan limits lot coverage to 50 percent and the BMP zoning district allows for a maximum floor area ratio (FAR) of 1.5. The project would result in building site coverage of 35.3 percent and a FAR of 0.5. The project would include 375 standard vehicular parking spaces, four ADA parking spaces, and 12 trailer parking spaces. Primary vehicular access to the project site would be provided by a driveway entrance located at the eastern terminus of Marlborough Avenue, on the western border of the site. A secondary driveway entrance would be located at

the northern border of the site at the southern terminus of Research Park Drive. The main freight truck entrance/exit to the proposed warehouse would be from Marlborough Avenue; the main passenger vehicle entrance would be from Research Park Drive. It is assumed the building would operate 24 hours a day, Monday through Sunday, with the exception of some holidays.

The project also includes the enhancement and partial reconstruction of an existing 10-foot-wide multi-purpose trail, consisting of decomposed granite material. It extends from the southwest corner of the site to the south and east sides of the site. The trail is proposed to be graded to drain into a proposed ditch/channel that will run along the southern and eastern side of the trail for storm water protection. The trail has been redesigned to provide a 12-foot wide clearance for fire service vehicles with a maximum slope no greater than 15 percent where feasible, as it is also used as a Fire access road. Lastly, the trail will be used as a maintenance road for maintenance of the proposed graded slopes and the storm water protection system, which consists of the drainage ditch/channel adjacent to the trail and the proposed underground storm drain.

11. **Surrounding land uses and setting:** The project site is located in Hunter Business Park within the City of Riverside, west of the terminus of Marlborough Avenue and south of the terminus of Research Park Drive, at the foot of the western portion of the Box Springs Mountains. The proposed project site currently consists of previously disked lots with sparsely vegetated areas on the south and east margins at the toe of the Box Springs Mountains. A cement-lined culvert traverses directly east-west through the site. Stormwater flows are contained on the project site under current conditions. There are no regular water sources, suitable riparian vegetation or soils, or riverine features that support downstream resources. Land uses immediately adjacent to the property are described in Table 1 below and include industrial development to the north and west, and open space to the east and south.

Table 1 Surrounding Land Uses and General Plan/Zoning Designations

	Existing Land Use	General Plan Designation	Zoning Designation
Project Site	Vacant	B/OP - Business Office/Park	BMP-SP – Business and Manufacturing Park and Specific Plan (Hunter Business Park) Overlay Zones
North	Office, Light Industrial	B/OP - Business Office/Park	BMP-SP – Business and Manufacturing Park and Specific Plan (Hunter Business Park) Overlay Zones
West	Office, Light Industrial	B/OP - Business Office/Park	BMP-SP – Business and Manufacturing Park and Specific Plan (Hunter Business Park) Overlay Zones
South	Box Springs Mountain Reserve Park	OS-C – Open Space – Conservation (Riverside County jurisdiction)	*R-1 – One Family Dwellings (Riverside County jurisdiction)*
East	Box Springs Mountain Reserve Park	OS-C – Open Space – Conservation (Riverside County jurisdiction)	*R-1 – One Family Dwellings (Riverside County jurisdiction)*

12. **Other public agencies whose approval is required (e.g. permits, financial approval, or participation agreement.):**

    a. None

13. **Other Environmental Reviews Incorporated by Reference in this Review:**

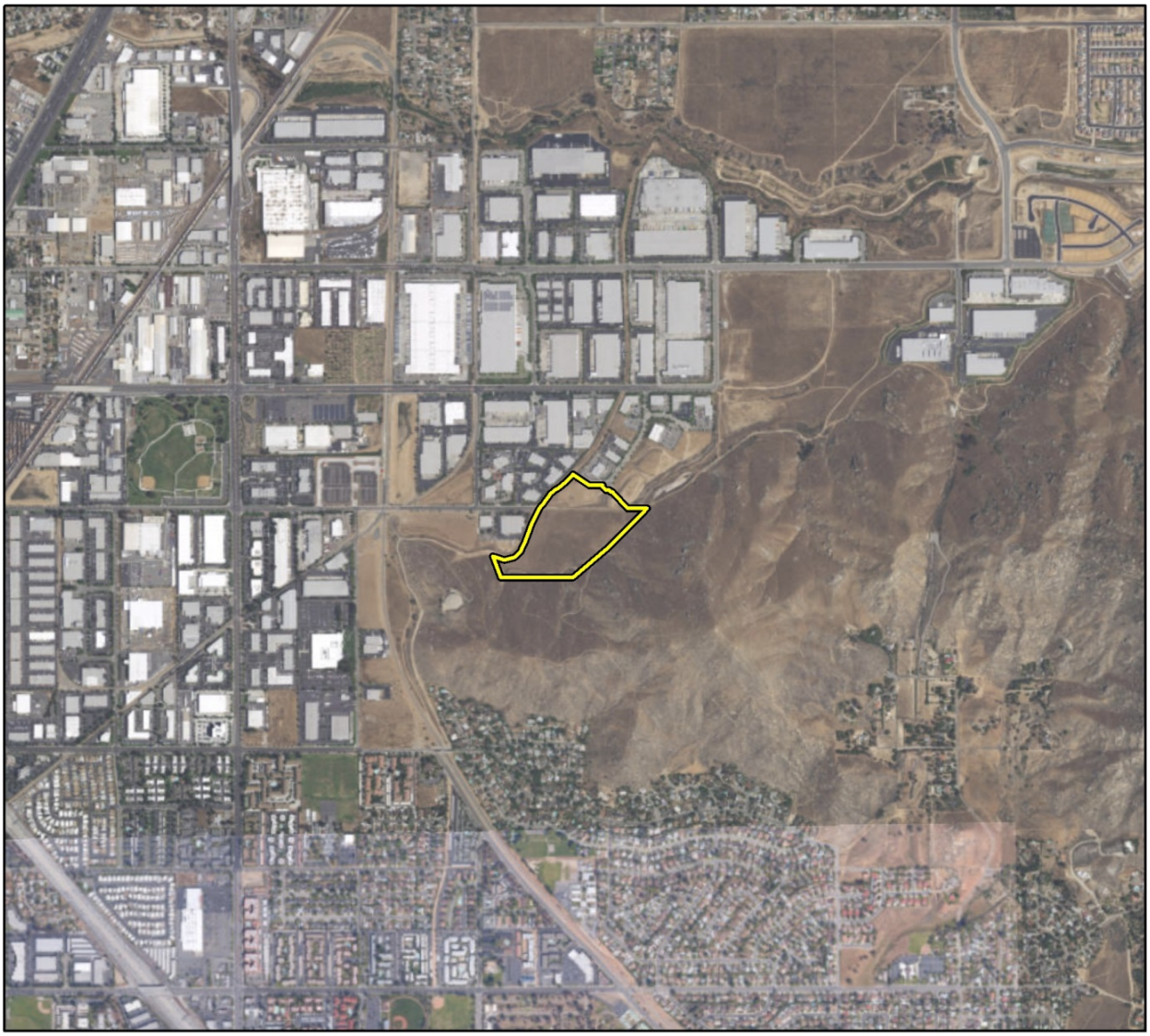
    a. 750 Marlborough Drive Project – Cultural Resources Study, prepared by Rincon Consultants, Inc., dated November 2017
    b. 750 Marlborough Drive Project – MSHCP Consistency Analysis and Habitat Assessment, prepared by Rincon Consultants, Inc., dated December 2017
    c. Air Quality and Greenhouse Gas Study – 750 Marlborough Drive Warehouse Project, prepared by Rincon Consultants, Inc., dated December 2017
    d. General Plan 2025
    e. GP 2025 FPEIR
    f. Hunter Business Park Specific Plan
    g. Hydrologic Analysis for Marlborough Industrial in the City of Riverside, CA

h. Marlborough Industrial Project Traffic Impact Analysis, prepared by Rick Engineering, dated December 2017
i. Noise Study – 750 Marlborough Drive Warehouse Project, prepared by Rincon Consultants, Inc., dated December 2017
j. Preliminary Project Specific Water Quality Management Plan for Guthrie Industrial

14. Acronyms

AQMP	Air Quality Management Plan
CEQA	California Environmental Quality Act
EIR	Environmental Impact Report
FEMA	Federal Emergency Management Agency
FPEIR	Final Program Environmental Impact Report
GIS	Geographic Information System
GHG	Greenhouse Gas
GP 2025	General Plan 2025
IS	Initial Study
MND	Mitigated Negative Declaration
MSHCP	Multiple Species Habitat Conservation Plan
PW	Public Works, Riverside
RCALUCP	Riverside County Airport Land Use Compatibility Plan
RFD	Riverside Fire Department
RMC	Riverside Municipal Code
RPD	Riverside Police Department
RPU	Riverside Public Utilities
RTP/SCS	Regional Transportation Plan/Sustainable Community Strategy
RUSD	Riverside Unified School District
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SKR-HCP	Stephens' Kangaroo Rat - Habitat Conservation Plan
SWPPP	Storm Water Pollution Prevention Plan

Figure 1 Project Location



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Project Location

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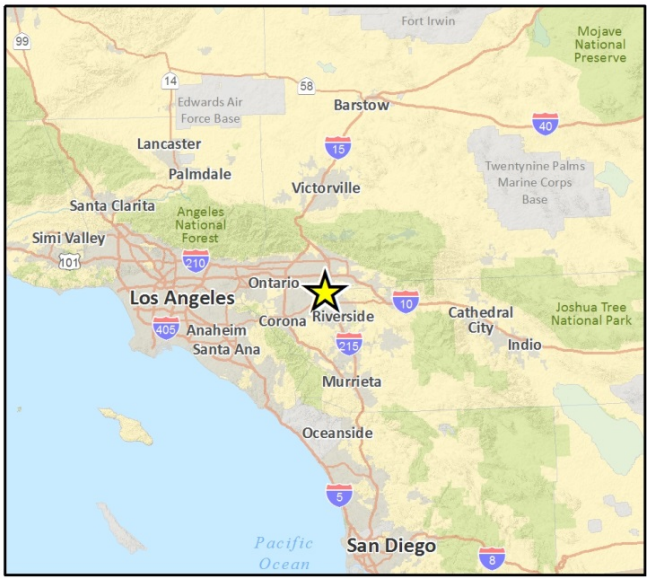
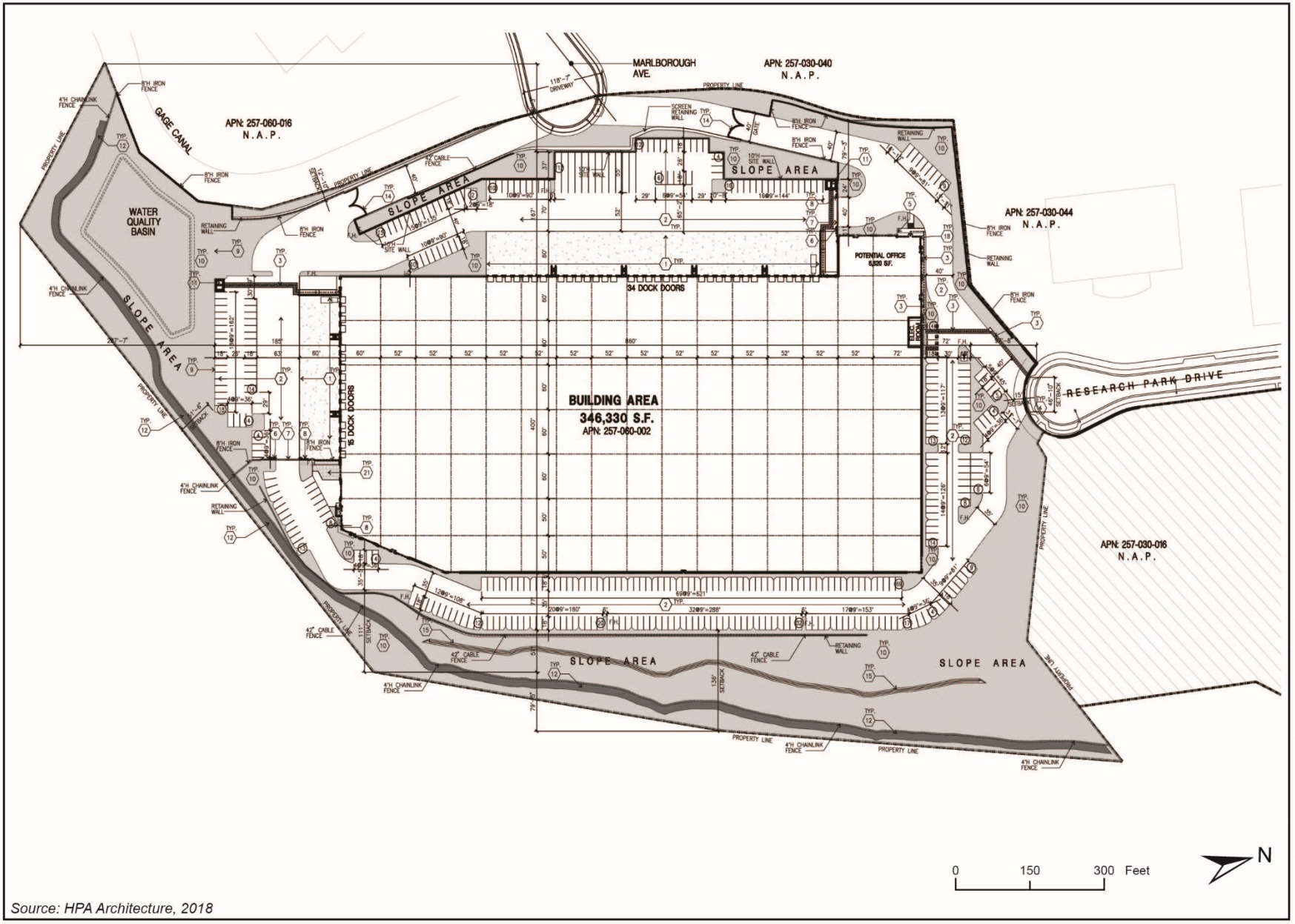


Figure 2 Project Site

Figure 3 Site Plan



Source: HPA Architecture, 2018

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

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

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

DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial evaluation which reflects the independent judgment of the City of Riverside, it is recommended that:

The City of Riverside finds that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared. ☐

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

The City of Riverside finds that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required. ☐

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

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

Signature _____ Date _____

Printed Name & Title _____ For City of Riverside

Draft Mitigated Negative Declaration

EVALUATION OF ENVIRONMENTAL IMPACTS:

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

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

3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an Environmental Impact Report (EIR) is required.

4) "Negative Declaration: Less Than Significant with Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).

5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other California Environmental Quality Act (CEQA) process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:

   a. **Earlier Analysis Used.** Identify and state where they are available for review.

   b. **Impacts Adequately Addressed.** Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

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

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

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

8) The explanation of each issue should identify:

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

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

ISSUES (AND SUPPORTING FORMATION SOURCES):	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
1. AESTHETICS Would the project:				
a. Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐

1a. Response (*Source: GP 2025 Figure CCM-4 Master Plan of Roadways, GP 2025 Open Space and Conservation Element, GP 2025 FPEIR Figure 5.1-1 Scenic and Special Boulevards and Parkways, Table 5.1-A Scenic and Special Boulevards, and Table 5.1-B Scenic Parkways*)

Less Than Significant Impact. The proposed warehouse consists of an infill project in a developed area, surrounded by existing office and light industrial development. General Plan 2025 (GP 2025) Figure CCM-4 labels Marlborough Avenue as a special boulevard between Chicago Avenue and Rustin Avenue, approximately 0.3 miles west of the project site. There are no view restrictions or regulations associated with the special boulevard designation. However, according to the GP 2025 Open Space and Conservation Element, the ridgelines of Box Springs Mountain Reserve Park, directly east and south of the project site, are scenic view points from the City.

The proposed building is anticipated to be a maximum of ~~45~~ 42 feet, 8 inches in height, which is comparable to existing buildings in the project site vicinity. Marlborough Avenue has a slight eastward incline, starting at approximately 990 feet above mean sea level (msl) at the intersection with Northgate Street, to approximately 1,030 feet above msl at the proposed Marlborough Avenue entrance to the project site. The project site is located at the foothill of Box Springs Mountain Reserve Park, which incurs a steep elevation climb from approximately 1,120 feet at its base (eastern boundary of the project site), to approximately 1,400 feet at the ridgeline peak nearest to the project site (Figure 4). At a maximum of 42 feet, 8 inches in height, the building would be in compliance with the development standards of the underlying land use designation and compatible in height to the surrounding industrial buildings. The ridgeline of this portion of the Reserve is nearly 300 feet higher in elevation than the proposed building. The 42-foot, 8-inch high building would not block views of the Reserve ridgelines from the drive east along Marlborough Avenue, the only east-west view corridor of the Reserve near the project site. Furthermore, the improved trail along the southern and eastern portion of the property would be equal in elevation to the building. This would allow for continued views to the west from the Reserve.

Therefore, the new building would not detract from views of Box Springs Mountain Reserve from Marlborough Avenue. Portions of Mount Rubidoux, approximately four miles southwest, and the San Gabriel and San Bernardino Mountains, approximately 23 miles northeast, are also partially visible from the project site. However, Box Springs Mountain Reserve Park as well as existing surrounding buildings and natural elevation changes, obstruct much of these views already. Therefore, the project would have **less than significant impacts** on scenic vistas. No mitigation is required.

b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒

1b. Response (*Source: GP 2025 Figure CCM-4 Master Plan of Roadways, GP 2025 FPEIR Figure 5.1-1 Scenic and Special Boulevards, Parkways, Table 5.1-A Scenic and Special Boulevards, Table 5.1-B Scenic Parkways, the City's Urban Forest Tree Policy Manual, Title 20 Cultural Resources, Caltrans Scenic Highway Routes, Hunter Business Park Specific Plan*)

No Impact. There are no State scenic highways in the City of Riverside (Caltrans 2017). The proposed warehouse would be located at the eastern terminus of Marlborough Avenue, which is a classified as an 88-foot arterial and special boulevard per Figure 5.1-1 and Table 5.1-A of the GP 2025 Final Program Environmental Impact Report (FPEIR). However, there are no special restrictions or regulations associated with the special boulevard designation. Additionally, the project site is currently vacant with no trees or rock outcroppings, and is located within an established industrial business park that does not have any historic buildings. Therefore, the project would have **no impact** on scenic resources, including trees, rock outcroppings, or historic buildings within a state scenic highway. No mitigation is required.

Figure 4 Elevation Profile from Marlborough Avenue and Northgate Street to Box Springs Mountain Reserve Park

Source: GoogleEarth 2017

c. Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐

1c. Response (*Source: GP 2025, GP 2025 FPEIR, Zoning Code, Citywide Design and Sign Guidelines, Hunter Business Park Specific Plan*)

Less Than Significant Impact. The project would consist of a single story warehouse building within Hunter Business Park. The project site is adjacent to existing industrial business park development to the north and west. Directly northwest of the project site, there is an office and light industrial complex similar in use and design to the proposed warehouse.

The project site is currently vacant and cleared of vegetation. The proposed warehouse would be consistent and aesthetically compatible to the surrounding business park and would be subject to the Hunter Business Park Specific Plan development standards as well as the City's *Citywide Design and Sign Guidelines.* Furthermore, as discussed in Response 1a, due to natural elevation changes, the proposed building would not significantly impact views of the Box Springs Mountain ridgelines south and east of the project site. Therefore, the project would not substantially degrade the existing visual character of the area and there would be a **less than significant impact**. No mitigation is required.

d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☒	☐	☐

1d. Response (*Source: GP 2025, GP 2025 FPEIR Figure 5.1-2 Mount Palomar Lighting Area, Title 19 Article VIII Chapter 19.556 Lighting, Citywide Design and Sign Guidelines, Hunter Business Park Specific Plan*)

Less Than Significant Impact with Mitigation Incorporated. The project would not result in a new source of substantial light or glare which would adversely affect day or nighttime views. No rooftop features which could produce light or glare, such as solar panels, are proposed as part of the project. Currently, nighttime lighting is produced by adjacent industrial properties located to the west and north of the project site. The proposed warehouse would include exterior building lights at entrances, exits, walkways along the building perimeter, and loading areas and parking lot lighting. As the site is currently vacant, the new lighting would incrementally increase ambient nighttime illumination in the area. Any exterior building materials would be constructed in accordance with Title 19, Article VIII, Chapter 19.710 (*Design Review*) of the RMC, and in compliance with the *Citywide Design and Sign Guidelines.* Adherence to Title 19, Article VIII, Chapter 19.556 (*Lighting*) of the Riverside Municipal Code (RMC) would ensure impacts from light or glare from the proposed building would remain within acceptable levels.

However, the project site located adjacent to the Box Springs Mountain Reserve Park, which is within the Multi-Species Habitat Conservation Plan (MSHCP) area. Section 6.1.4 of the MSHCP contains Urban/Wildlands Interface Guidelines, which are intended to address indirect effects associated with locating development in proximity to the MSHCP Conservation Area, including impacts from lighting. In order to ensure impacts to the adjacent habitat area from new sources of light are as limited as possible, the following mitigation measures shall be required to ensure potential impacts to the adjacent habitat area from sources of light are **less than significant with mitigation incorporated**:

> **MM AES-1: Photometric Plan.** Prior to the issuance of building permits, the applicant shall submit a photometric (lighting) plan for approval by the Community & Economic Development Department, Planning Division. The approved light design requirements shall be included on the final building plan sheets. The lighting plan shall incorporate the following requirements:
>
> - The project shall be designed in such a manner as to prevent light spillage from the project to the adjacent and nearby open space areas
> - Project lighting shall not exceed an intensity of one foot-candle
> - Shielding shall be employed, where feasible
> - Any night lighting shall be directed away from natural open space areas and directed downward and towards the center of the development
> - No project lights shall blink, flash, oscillate, or be of unusually high intensity or brightness
> - Energy-efficient LPS or HPS lamps shall be used exclusively throughout the project site to dampen glare
> - Exterior lights shall be only "warm" LED lights (<3000K color temperature)

2. AGRICULTURE AND FOREST RESOURCES In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information complied by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and the forest carbon measurement methodology provided in the Forest Protocols adopted by the California Air Resources Board. Would the project:				
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒

2a. Response (*Source: GP 2025 Figure OS-2 Agricultural Suitability*)

No Impact. The project site is not designated as, and is not adjacent to or in proximity to any land classified as, Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency and Figure OS-2 of the GP 2025. Figure OS-2 shows the project site as Farmland of Local Importance. However, the project site is zoned BMP-SP – Business and Manufacturing Park and Specific Plan (Hunter Business Park – Industrial Park District) Overlay Zones. There are no active agricultural resources or operations, including farmlands on or in proximity of the project site. Therefore, the project would have **no impact** on agricultural uses. No mitigation is required.

b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒

2b. Response (*Source: GP 2025 Figure OS-3 Williamson Act Preserves, GP 2025 FPEIR Figures 5.2-2 Williamson Act Preserves and 5.2-4 Proposed Zones Permitting Agricultural Uses, and RMC Title 19*)

No Impact. Pursuant to Figure OS-3 in the GP 2025 and Figures 5.2-2 and 5.2-4 of the GP 2025 FPEIR reveals that the project site is not located within an area that is affected by a Williamson Act Preserve or under a Williamson Act Contract. Moreover, the project site is not zoned for agricultural use. The site is not next to land zoned for agricultural use; therefore, the project would have **no impact** on agricultural uses. No mitigation is required.

c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)) timberland (as defined in Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒

2c. Response (*Source: GIS Map Forest Data*)

No Impact. The City of Riverside has no designated forest land or timberland as defined in Sections 12220[g] and 4526 of the *California Public Resources Code*. Therefore, the project would have **no impacts** on forest land or timberland. No mitigation is required.

d. Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒

2d. Response (*Source: GIS Map Forest Data*)

No Impact. The City of Riverside has no designated forest land. There are no active forest land resources or operations in proximity of the project site. Therefore, the project would have **no impact** on the loss or conversion of forest land. No mitigation is required.

e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

2e. Response (*Source: GP 2025 Figure OS-2 Agricultural Suitability, Figure OS-3 Williamson Act Preserves, Title 19 Article V Chapter 19.130 Industrial Zones BMP, and GIS Map Forest Data*)

No Impact. The project site is zoned Business and Manufacturing Park (BMP) and does not support agricultural resources or operations. The project would not result in the conversion of designated farmland to non-agricultural uses. In addition, there are no agricultural resources or operations, including farmlands within proximity of the subject site. The City of Riverside has no forest land that can support 10 percent native tree cover. Therefore, the project would have **no impact** related to the conversion of Farmland to non-agricultural use or to the loss of forest land. No mitigation is required.

3. AIR QUALITY Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a. Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐

3a. Response (*Source: SCAQMD's 2016 AQMP, SCAG 2016-2040 RTP/SCS, SCAG Employment Density Study*)

Less Than Significant Impact. A project may be inconsistent with the Air Quality Management Plan (AQMP) if it would generate population, housing, or employment growth exceeding the forecasts used in the development of the AQMP. The 2016 AQMP, adopted on March 3, 2017, relies on local city general plans' and the Southern California Association of Government's (SCAG) Regional Transportation Plans' (RTP) forecasts of regional population, housing and employment growth in its own projections for managing Basin air quality.

The proposed project involves the construction of an unrefrigerated warehouse with office space. The project would not provide residential units that would cause a direct increase in the City's population. While the project may provide new employment opportunities in the City of Riverside that could contribute to population growth, this contribution would be nominal. According to an employee density study prepared for SCAG in 2001, warehouse uses in Riverside County employ 16.32 employees per net-acre on average. Thus, the proposed project is expected to employ approximately 273 persons (16.32 employees/acre x 16.7 net-acres) (SCAG 2001). In its 2016 Regional Transportation Plan/Sustainable Community Strategy (RTP/SCS), SCAG projects the City of Riverside's number of employees would increase to 200,500 by 2040; an increase of 80,500 persons relative to 2015 (SCAG 2016). Based on these estimates, the project would constitute 0.3 percent of projected employment growth over the next 20 years. Thus, the level of employment growth associated with the project would not exceed the official regional employment projections. Therefore, the project would be consistent with GP 2025 and the AQMP. The project would have a **less than significant impact** to the implementation of an air quality plan. No mitigation is required.

b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐

3b. Response (*Source: GP 2025 FPEIR Table 5.3-B SCAQMD Air Quality Significance Thresholds, SCAQMD's 2016 AQMP, CalEEMod, Air Quality and Greenhouse Gas Study [Rincon Consultants 2017c]*)

Less Than Significant Impact. The project area is within the South Coast Air Basin (SCAB), which is bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east, and includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties, in addition to the San Gorgonio Pass area in Riverside County. The South Coast Air Quality Management District (SCAQMD) is the designated air quality control agency for the SCAB. The SCAB is designated a nonattainment area for the federal and state one-hour and eight-hour ozone standards, the state suspended particulate matter (PM_{10}) standard, the federal 24-hour $PM_{2.5}$ standard, and the state and federal annual $PM_{2.5}$ standard (SCAQMD 2016). The SCAB is designated unclassifiable or in attainment for all other federal and state standards. The health effects associated with criteria pollutants upon which attainment of state and federal air quality standards is measured are described in Table 2.

Any growth within the Los Angeles metropolitan area would contribute to existing exceedances of ambient air quality standards when taken as a whole with existing development. SCAQMD's approach to determining cumulative air quality impacts for criteria air pollutants is to first determine whether the proposed project would result in a significant project-level impact to regional air quality based on SCAQMD significance thresholds. If the project does not exceed SCAQMD thresholds, then the lead agency needs to consider the additive effects of related projects *only if* the proposed project is part of an ongoing regulatory program or is contemplated in a Program EIR, *and* the related projects are located within an approximately one mile of the proposed project site. If there are related projects within the vicinity (one-mile radius) of the project site, that are part of an ongoing regulatory program or are contemplated in a Program EIR, then the additive effect of the related projects should be considered. The proposed project is not part of a Program EIR nor are there any projects within 1 mile of the project site that are regulated by a Program EIR.

Table 2 Health Effects Associated with Criteria Pollutants

Pollutant	Adverse Effects
Ozone	(1) Short-term exposures: pulmonary function decrements and localized lung edema in humans and animals, risk to public health implied by alterations in pulmonary morphology and host defense in animals; (2) long-term exposures: risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans; (3) vegetation damage; and (4) property damage.
Carbon monoxide (CO)	Reduces oxygen delivery leading to: (1) Aggravation of chest pain (angina pectoris) and other aspects of coronary heart disease; (2) decreased exercise tolerance in persons with peripheral vascular disease and lung disease; (3) impairment of central nervous system functions; and (4) possible increased risk to fetuses.
Nitrogen dioxide (NO_2)	(1) Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; (2) risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes; and (3) contribution to atmospheric discoloration.
Sulfur dioxide (SO_2)	(1) Bronchoconstriction accompanied by symptoms that may include wheezing, shortness of breath, and chest tightness during exercise or physical activity in persons with asthma.
Suspended particulate matter (PM_{10})	(1) Excess deaths from short-term and long-term exposures; (2) excess seasonal declines in pulmonary function, especially in children; (3) asthma exacerbation and possibly induction; (4) adverse birth outcomes including low birth weight; (5) increased infant mortality; (6) increased respiratory symptoms in children such as cough and bronchitis; and (7) increased hospitalization for both cardiovascular and respiratory disease (including asthma).[a]
Suspended particulate matter ($PM_{2.5}$)	(1) Excess deaths from short- and long-term exposures; (2) excess seasonal declines in pulmonary function, especially in children; (3) asthma exacerbation and possibly induction; (4) adverse birth outcomes, including low birth weight; (5) increased infant mortality; (6) increased respiratory symptoms in children, such as cough and bronchitis; and (7) increased hospitalization for both cardiovascular and respiratory disease, including asthma.[a]

[a] More detailed discussions on the health effects associated with exposure to suspended particulate matter can be found in the following documents: Office of Environmental Health Hazard Assessment, Particulate Matter Health Effects and Standard Recommendations, www.oehha.ca.gov/air/toxic_contaminants/PM10notice.html#may, May 9, 2002; and EPA, Air Quality Criteria for Particulate Matter, October 2004.
Source: US EPA 2016

The SCAQMD adopted the 2016 Air Quality Management Plan (AQMP) on March 3, 2017, which provides a strategy for the attainment of state and federal air quality standards. The SCAQMD recommends the use of quantitative thresholds to determine the significance of temporary construction-related pollutant emissions and project operations. These thresholds are shown in Table 3.

Table 3 SCAQMD Air Quality Significance Thresholds

Construction Thresholds	Operational Thresholds
75 pounds per day of ROG	55 pounds per day of ROG
100 pounds per day of NO_X	55 pounds per day of NO_X
550 pounds per day of CO	550 pounds per day of CO
150 pounds per day of PM_{10}	150 pounds per day of SO_X
55 pounds per day of $PM_{2.5}$	150 pounds per day of PM_{10}
	55 pounds per day of $PM_{2.5}$

Source: SCAQMD. March 2015. Accessed May 2017 at: http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf

In addition to the above thresholds, the SCAQMD has developed Localized Significance Thresholds (LSTs), which were devised in response to concern regarding exposure of individuals to criteria pollutants in local communities. LSTs represent the maximum emissions from a project that will not cause or contribute to an air quality exceedance of the most stringent applicable federal or state ambient air quality standard at the nearest sensitive receptor, taking into consideration ambient concentrations in each source receptor area (SRA), distance to the sensitive receptor, and project size; LSTs have been developed for emissions within construction areas up to five acres in size. However, LSTs only apply to emissions within a fixed stationary location and are not applicable to mobile sources, such as cars on a roadway (SCAQMD 2008). As such, LSTs are typically applied only to construction emissions as the majority of operational emissions are associated with project-generated vehicle trips.

The project site is located in Source Receptor Area 23 (SRA 23), Metropolitan Riverside County (SCAQMD 2008). The SCAQMD provides lookup tables for project sites that measure one, two, three, four, or five acres. The project site is approximately 22.34 gross-acres and grading would occur across approximately 17 acres of the site. However, this analysis assumes that there would be no more than five acres under active construction at one time, and relies on the five-acre LSTs for significance determinations. The five-acre LSTs provide a more stringent threshold for construction emissions compared to the analysis of emissions over a larger area. The closest sensitive receptor is Box Mountain Springs Reserve Park located adjacent to the project site along the southern border. Because the shortest distance for which LSTs are provided is 82 feet (25 meters), this is the distance that was used for project analysis as shown in Table 4.

Table 4 SCAQMD LSTs for Construction (SRA-23)

Pollutant	Allowable construction emissions from a 5-acre site in SRA-23 for receptor 82 feet away (lbs/day)
Gradual conversion of NO_x to NO_2	270
CO	1,577
PM_{10}	13
$PM_{2.5}$	8

Source: SCAQMD, October 2009, http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/appendix-c-mass-rate-lst-look-up-tables.pdf?sfvrsn=2 accessed online May 2017.

The proposed project would involve the construction of a warehouse, with associated office space and vehicular parking. The project's construction and operational emissions were estimated using the California Emissions Estimator Model (CalEEMod), version 2016.3.1, per GP 2025 FPEIR MM Air 1 and 7. CalEEMod uses project-specific information, including the project's land uses, square footages for different uses (e.g., residential, parking), and location, as well as model defaults that can be tailored for a specific project to estimate a project's construction and operational emissions. Construction emissions modeled include emissions generated by construction equipment used on-site, such as backhoes and bulldozers, as well as emissions generated by vehicle trips associated with construction, such as hauling trips and employee travel. Operational emissions modeled include mobile source emissions (i.e., vehicle emissions), energy emissions, and area source emissions. Mobile source emissions include emissions generated by delivery truck trips and employee trips to and from the project site associated with operation of the proposed project. Emissions attributed to energy use include natural gas

consumption for space and water heating, in addition to the emissions associated with electricity. Area source emissions are generated by landscape maintenance equipment, consumer products, and architectural coating.

At the request of SCAQMD, the project was modeled using a High Cube Warehouse rate. A high-cube warehouse (HCW) is a building that typically has at least 200,000 gross square feet of floor area, has a ceiling height of 24 feet or more, and is used primarily for the storage and/or consolidation of manufactured goods (and to a lesser extent, raw materials) prior to their distribution to retail locations or other warehouses. A typical HCW has a high level of on-site automation and logistics management. The automation and logistics enable highly-efficient processing of goods through the HCW.

The model assumed construction of 336,330 square feet of unrefrigerated warehouse space, 10,000 square feet of office space, and approximately 86,700 square feet of surface vehicular parking. CalEEMod defaults were used, with trip generation rates set at 25.1 daily trips per 1,000 square feet of office space and 1.68 daily trips per 1,000 square feet of high cube warehouse space. The fleet mix was also adjusted to 68 percent passenger vehicles and 32 percent truck vehicles; truck trip percentages were attributed to different vehicle classes based on the High-Cube Warehouse Vehicle Generation Analysis conducted in 2016 for SCAQMD and the National Association of Industrial and Office Properties (Institute of Transportation Engineers); passenger vehicle percentages were attributed to different vehicle classes based on CalEEMod default percentages, weighted to a total of 68 percent. ~~The proposed project was modeled assuming construction of a 339,510 square foot unrefrigerated warehouse space, 6,820 square feet of office space, and 86,698 square feet of vehicular parking. In addition to project details, a construction schedule was provided by the applicant and used for construction phase lengths. The CalEEMod defaults were used for the number and type of equipment used during each phase of construction. Trip generation rates for the warehouse land use were adjusted to match rates used in the Traffic Impact Analysis completed for the project (Rick Engineering 2017b).~~ In addition, it was assumed the project would comply with all applicable regulatory standards, such as SCAQMD Rule 1113, which limits reactive organic gas (ROG) content in flat and non-flat coatings to 50 grams per liter and Rule 403, which requires watering of disturbed ground surfaces to maintain soils in a damp condition during earth-moving activities; it was assumed watering would occur three times a day.

Construction Emissions. Construction activities associated with the proposed project would consist of grading, site preparation, construction of the proposed building, parking lot, and roadway paving, and architectural coating. These construction activities would generate temporary emissions of fugitive dust (measured as particulate matter), exhaust emissions from heavy construction vehicles and soil hauling trucks, and ROGs from architectural coatings. The majority of project-related operational emissions would be due to area emissions and vehicle trips to and from the site.

Table 5 summarizes the estimated maximum daily emissions of pollutants during construction on the project site. As shown in Table 5, construction emissions would not exceed SCAQMD regional or LSTs for any pollutants. Therefore, impacts to regional air quality and local receptors due to construction emissions would be **less than significant**. No mitigation is required.

Table 5 CalEEMod Model Results: Short-Term Construction Impacts

	Daily Emissions (pounds/day)					
Activity	**ROG**	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Daily Project – Emissions Construction[1]	34.0	52.5	47.4	<0.1	11.2	7.2
SCAQMD Daily Thresholds Construction	75	100	550	150	150	55
Exceeds Threshold? (Y/N)	**N**	**N**	**N**	**N**	**N**	**N**
Daily Project – Onsite Emissions Construction	27.6	52.3	24.3	<0.1	11.0	7.1
LSTs (Onsite only, 82 feet away)	N/A	270	1,577	N/A	13	8
Exceeds Threshold? (Y/N)	**N/A**	**N**	**N**	**N/A**	**N**	**N**

Source: Rincon Consultants 2017c.

[1]Includes emissions from demolition, grading, paving, building construction, and architectural coating; totals include worker trips, soil export hauling trips, construction vehicle emissions, and fugitive dust.

Operational Emissions

Table 6 summarizes estimated emissions associated with operation of the proposed project. The majority of project-related operational emissions would be due to area emissions and vehicle trips to and from the site. As shown below, project-generated emissions would not exceed SCAQMD regional thresholds for ROG, NO_X, CO, SO_X, PM_{10}, or $PM_{2.5}$.

Table 6 CalEEMod Results: Long-Term Operational Impacts

Activity	Daily Emissions (pounds/day)					
	ROG	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Daily Project – Emissions Operational	~~10.8~~9.5	~~25.6~~31.2	~~46.4~~24.8	~~0.2~~0.3	~~12.2~~7.5	~~3.4~~2.2
SCAQMD Daily Thresholds Operational	55	55	550	150	150	55
Exceeds Threshold? (Y/N)	**N**	**N**	**N**	**N**	**N**	**N**

Source: Rincon Consultants 2017c.

As demonstrated above, the project would not exceed SCAQMD thresholds and therefore, would not violate any ambient air quality standard or contribute substantially to an existing or projected air quality violation. Direct, indirect, and cumulative impacts related to air quality would be **less than significant**. No mitigation is required.

To further ensure short-term emissions are reduced to the extent possible, Mitigation Measure Air 4 from the GP 2025 FPEIR and SCAQMD Rule 403 directly apply to this project.

GP 2025 FPEIR MM Air 4: To reduce diesel emissions associated with construction, construction contractors shall provide temporary electricity to eliminate the need for diesel powered generators, or provide evidence that electrical hook ups at construction sites are not cost effective or feasible.

SCAQMD Rule 403: To reduce construction related particulate matter air quality impacts of City projects the following measures shall be required:

1. Minimization of Disturbance. Construction contractors should minimize the area disturbed by clearing, grading, earth moving, or excavation operations to prevent excessive amounts of dust.
2. Soil Treatment. Construction contractors should treat all graded and excavated material, exposed soil areas, and active portions of the construction site, including unpaved onsite roadways to minimize fugitive dust. Treatment shall include, but not necessarily be limited to, periodic watering, application of environmentally safe soil stabilization materials, and/or roll compaction as appropriate. Watering shall be done as often as necessary, and at least twice daily, preferably in the late morning and after work is done for the day. The modeling for this project assumed watering would occur three times a day.
3. Soil Stabilization. Construction contractors should monitor all graded and/or excavated inactive areas of the construction site at least weekly for dust stabilization. Soil stabilization methods, such as water and roll compaction, and environmentally safe dust control materials, shall be applied to portions of the construction site that are inactive for over four days. In addition, a wheel shaker/wheel spreading device consisting of raised dividers (rails, pipe, or grates) at least 24 feet long and 10 feet wide, shall be utilized to remove bulk material from tires and vehicle undercarriages before vehicles exit the site. If no further grading or excavation operations are planned for the area, the area shall be seeded and watered until landscape growth is evident, or periodically treated with environmentally safe dust suppressants, to prevent excessive fugitive dust.
4. No Grading During High Winds. Construction contractors should stop all clearing, grading, earth moving, and excavation operations during periods of high winds (20 miles per hour or greater, as measured continuously over a one-hour period).
5. Street Sweeping. Construction contractors should sweep all onsite driveways and adjacent streets and roads at least once per day, preferably at the end of the day, if visible soil material is carried over to adjacent streets and roads.

c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐

3c. Response (*Source: GP 2025 FPEIR Table 5.3-B SCAQMD Air Quality Significance Thresholds, SCAQMD's 2016 AQMP, CalEEMod, Air Quality and Greenhouse Gas Study [Rincon Consultants 2017c]*)

Less than Significant. Aside from the pollutant concentrations determined to be less than significant based on CalEEMod analysis for the project, heavily congested intersections can lead to long-term mobile emissions that exceed carbon monoxide (CO) standards and lead to CO hotspots. CO hotspots are locations where the federal or State ambient air quality standards could be exceeded because of the concentration of motor vehicles that are idling. Other factors contributing to a CO hotspot

include the configuration of the intersection, distance to sensitive receptors, and patterns of air circulation. While the SCAQMD has not established a formal screening threshold for carbon monoxide (CO) hotspot analysis, the Bay Area Air Quality Management District (BAAQMD) has established the following threshold: under existing and future emission rates, a project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour in order to generate a significant CO impact (BAAQMD 2011). According to the Traffic Impact Analysis completed for the project (Rick Engineering 2017b), no intersections affected by the project would be required to accommodate more than 44,000 vehicles per hour even during peak hours under future cumulative conditions. Therefore, no intersection-specific CO modeling is required. No substantial pollutant concentrations would be expected as a result of the project. Direct, indirect, and cumulative impacts would be a **less than significant**. No mitigation is required.

d. Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐

3d. Response (*Source: GP 2025 FPEIR Table 5.3-B SCAQMD Air Quality Significance Thresholds, SCAQMD's 2016 AQMP, CalEEMod, Air Quality and Greenhouse Gas Study [Rincon Consultants 2017c]*)

Less Than Significant Impact. Certain population groups, such as children, the elderly, and people with health problems, are particularly sensitive to air pollution. Sensitive receptors are defined as land uses that are more likely to be used by these population groups and include health care facilities, retirement homes, school and playground facilities, and residential areas. The nearest sensitive receptors are approximately 1,700 feet to the south and are separated from the project site by a mountain with an average elevation of 1,201 feet. Diesel emissions from the proposed project would be substantially obstructed by this physical barrier. Furthermore, none of the anticipated truck trips would be driving near these homes. Other sensitive receptors nearest to the project include Highland Elementary School (700 Highlander Drive, Riverside, CA 92507) located approximately three quarters of a mile south of the site, University Heights Middle School (1155 Massachusetts Avenue, Riverside, CA 92507) located approximately three quarters of a mile southwest, single-family residences located approximately a third of a mile south, and Stahovich Mary-US Health Works Medical Group Urgent Care Center (1760 Chicago Avenue, Riverside, CA 92507) located approximately one mile west of the project site.

According to the City of Riverside Good Neighbor Guidelines for Siting New and/or Modified Warehouse Distribution Facilities (2008), on-site truck idling is restricted to less than 5 minutes and signage is required to ensure cooperation. This restriction is based on a State-mandated *Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling* (California Air Resources Board 2005). Compliance with this truck idling restriction would substantially reduce on-site emissions of diesel particulate matter.

Given the applicable idling regulations as well as the lack of sensitive receptors in the proximity, and the presence of a physical barrier between the project site and the nearest sensitive receptor approximately 1,700 feet away, preparation of a mobile source health risk assessment is not warranted. Furthermore, the project would not involve the use of any equipment, such as a diesel generator or operational equipment, which generates toxic air contaminants. ~~The sensitive receptors nearest to the project include Highland Elementary School (700 Highlander Drive, Riverside, CA 92507) located approximately three quarters of a mile south of the site, University Heights Middle School (1155 Massachusetts Avenue, Riverside, CA 92507) located approximately three quarters of a mile southwest, single-family residences located approximately a third of a mile south, and Stahovich Mary-US Health Works Medical Group Urgent Care Center (1760 Chicago Avenue, Riverside, CA 92507) located approximately one mile west of the project site.~~ The proposed project would not exceed SCAQMD thresholds for pollutants as discussed above under construction and operational emissions. Therefore, impacts to sensitive receptors from pollutant concentrations would be **less than significant**.

e. Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

3e. Response (*Source: SCAQMD CEQA Air Quality Handbook, Air Quality and Greenhouse Gas Study [Rincon Consultants 2017c]*)

Less Than Significant Impact. The 1993 SCAQMD CEQA Air Quality Handbook identifies land uses associated with odor complaints to be agriculture uses, wastewater treatment plants, chemical and food processing plants, composting, refineries, landfills, dairies, and fiberglass molding. Warehouses are not identified on this list. In addition, the project would have to comply with SCAQMD Rule 402, which prohibits the discharge of air contaminants that would cause injury, detriment, nuisance, or annoyance to the public. Therefore, the proposed project would not generate objectionable odors affecting a substantial number of people and impacts would be **less than significant**. No mitigation is required.

4. BIOLOGICAL RESOURCES Would the project:				
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐

4a. Response (*Source: GP 2025 Figure OS-6 Stephen's Kangaroo Rat (SKR) Core Reserve and Other Habitat Conservation Plans (HCP) [SKR-HCP], Figure OS-7 MSHCP Cores and Linkages, Figure OS-8 MSHCP Cell Areas, GP 2025 FPEIR Figure 5.4-2 MSHCP Area Plans, Figure 5.4-4 MSHCP Criteria Cells and Subunit Areas, Figure 5.4-6 MSHCP Narrow Endemic Plant Species Survey Area, Figure 5.4-7 MSHCP Criteria Area Species Survey Area, Figure 5.4-8 MSHCP Burrowing Owl Survey Area, Burrowing Owl Focused Surveys [Rincon Consultants 2017d] and Habitat Assessment [Rincon Consultants 2017b]*).

Less Than Significant with Mitigation Incorporated. The proposed project site is located in the Multiple Species Habitat Conservation Plan (MSHCP) survey area for burrowing owl (*Athene cunicularia*: BUOW); therefore, a habitat assessment was conducted on May 4, 2017 by a qualified biologist (Rincon Consultants 2017b and 2017d). The survey area contains elements of suitable habitat for BUOW, including flat, open areas occupied by non-native herbs and grasses, earthen levees and berms, manmade concrete and cement structures, and vacant urban lots. Portions of the survey area are also partially surrounded by fences, which provide perching substrate for BUOW to attain good visibility. The BUOW habitat assessment concluded that no BUOW or sign of BUOW was observed in the survey area or buffer during the focused BUOW survey (Rincon Consultants 2017d). Therefore, BUOW is considered currently absent from the project site and buffer area. However, since suitable habitat is present within the project site there is the potential for BUOW to move onto the site during winter migration or subsequent nesting seasons. Therefore, mitigation measure BIO-1 would be implemented prior to ground-disturbing activities associated with construction activities at 750 Marlborough Avenue to ensure potential impacts to biological resources are **less than significant with mitigation incorporated**:

> **MM BIO-1: Burrowing Owl Pre-Construction Survey.** A pre-construction survey shall be conducted by a qualified biologist within 30 days prior to initiating ground disturbing activities per Objective 6 of the MSHCP BUOW Species Account. If owls are not present on the project site during the pre-construction survey, the proposed disturbance activities may proceed. In the event that owls are discovered and may be affected by the proposed project, avoidance measure shall be developed in compliance with the MSHCP and in coordination with the CDFW and/or Western Riverside County Regional Conservation Authority.

In addition, California Fish and Game Code 3503 (CFGC) and the Migratory Bird Treaty Act (MBTA) protect native birds and their nests from direct take. The Grassland Habitat available on the project site potentially provides habitat for ground nesters, while the properties adjacent to the project site contain ornamental landscaping that may provide suitable nesting habitat for several avian species. Although no nesting behavior was observed during the habitat assessment, construction occurring within breading season could potentially impact nesting birds. Therefore, mitigation measure BIO-2 has been established to ensure that potential impacts to nesting birds and raptors during construction activities are **less than significant with mitigation incorporated:**

> **MM BIO-2: Nesting Bird Survey.** A pre-construction survey shall be conducted by a qualified biologist within 30 days prior to initiating vegetation removal and/or ground disturbing activities. Vegetation removal and initial ground disturbance should occur outside the nesting bird breeding season between the months of February through August. If project activities occur during the nesting season, which can vary based on annual climatic conditions, geographic location, and avian species requirements; or if potential nesting activity is observed by qualified project personnel, then a nesting bird survey should be conducted by a qualified biologist within one (1) week of proposed construction activities. If active nests of protected native species are located, construction work should be delayed until after the nesting season or until the young are no longer dependent upon the nest site. Construction in the vicinity of an active nest should be conducted at the discretion of a biological monitor.

b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☒

4b. Response (*Source: GP 2025 Figure OS-6 SKR-HCP, Figure OS-7 MSHCP Cores and Linkages, Figure OS-8 MSHCP Cell Areas, GP 2025 FPEIR Figure 5.4-2 MSHCP Area Plans, Figure 5.4-4 MSHCP Criteria Cells and Subunit Areas, Figure 5.4-6 MSHCP Narrow Endemic Plant Species Survey Area, Figure 5.4-7 MSHCP Criteria Area Species Survey Area, Figure 5.4-8 MSHCP Burrowing Owl Survey Area, MSHCP Section 6.1.2 Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools, and Habitat Assessment [Rincon Consultants 2017b]*).

No Impact. No wetland or riparian vegetation exists on the project site. Therefore, **no impact** to any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service with implementation of the proposed project would occur. No mitigation is required.

c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒

4c. Response (*Source: City of Riverside GIS/CADME USGS Quad Map Layer, and Habitat Assessment [Rincon Consultants 2017b]*).

No Impact. There are no federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) onsite or within proximity to the project site. The project site does not contain any discernible drainage courses, inundated areas, wetland vegetation, or hydric soils and thus does not include USACOE jurisdictional drainages or wetlands. Therefore, the project would have **no impact** on federally protected wetlands as defined by Section 404 of the Clean Water Act. No mitigation is required.

d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☒	☐

4d. Response (*Source: MSHCP, MSHCP Cores and Linkage, and Habitat Assessment [Rincon Consultants 2017b]*).

Less Than Significant Impact. The project would be subject to the MSHCP and would be consistent with the GP 2025. The proposed project would not conflict with GP 2025 Policy OS-6.4 which requires the City to continue efforts to establish a wildlife movement corridor between Sycamore Canyon Wilderness Park and the Box Springs Mountain Regional Park, between Box Springs Mountain Reserve and the Santa Ana River via Springbrook Wash as identified in the MSHCP and the City's GP 2025. The project would also be consistent with GP 2025 Policy OS-6.1 which addresses preserving wildlife migration areas in general.

The project site is located within the Riverside/Norco and the Highgrove Area Plan of the MSHCP, which contains a small portion of the Proposed Constrained Linkage 4, Proposed Constrained Linkage 7, Existing Noncontiguous Habitat Block A, and Core A as described in the Habitat Assessment (Rincon Consultants 2017b). Though the linkages intersect a small portion of the Riverside/Norco and Highgrove Area Plan, the project site is situated at the base of Box Springs Mountain in a primarily flat and previously graded area adjacent to industrially developed areas and is not located in Cells, Cell Groups, or sub-units within the Riverside/Norco and Highgrove Area Plans. The project site does not likely currently support wildlife movement as it is bordered on the north and west by industrial land uses and roads which do not offer any means of movement through or between natural areas or areas with abundant high-quality habitat. As such, the project would not hinder the movement of wildlife.

Therefore, the project would have a **less than significant impact** to the movement of any native resident or migratory fish or wildlife species or the establishment of native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☒	☐	☐

4e. Response (*Source: MSHCP, Title 16 Section 16.72.040 Establishing the Western Riverside County MSHCP Mitigation Fee, Title 16 Section 16.40.040 Establishing a Threatened and Endangered Species Fees, City of Riverside Urban Forestry Policy Manual, Box Springs Mountain Reserve Comprehensive Trails Master Plan, and Habitat Assessment [Rincon Consultants 2017b]*).

Less Than Significant with Mitigation Incorporated. Implementation of the proposed project would be subject to all applicable Federal, State, and local policies and regulations related to the protection of biological resources, including tree preservation. The project would be required to comply with RMC Section 16.72.040 establishing the MSHCP mitigation fee and Section 16.40.040 establishing the Threatened and Endangered Species Fees.

The Habitat Assessment completed for the project (Rincon Consultants 2017b) concluded that there are no water features or riparian habitats on the project site as defined under Section 6.1.2 of the MSHCP. The cement-lined culvert near the western boundary of the project site was determined to be unsuitable as quality habitat for riparian/riverine species listed in Section 6.1.2 of the MSHCP. Therefore, no further actions related to riparian/riverine species or habitats are recommended pursuant to the MSHCP, and implementation would not conflict with the MSHCP.

Section 6.1.4 of the MSHCP contains Urban/Wildlands Interface Guidelines, which are intended to address indirect effects associated with locating development in proximity to the MSHCP Conservation Area. The project site located adjacent to the Box Springs Mountain Reserve Park. Therefore, the provisions of the guideline in Section 6.1.4 would apply to the project in the following areas:

- **Drainage:** "*… measures shall be put in place to avoid discharge of untreated surface runoff from developed and paved areas into the MSHCP Conservation Area*." The project site includes the construction of bioretention facilities on the southwest portion of the project site, designed to capture sheet flow around the paved parking areas on site before conveying water to the existing storm drain on Marlborough Avenue (further discussed in Section 18, *Utilities and Services Systems*). Furthermore, the project site is downhill from, and lower in elevation than, the hills of Box Springs Mountain Reserve, and naturally convey stormwater and runoff to the proposed biorentention facilities.

- **Toxics:** "*…incorporate measures to ensure that application of such chemicals does not result in discharge to the MSHCP Conservation Area*." Proposed uses for the project site entail warehouse and office uses, which would not be a manufacturer, discharger, or transporter of hazardous materials (further discussed in Section 8, *Hazards and Hazardous Materials*). Potential hazardous materials such as fuel, paint products, lubricants, solvents, and cleaning products may be used and/or stored on site during the construction and/or operation of the building. However, due to the limited quantities of these materials to be used by the project, they are not considered hazardous to the public or MSHCP Conservation Area at large.

- **Lighting:** "*[Light] Shielding shall be incorporated in project designs to ensure ambient lighting in the MSHCP Conservation Area is not increased*." The project would not result in a new source of substantial light or glare which would adversely affect day or nighttime views (further discussed in Section 1, *Aesthetics*). The proposed warehouse would include exterior building lights at entrances, exits, walkways along the building perimeter, and loading areas and parking lot lighting, which would incrementally increase ambient nighttime light in the area. However, adherence to Title 19, Article VIII, Chapter 19.556 (*Lighting*) of the RMC, which sets forth standards for lighting to ensure that lighting provided for projects is adequate to light the project for safety while not causing light spillage onto neighboring properties, would ensure impacts from light or glare from the proposed building would remain less than significant. As part of the project review process and as required as part of MM AES-1, the City shall require a photometric plan be submitted and approved prior to the issuance of building permits.

- **Noise:** "*…wildlife within the MSHCP Conservation Area should not be subject to noise that would exceed residential noise standards*." Further discussed in Section 12, *Noise*, several mitigation measures would be implemented to ensure temporary construction noise and operational noise would not exceed residential noise standards. Such measures to reduce construction noise impacts (mitigation measures NOI-~~3~~ 4 and NOI-~~4~~5) entail restricted hours for construction activities, implementation of temporary sound attenuation barriers, and the use of mufflers on all equipment. Measures to reduce operational noise impacts (mitigation measures NOI-1, NOI-2, and NOI-~~2~~3) include restricted operations during nighttime hours and the installation of noise-attenuating barriers around any rooftop mechanical equipment.

- **Invasives.** "*…consider the invasive, non-native plant species listed in Table 6-2 of the MSHCP and avoid the use of invasive species adjacent to the MSHCP Conservation Area."* The project would include extensive landscaping along the southern portion of the property and around the lot boundaries. The project would be required to comply with the Hunter Business Park Specific Plan Landscape requirements, the City of Riverside Landscape Design

Guidelines, and Chapter 19.62 of the RMC.

- **Barriers.** *"… incorporate barriers, where appropriate in individual project designs to minimize unauthorized public access, domestic animal predation, illegal trespass or dumping in the MSHCP Conservation Area."* The project would include barriers such as native landscaping, fencing, walls, and/or other appropriate mechanisms along the lot boundaries to restrict unauthorized public access to the extent feasible. The project does include improvements to the existing public trail that traverses the eastern and southern boundary of the project site. This trail is meant for pedestrian and emergency vehicle access only and use of the trail shall be required to meet the requirements of the City of Riverside Parks, Recreation, and Community Services Department, as well as the Box Springs Mountain Reserve Comprehensive Trails Master Plan (Riverside, County of 2015), which will ensure impacts from the proposed project would remain less than significant.
- **Grading/Land Development.** *"…slopes associated with proposed site development shall not extend into the MSHCP Conservation Area."* The project site has relatively flat topography, though adjacent to the slopes of Box Springs Mountain Reserve Park to the northeast and east of the project site. Pursuant to the preliminary grading plans and building plans, the proposed project would not encroach into the adjacent MSHCP Conservation Area.

The GP 2025 Open Space/Conservation Element and the Hunter Business Park Specific Plan Landscape Concept include policies to ensure development does not conflict with any local policies or ordinances protecting biological resources. This project has been reviewed against these policies and found to be in compliance with the policies. Furthermore, the project does not include any planting within the public right-of-way. Therefore, the project would have a **less than significant impact with mitigation incorporated** on local policies and ordinances protecting biological resources.

f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☒	☐	☐

4f. Response (*Source: MSHCP, GP 2025 Figure OS-6 SKR-HCP*)

Less Than Significant Impact with Mitigation Incorporated. The project is consistent with the SKR-HCP (Stephens' Kangaroo Rat - Habitat Conservation Plan) and with GP 2025 Policy OS-5.3. The project would be mostly consistent with the guidelines of the MSHCP, including Section 6.1.4 (Guidelines Pertaining to the Urban/Wildlife Interface) and related policies in the GP 2025, including Policy LU-7.4. However, as further discussed in Section 1, *Aesthetics*, and Section 12, *Noise*, several mitigation measures would be implemented to ensure new sources of light and temporary construction noise and operational noise would not significantly impact the surrounding natural open space area. Such measures include limiting glare from new light sources (AES-1), and reducing construction noise impacts (mitigation measures NOI-~~3~~ 4 and NOI-~~4~~5) by restricting hours for construction activities, implementing temporary sound attenuation barriers, and the use of mufflers on all equipment. Measures to reduce operational noise impacts (mitigation measures NOI-1, NOI-2, and NOI-~~2~~3) include restricted operations during nighttime hours and the installation of noise-attenuating barriers around any rooftop mechanical equipment. Therefore, the project would have a **less than significant impact with mitigation incorporated** associated with potential inconsistencies with the MSHCP and/or SKR-HCP to the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan.

5. CULTURAL RESOURCES Would the project:				
a. Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5 of the CEQA Guidelines?	☐	☐	☐	☒

5a. Response (*Source: GP 2025 FPEIR Table 5.5-A Historical Districts and Neighborhood Conservation Areas and Appendix D, Title 20 of the RMC, Cultural Resources Survey [Rincon Consultants 2017a]*)

No Impact. A Cultural Resources Study was completed by Rincon Consultants in September 2017, which found no previously recorded cultural resources within the project site. One previously recorded resource, the Gage Canal (P-33-04768), was identified directly adjacent to the project site. The Gage Canal is listed by the City of Riverside as a Cultural Heritage Landmark. The project would include the extension of Marlborough Avenue across the Gage Canal, however the canal runs underground at this location and ground disturbance for the road extension would not extend deep enough to impact the canal. The Gage Canal is crossed by paved roads numerous times throughout its alignment, including by Columbia Avenue approximately 0.25 miles (400 meters) north of Marlborough Avenue. Additionally, walls would be

installed along the perimeter of paved areas to ensure proper buffering from existing contours, ensuring the preservation of the Gage Canal adjacent to the project site. Thus, the project would not impact the Gage Canal.

A pedestrian survey of the project area resulted in the identification of previously unrecorded remnants of a historical-period irrigation system. The system is no longer in use and has been significantly damaged and vandalized over the years, and the irrigation system cannot be demonstrated to be associated with events or persons significant in our past. The system does not embody the distinctive characteristics of a type, period, or method of installation nor would it yield information important to history. The irrigation system was recorded on Department of Parks and Recreation Series 523 forms, and was determined to be ineligible for listing in the California Register of Historical Resources. Therefore, the project would have **no impact** on historical resources as defined in Section 15064.5 of the CEQA Guidelines. No mitigation is required.

b. Cause a substantial adverse change in the significance of an archeological resource pursuant to § 15064.5 of the CEQA Guidelines?	☐	☒	☐	☐

5b. Response (*Source: GP 2025 FPEIR Figure 5.5-1 Archaeological Sensitivity and Figure 5.5-2 Prehistoric Cultural Resources Sensitivity and Appendix D, Cultural Resources Survey [Rincon Consultants 2017a]*)

Less Than Significant with Mitigation Incorporated. According to the Cultural Resources Study (Rincon 2017a), there are no known archeological resources present on the project site. Although unlikely, due to previous site grading and the relatively low depth of proposed excavation, subsurface materials could be uncovered during excavation and ground-disturbing activities necessary to construction of the proposed building. This could potentially expose, damage, or destroy previously undiscovered archaeological resources. In addition, during the course of Assembly Bill 52 (AB 52) tribal consultation, a potential tribal artifact was identified either on or adjacent to the southeast portion of the project site, near the existing trail. Therefore, mitigation measures CR-1 through CR-6 shall be implemented during ground-disturbing activities associated with construction and trail improvements at 750 Marlborough Avenue to ensure potential impacts to archaeological and tribal resources are **less than significant with mitigation incorporated**.

MM CR-1: Plan Review. Prior to grading permit issuance, if there are any changes to project site design and/or proposed grades, the Applicant and the City shall contact interested tribes to provide an electronic copy of the revised plans for review. Additional consultation shall occur between the City and interested tribes to discuss any proposed changes and review any new impacts and/or potential avoidance/preservation of the cultural resources on the project site. The City and the Applicant shall make all attempts to avoid and/or preserve in place as many cultural and paleontological resources as possible that are located on the project site if the site design and/or proposed grades should be revised.

MM CR-2: Archaeological and Paleontological Monitoring. At least 30 days prior to application for a grading permit and before any grading, excavation and/or ground disturbing activities on the site take place, the Project Applicant shall retain a Secretary of Interior Standards qualified Archaeological Monitor and Native American Tribal Monitor(s) from the consulting tribes to monitor all ground-disturbing activities in an effort to identify any unknown archaeological resources.

1. The Project Archaeologist, in consultation with interested tribes, the Developer and the City, shall develop an Archaeological Monitoring Plan to address the details, timing and responsibility of all archaeological and cultural activities that will occur on the project site. Details in the Plan shall include:

    a. Project grading and development scheduling;

    b. The development of simultaneous schedule in coordination with the applicant and the Project Archeologist for designated Native American Tribal Monitors from the consulting tribes during grading, excavation and ground disturbing activities on the site: including the scheduling, safety requirements, duties, scope of work, and Native American Tribal Monitors' authority to stop and redirect grading activities in coordination with all Project archaeologists;

    c. The protocols and stipulations that the Applicant, tribes and project archaeologist/paleontologist will follow in the event of inadvertent cultural resources discoveries, including any newly discovered cultural resource deposits, or nonrenewable paleontological resources that shall be subject to a cultural resources evaluation;

    d. Treatment and final disposition of any cultural and paleontological resources, sacred sites,

and human remains if discovered on the project site; and

e. The scheduling and timing of the Cultural Sensitivity Training noted in mitigation measure **MM CR-3**.

2. In the case of inadvertent discoveries, the consulting Native American tribes or bands will be contacted and provided information of the find, and permitted/invited to perform a site visit when the Project Archaeologist and Tribal monitor makes his/her assessment, so as to provide input. In the case of inadvertent discoveries, the consulting Native American tribes or bands have the right to elect to monitor the project moving forward, should the consulting Native American tribes or bands choose to do so after assessment of the find(s).

3. During the project duration, the consulting Native American tribes or bands will be provided copies of any daily/weekly/etc. logs completed by the archaeologist(s) and tribal monitor(s) for review. In addition, the consulting Native American tribes or bands will be provided a copy of the final monitoring report(s) for review.

MM CR-3: Cultural Sensitivity Training. The Project Archaeologist and Native American Monitors from consulting tribes shall attend the pre-grading meeting with the developer/permit holder's contractors to provide Cultural Sensitivity Training for all construction personnel. This shall include the procedures to be followed during ground disturbance in sensitive areas and protocols that apply in the event that unanticipated resources are discovered. Only construction personnel who have received this training can conduct construction and disturbance activities in sensitive areas. A sign in sheet for attendees of this training shall be included in the Phase IV Monitoring Report.

MM CR-4: Treatment and Disposition of Cultural Resources: In the event that Native American cultural resources are inadvertently discovered during the course of grading for this Project. The following procedures will be carried out for treatment and disposition of the discoveries:

1. **Temporary Curation and Storage:** During the course of construction, all discovered resources shall be temporarily curated in a secure location onsite or at the offices of the project archaeologist. The removal of any artifacts from the project site will need to be thoroughly inventoried with tribal monitor oversite of the process; and

2. **Treatment and Final Disposition:** The landowner(s) shall relinquish ownership of all cultural resources, including sacred items, burial goods, and all archaeological artifacts and non-human remains as part of the required mitigation for impacts to cultural resources. The applicant shall relinquish the artifacts through one or more of the following methods and provide the City of Riverside Community and Economic Development Department with evidence of same:

   a. Accommodate the process for onsite reburial of the discovered items with the consulting Native American tribes or bands. This shall include measures and provisions to protect the future reburial area from any future impacts. Reburial shall not occur until all cataloguing and basic recordation have been completed;

   b. A curation agreement with an appropriate qualified repository within Riverside County that meets federal standards per 36 CFR Part 79 and therefore would be professionally curated and made available to other archaeologists/researchers for further study. The collections and associated records shall be transferred, including title, to an appropriate curation facility within Riverside County, to be accompanied by payment of the fees necessary for permanent curation;

   c. If more than one Native American tribe or band is involved with the project and cannot come to an agreement as to the disposition of cultural materials, they shall be curated at the Western Science Center or Riverside Metropolitan Museum by default; and

   d. At the completion of grading, excavation and ground disturbing activities on the site a Phase IV Monitoring Report shall be submitted to the City documenting monitoring activities conducted by the project Archaeologist and Native Tribal Monitors within 60 days of completion of grading. This report shall document the impacts to the known resources on the property; describe how each mitigation measure was fulfilled; document the type of cultural resources recovered and the disposition of such resources; provide evidence of the required cultural sensitivity training for the construction staff held during the required pre-grade meeting; and, in a confidential appendix, include the daily/weekly monitoring notes from the

archaeologist. All reports produced will be submitted to the City of Riverside, Eastern Information Center and interested tribes.

MM CR-5: Human Remains. Cease ground-disturbing activities and notify County Coroner if human remains are encountered. If human remains are unearthed during implementation of the Proposed Project, the City of Riverside and the Applicant shall comply with State Health and Safety Code Section 7050.5. The City of Riverside and the Applicant shall immediately notify the County Coroner and no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to PRC Section 5097.98. If the remains are determined to be of Native American descent, the coroner has 24 hours to notify the Native American Heritage Commission (NAHC). The NAHC shall then identify the person(s) thought to be the Most Likely Descendent (MLD). After the MLD has inspected the remains and the site, they have 48 hours to provide recommendations to the landowner. If the NAHC is unable to identify a MLD, or the MLD identified fails to make a recommendation, or the landowner rejects the recommendation of the MLD and the mediation provided for in Subdivision (k) of Section 5097.94, if invoked, fails to provide measures acceptable to the landowner, the landowner or his or her authorized representative shall inter the human remains and items associated with Native American human remains with appropriate dignity on the property in a location not subject to further and future subsurface disturbance.

MM CR-6: Native American Cultural Resources. Prior to any grading, the Project Applicant will meet with the Project Archeologist, and the consulting Native American tribes or bands in order to assess the feature, identified during consultation, located on the southeast border of the project boundary to determine the suitability for relocation to a permanent open space area. The consulting Native American tribes or bands shall work with the Project Archaeologist, Project Applicant and the Grading Contractor or appropriate personnel to determine whether the features can be relocated safely and will discuss the most appropriate methods for relocation. Before construction activities may resume in the affected area, any visible artifacts shall be recovered and the features recorded using professional archaeological methods. The current Department of Parks and Recreation (DPR) Forms shall be updated, detailing which features were relocated, the process taken and updated maps provided documentation of the features' new location. The site record should clearly indicate that the features are not in their original location and why they were relocated.

c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

5c. Response (*Source: GP 2025 Policy HP-1.3, Cultural Resources Survey [Rincon Consultants 2017a]*)

Less Than Significant with Mitigation Incorporated. The Cultural Resources Study completed by Rincon Consultants found no evidence of paleontological resources within the project site. However, it is possible that subsurface materials could be uncovered during excavation and ground-disturbing activities necessary to the construction of the proposed building. These activities could potentially expose, damage, or destroy previously undiscovered paleontological resources. Therefore, mitigation measure CR-2 would be implemented during ground-disturbing activities associated with construction activities at 750 Marlborough Avenue to ensure potential impacts to paleontological resources are **less than significant with mitigation incorporated**.

d. Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

5d. Response (*Source: GP 2025 FPEIR Figure 5.5-1 Archaeological Sensitivity and Figure 5.5-2 Prehistoric Cultural Resources Sensitivity, Cultural Resources Survey [Rincon Consultants 2017a]*)

Less Than Significant with Mitigation Incorporated. The Cultural Resources Study (Rincon 2017) found that the project site was historically occupied by a citrus grove. Historic aerial images indicate that the site was cleared sometime between 1994 and 2002. Based on extensive and consistent disturbance of the project site associated with previous land uses, is it unlikely that human remains are interred on the site. However, excavation and ground disturbing activities necessary to construct the proposed building could potentially uncover, damage, or destroy previously undiscovered human remains. Therefore, mitigation measure CR-5 would be implemented during ground-disturbing activities associated with construction activities at 750 Marlborough Avenue to ensure to ensure potential impacts to human remains are **less than significant with mitigation incorporated**.

6. GEOLOGY AND SOILS Would the project:				
a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☒

6i. Response (*Source: GP 2025 Figure PS-1 Regional Fault Zones & GP 2025 FPEIR Appendix E Geotechnical Report*)

No Impact. The entire southern California region, including the project area, is considered to be seismically active. However, there are no Alquist-Priolo Fault Zones in Riverside, and the project site does not contain any known fault lines. The nearest active Alquist-Priolo Fault Zones are the San Jacinto Fault and the Elsinore Fault, located approximately five miles northeast and 19 miles southwest of the project site, respectively. Therefore, the potential for fault rupture at or near the project site is low. The project has **no impact** related to rupture of a known earthquake fault. No mitigation is required.

ii. Strong seismic ground shaking?	☐	☐	☒	☐

6ii. Response (*Source: GP 2025 FPEIR Appendix E Geotechnical Report*)

Less than Significant Impact. The entire southern California region, including the project area, is considered seismically active. Therefore, the project could be subject to ground shaking generated from activity on regional faults. The San Jacinto Fault Zone and the Elsinore Fault Zone are located five miles northeast and 19 miles southwest of the project site, respectively. Both faults have the potential to cause moderate to large earthquakes that would result in intense ground shaking. The proposed warehouse structure is not intended for permanent, full-time occupancy. However, the building would be required to comply with applicable CBC Title 24 regulations, which establish engineering standards appropriate for the potential seismic hazards of the project site. Compliance with Title 24 regulations would result in a structure designed to resist structural collapse and thereby provide reasonable protection from serious injury, catastrophic property damage, and loss of life as a result of strong seismic ground shaking. Therefore, the project would have **less than significant impact** related to seismic ground shaking. No mitigation is required.

iii. Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒

6iii. Response (*Source: GP 2025 Figure PS-1 Regional Fault Zones, Figure PS-2 Liquefaction Zones, GP 2025 FPEIR Figure PS-3 Soils with High Shrink-Swell Potential, and GP 2025 FPEIR Appendix E Geotechnical Report*)

No Impact. The project site is located in an area with low potential for liquefaction as depicted in the GP 2025 Liquefaction Zones Map Figure PS-2. Compliance with CBC regulations and implementation of standard engineering and construction protocols would ensure that impacts related to seismic-related ground failure, including liquefaction would have **no impact**. No mitigation is required.

iv. Landslides?	☐	☐	☒	☐

6iv. Response (*Source: GP 2025 FPEIR Figure 5.6-1 Areas Underlain by Steep Slope, GP 2025 FPEIR Appendix E Geotechnical Report, Riverside Municipal Code Title 18 Subdivision Code, and Title 17 Grading Code*)

Less Than Significant Impact. The project site itself has generally flat topography in an area not prone to landslides per Figure 5.6-1 of the GP 2025 Program Final PEIR. The slope that forms the foothills of the Box Springs Mountain Reserve Park gradually increases from 15 to 30 percent to the east and south of the project site. The GP 2025 FPEIR states that seismically induced landslides and rockfalls could be expected in the northeastern area of the City associated with the Box Springs Mountain Reserve Park. The GP 2025 FPEIR does not contain mitigation measures specific to landslides. The project would incorporate a retaining wall along the eastern boundary of the project site, adjacent to the northwestern foothill of Box Springs Mountain Reserve. The retaining wall would serve as a structural barrier to potential landslides and rockfalls. In addition, the proposed building would be set back nearly 200 feet from the base of the hill, and the building itself would

be required to meet CBC standards. Therefore, there would be **a less than significant impact** related to landslides directly, indirectly and cumulatively. No mitigation is required.

b. Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐

6b. Response (*Source: GP 2025 FPEIR Figure 5.6-1 Areas Underlain by Steep Slope, Figure 5.6-4 Soils, Table 5.6-B Soil Types, Riverside Municipal Code Title 18 Subdivision Code, Title 17 Grading Code*)

Less Than Significant Impact. Soil erosion is the process by which soil particles are removed from a land surface by wind, water, or gravity. Most natural erosion occurs at slow rates; however, the rate of erosion increases when land is cleared or altered and left in a disturbed condition. The project site contains soil types Arlington and Hanford that have slight to moderate erosivity, according to Figure 5.6-4 and Table 5.6-B in the GP 2025 FPEIR. Construction activities may result in temporary erosion of topsoil during grading activities. However, upon project completion, the site would not contain any loose or exposed topsoil, and conditions that would cause long-term erosion would not be present. Combined with the relatively flat topography present at the project site, grading and development activities would not result in substantial soil erosion or loss of topsoil. Therefore, the project would have **a less than significant impact** on soil erosion or loss of topsoil. No mitigation is required.

c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☐	☒

6c. Response (*Source: GP 2025 Figure PS-1 Regional Fault Zones, Figure PS-2 Liquefaction Zones, Figure PS-3 Soils with High Shrink-Swell Potential, GP 2025 FPEIR Figure 5.6-1 Areas Underlain by Steep Slope, Figure 5.6-4 Soils, Table 5.6-B Soil Types, and GP 2025 FPEIR Appendix E Geotechnical Report*)

No Impact. The project site is generally flat, and on-site soils have low to moderate shrink-swell potential per the GP 2025 Figure PS-3 and Table 5.6B of the FPEIR. As described previously in this section, the project site is not considered susceptible to landslides or liquefaction, and the site is not located on an existing fault. Implementation of the project would not cause the project site to become unstable. Therefore, the project would have **no impact** on landslides, lateral spreading, subsidence, liquefaction or collapse. No mitigation is required.

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

6d. Response (*Source: GP 2025 FPEIR Figure 5.6-4 Soils, Figure 5.6-4 Soils, Table 5.6-B Soil Types, Figure 5.6-5 Soils with High Shrink-Swell Potential, GP 2025 FPEIR Appendix E Geotechnical Report, and California Building Code as adopted by the City of Riverside and set out in Title 16 of the RMC*)

No Impact. Pursuant to Figure 5.6-4 and Table 5.6-B of the GP 2025 FPEIR, the project site does not contain expansive soils. Therefore, the project would have **no impact** resulting in substantial risks to life or property due to expansive soils. No mitigation is required.

e. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒

6e. Response (*Source: GP 2025 FPEIR Figure 5.6-4 Soils, Table 5.6-B Soil Types*)

No Impact. The proposed warehouse building would be served by the municipal sewer system and would not entail the construction or use of septic tanks or alternative waste water disposal systems. Therefore, there would be **no impact** related to soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems**.** No mitigation is required.

7. GREENHOUSE GAS EMISSIONS Would the project:				
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b. Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

7a. & 7b.) Response (*Source: Western Riverside Council of Governments Subregional Climate Action Plan; Riverside Restorative Growthprint; Air Quality and Greenhouse Gas Study [Rincon Consultants 2017c updated February 2018]*)

Less Than Significant Impact. Climate change is the observed increase in the average temperature of the Earth's atmosphere and oceans along with other substantial changes in climate (such as wind patterns, precipitation, and storms) over an extended period of time. Climate change is the result of numerous, cumulative sources of greenhouse gases (GHGs). GHGs contribute to the "greenhouse effect," which is a natural occurrence that helps regulate the temperature of the planet. The majority of radiation from the Sun hits the Earth's surface and warms it. The surface in turn radiates heat back towards the atmosphere, known as infrared radiation. Gases and clouds in the atmosphere trap and prevent some of this heat from escaping back into space and re-radiate it in all directions. This process is essential to supporting life on Earth because it warms the planet by approximately 60° Fahrenheit. Emissions from human activities since the beginning of the industrial revolution (approximately 250 years ago) are adding to the natural greenhouse effect by increasing the gases in the atmosphere that trap heat, thereby contributing to an average increase in the Earth's temperature.

GHGs occur naturally and from human activities. Human activities that produce GHGs are the burning of fossil fuels (coal, oil and natural gas for heating and electricity, gasoline and diesel for transportation); methane from landfill wastes and raising livestock; deforestation activities; and some agricultural practices. GHGs produced by human activities include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). Emissions of GHGs affect the atmosphere directly by changing its chemical composition while changes to the land surface indirectly affect the atmosphere by changing the way in which the Earth absorbs gases from the atmosphere. Potential impacts of global climate change in California may include loss of snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years (CEC March 2009).

Senate Bill (SB) 97, signed in August 2007, acknowledges that climate change is an environmental issue that requires analysis in California Environmental Quality Act (CEQA) documents. In March 2010, the California Resources Agency adopted amendments to the State CEQA Guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions. The adopted guidelines give lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHGs and climate change impacts.

Senate Bill 32 became effective on January 1, 2017 and requires the California Air Resources Board (ARB) to develop technologically feasible and cost effective regulations to achieve the targeted 40 percent GHG emission reduction. ARB is currently working to update the Scoping Plan to provide a framework for achieving the 2030 target. The updated Scoping Plan is expected to be completed and adopted by ARB in 2017 (ARB 2017). The Proposed Scoping Plan calls for emissions reductions at the State level that meet or exceed the statewide GHG target, and notes that additional effort will be needed to maintain and continue GHG reductions to meet the mid- (2030) and long-term (2050) targets. However, there is currently no detailed pathway to achieve the reductions. Additionally, the proposed Scoping Plan recognizes the need to reach beyond statewide policy and engage local jurisdictions to develop plans to address local conditions and provide a "fair share" contribution towards the achievement of the State's GHG reduction targets. To assist local planning efforts with developing strategies to meet these targets, ARB has developed the annual community-wide thresholds of no more than six metric tons CO_2e per capita by 2030 and no more than two metric tons CO_2e per capita by 2050.

The Riverside City Council approved the Sustainable Riverside Policy Statement (SRPS) in 2005 and is committed to becoming a greener, more sustainable community. The SRPS emphasizes the implementation of cleaner, greener, and more sustainable programs. Riverside's 38 point Green Action Plan focuses on energy, greenhouse gas emissions, waste reduction, urban design, urban nature, transportation, and water.

The City of Riverside's 2025 General Plan includes policies that ensures that GHG emissions will be reduced in future City of Riverside development and operations. The relevant policies are listed below:

- Policy AQ-8.2: Support appropriate initiatives, legislation, and actions for reducing and responding to climate change.

- Policy AQ-8.3: Encourage community involvement and public-private partnerships to reduce and respond to global warming.
- Policy AQ-2.4: Monitor and strive to achieve performance goals and/or VMT reduction, which are consistent with SCAG's goals.

Additionally, the Western Riverside Council of Governments (WRCOG) completed a subregional climate action plan (CAP) in 2014 that encompasses twelve cities in the subregion, including Riverside, that have joined efforts to develop the CAP (WRCOG 2014). The CAP sets forth a subregional emissions reduction target, emissions reduction measures, and action steps to reduce GHG emissions and demonstrate consistency with the California's Global Warming Solutions Act of 2006 (Assembly Bill [AB] 32). The CAP contains GHG reduction measures organized into four primary sectors, as follows: energy, transportation and land use, solid waste, and water. If fully implemented, the CAP would exceed WRCOG's 2020 goal by 2.1 percent, achieving an overall 17.1 percent reduction in GHG emissions by 2020.

Then, in January 2016, Riverside adopted the Riverside Restorative Growthprint (RRG), which combines two plans: the Economic Prosperity Action Plan (RRG-EPAP) and the Climate Action Plan (RRG-CAP) (Resolution No. 22942, City of Riverside 2016d). The RRG-CAP expands upon the subregional CAP and provides a path for the City to achieve reductions in GHG emissions through 2035, while the RRG-EPAP provides a framework for smart growth and low-carbon economic development. The City's baseline GHG emissions inventory (2007) is a benchmark for tracking the City's progress in achieving future reductions. The community-wide inventory identifies the quantity of GHG emissions produced by residents, businesses, and municipal government operations. The inventory reflects the emissions generated within the City that result from the operation of motor vehicles, use of electricity and natural gas, and disposal of solid waste. In 2007, the City's total community-wide emissions were estimated at 3,024,066 MT of CO2e; while emissions resulting from municipal operations were responsible for approximately 122,525 MT of CO2e. In 2010, the City conducted a second inventory that indicated the City's emissions had decreased by approximately 13.4 percent over the three year time period. That reduction is largely attributed to the City's actions to reduce the carbon intensity of its electricity portfolio, as supplied by municipally-owned Riverside Public Utilities (RPU). In addition, the City's energy efficiency and renewable energy incentive programs have helped reduce energy use by residential, commercial, and industrial customers; while solid waste diversion efforts have helped decrease emissions that result from landfill disposal (City of Riverside 2016e).

Through the WRCOG subregional CAP process, the City has committed to a 2020 emissions target of 2,224,908 MT of CO2e, which is 26.4 percent below the City's 2007 baseline and 15 percent below 2010 emissions. This represents a reduction of 779,304 MT CO2e from the City's 2020 business-as-usual (BAU) forecast. The City is aiming for a 2035 emissions target of 1,542,274 MT of CO2e, which is 49 percent below the 2007 baseline and represents a reduction of 2,120,931 MT of CO2e from the 2035 BAU forecast. This 2035 emissions target is derived from a straight-line interpolation of the state-wide AB 32 goal and Executive Order (EO) S-3-05, which aims for 80 percent below 1990 levels by 2050, and is equivalent to 40 percent below 1990 levels. Through state and regional measures implemented at the subregional level, the City of Riverside anticipates significant reductions from the City's 2020 and 2035 BAU emissions forecasts (949,572 MT of CO2e and 1,398,918 MT of CO2e, respectively). The RRG-CAP is a qualified GHG reduction strategy that can be used to streamline the analysis of GHG emissions under the streamlining provisions of California Environmental Quality Act (CEQA) Guidelines Section §15183.5. In guidance provided by the SCAQMD's GHG CEQA Significance Threshold Working Group in September 2010, SCAQMD considered a tiered approach to determine the significance of residential and commercial projects. The draft tiered approach is outlined in meeting minutes dated September 29, 2010.

Tier 1. If the project is exempt from further environmental analysis under existing statutory or categorical exemptions, there is a presumption of less than significant impacts with respect to climate change. If not, then the Tier 2 threshold should be considered.

Tier 2. Consists of determining whether or not the project is consistent with a GHG reduction plan that may be part of a local general plan, for example. The concept embodied in this tier is equivalent to the existing concept of consistency in CEQA Guidelines section 15064(h)(3), 15125(d) or 15152(a). Under this Tier, if the proposed project is consistent with the qualifying local GHG reduction plan, it is not significant for GHG emissions. If there is not an adopted plan, then a Tier 3 approach would be appropriate.

Tier 3. Establishes a screening significance threshold level to determine significance. The Working Group has provided a recommendation of 3,000 metric tons (MT) of CO2e per year for residential/commercial projects.

Tier 4. Establishes a service population efficiency threshold to determine significance. The Working Group has provided a recommendation of 3.0 MT of CO2e per year for land use projects and 4.1 MT of CO2e per year for plans based on statewide service population to achieve statewide 2035 targets.

Tier 2 is the most appropriate threshold for the proposed project as the City of Riverside has adopted a local qualified GHG reduction plan. Project emissions were still calculated and provided for informational purposes, but significance is

determined based on the project's consistency with all applicable RRG-CAP strategies.

Construction Emissions

Construction of the proposed project would generate temporary GHG emissions primarily due to the operation of construction equipment and truck trips. Site preparation and grading typically generate the greatest amount of emissions due to the use of grading equipment and soil hauling. Construction activity was assumed to occur over a period of approximately ten months, based on information provided by the project applicant. As shown in Table 6, construction activity for the project would generate an estimated 552.6 MT of CO_2e. When amortized over a 30-year period, construction of the project would generate about 18.4 MT of CO_2e per year.

Table 6 Estimated GHG Emissions: Construction

Emission Source	Emissions (Metric Tons Co_2e/Year)
Construction 2017	259.3
Construction 2018	293.3
Total	**552.6**
Amortized over 30 years	18.4

Source: Rincon Consultants 2017c.

Operational Emissions

Table 7 combines the operational and mobile GHG emissions associated with development of the project. SCAQMD requested that the project be evaluated with traffic generation numbers calculated based on a "High Cube Warehouse" classification. The project was estimated to total 816 average daily trips and approximately 3.2 million annual vehicle miles travelled through CalEEMod. Sixty-eight (68) percent of the trips were assumed to be from passenger vehicles, while 32 percent of the trips were assumed to be from trucks. The annual emissions would total approximately ~~4,307~~5,389 MT of CO_2e.

Table 7 Estimated GHG Emissions: Operational

Operational Emissions Source	GHG Emissions ($MTCO_2e$)/year)*
Operational (Mobile) Sources	~~2,810.1~~3,892.3
Area Sources	<0.1
Energy	593.7
Solid Waste	163.7
Water	739.6
Total	**~~4,307.1~~5,389.3**

Source: Rincon Consultants 2017c.
*MT=Metric Tons

As mentioned above, the project would result in total annual GHG emissions of ~~4,325.5~~5,407.7 MT CO_2e (30-year amortized construction emissions of 18.4 MT CO_2e, combined with annual operational emissions of ~~4,307.2~~5,389.3 MT CO_2e).

As discussed above, the RRG-CAP serves as a Qualified GHG Reduction Strategy consistent with State CEQA Guidelines and outlines a programmatic approach to review the potential GHG-related impacts associated with new development. As detailed in Table 8, the project would be consistent with the following RRG-CAP Emission Reduction Strategies and supportive state regulations.

Table 8 Riverside Restorative Growthprint – Climate Action Plan Emission Reduction Strategies Consistency

Measure/Regulation	Project Consistency
State and Regional Regulations	
Energy	
California Building Energy Efficiency Standards (Title 24, Part 6). Maximize energy efficiency building and appliance standards, and pursue additional efficiency efforts including new technologies, and new policy and	**Consistent.** The proposed project will comply with the requirements of the 2016 California Building Energy Efficiency Standards (Title 24, Part 6) including measures to incorporate energy-efficient building design features.

implementation mechanisms. Pursue comparable investment in energy efficiency from all retail providers of electricity in California (including both investor-owned and publicly owned utilities).	
Water	
Water Use Efficiency. Reduce per capita water use by 20% by 2020. SB X7-7 is part of a California legislative package passed in 2009 that requires urban retail water suppliers to reduce per-capita water use by 10% from a baseline level by 2015, and to reduce per capita water use by 20% by 2020. Green accountability performance (GAP) Goal 16 directly aligns with SB X7-7. In Southern California, energy costs and GHG emissions associated with the transport, treatment, and delivery of water from outlying regions are high. Therefore, the region has extra incentive to reduce water consumption. While this is considered a state measure, it is up to the local water retailers, jurisdictions, and water users to meet these targets.	**Consistent.** The proposed project will comply with the requirements of Title 19 – Article VIII – Chapter 19.570 – Water Efficient Landscaping and Irrigation, including measures to increase water use efficiency. Water efficient irrigation systems and devices and drought tolerant landscaping will be installed on the project site.
Solid Waste	
Construction and Demolition Waste Diversion. Meet mandatory requirement to divert 50% of C&D waste from landfills by 2020 and exceed requirement by diverting 90% of C&D waste from landfills by 2035.	**Consistent.** In compliance with CalGreen requirements, at least 65% of all nonhazardous construction waste generated by the proposed project would be recycled and/or salvaged (including, but not limited to, soil, vegetation, concrete, lumber, metal, and cardboard). Furthermore, 100% of excavated soil shall be reused or recycled.
Transportation	
Pavley and Low Carbon Fuel Standard (LCFS). ARB identified this measure as a Discrete Early Action Measure. This measure would reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020.	**Consistent.** The project does not involve the manufacture, sale, or purchase of vehicles. However, vehicles that operate within and access the project site will comply with Pavley and Low Carbon Fuel Standard. Medium duty and heavy duty trucks and trailers working from the proposed warehouse will be subject to aerodynamic and hybridization requirements as established by ARB; no feature of the project will interfere with implementation of these requirements and programs.
RRG-CAP Measures	
Energy Measures	
E-1: Traffic and Street Lights Replace traffic and street lights with high-efficiency bulbs.	**Not Applicable.** This objective is aimed at government agencies, not private developers. Nonetheless, the project would comply with applicable energy efficiency requirements related to lighting detailed in the Green Building Standards Code (Title 24, California Code of Regulations).
E-2: Shade Trees Strategically plant trees at new residential developments to reduce the urban heat island effect**.**	**Not Applicable.** This objective is aimed at government agencies and private developers of residential projects.
E-3: Local Utility Programs – Electricity Financing and incentives for business and home owners to make energy efficient, renewable energy, and water conservation improvements	**Not Applicable.** This objective is aimed at government agencies, not private developers. Nonetheless, the project would comply with applicable energy efficiency requirements detailed in the Green Building Standards Code (Title 24, California Code of Regulations).
E-4: Renewable Energy Production on Public Property Large scale renewable energy installation on publicly owned property and in public rights of way.	**Not Applicable.** This objective is aimed at government agencies, not private developers.
E-5: UCR Carbon Neutrality Collaborate with UCR to achieve a carbon neutral campus.	**Not Applicable.** This objective is aimed at government agencies and the University of California, Riverside, not private developers.
E-6: RPU Technology Grants RPU grant programs to foster research, development and demonstration of innovative solutions to energy problems.	**Not Applicable.** This objective is aimed at government agencies, not private developers.
Transportation Measures	
T-1: Bicycle Infrastructure Improvements Expand on-street and off-street bicycle infrastructure,	**Consistent.** All collector and arterial streets in Hunter Business Park provide bike lanes. Class 2 bike lanes are provided on Columbia and

including bicycle lanes and bicycle trails.	Iowa Avenues and Spruce Street. These bike lanes are consistent with the bicycle routes shown on the Circulation/Transportation element of the City's General Plan and connect with city wide routes. A bikeway is also designated along the Gage Canal. The project would extend Marlborough across the Gage Canal, but would not block public access to the bikeway as improvements will be made to ensure continued access to the canal bikeway via the cul-de-sac sidewalk.
T-2: Bicycle Parking Provide additional options for bicycle parking. **T-3: End of Trip Facilities** Encourage use of non-motorized transportation modes by providing appropriate facilities and amenities for commuters	**Consistent.** The project would comply with RMC Chapter 10.64 regarding bicycle accommodations.
T-4: Promotional Transportation Demand Management Encourage Transportation Demand Management strategies.	**Consistent.** Pursuant to Chapter 19.88 of the Riverside Municipal Code, businesses generating one hundred or more employees are required to prepare and submit a trip reduction plan to reduce work-related vehicle trips by 6.5 percent from the number of trips related to the project as indicated in the most current edition of the Trip Generation Handbook, published by the Institute of Traffic Engineers (ITE). Methods to achieve the vehicle reduction targets may include, but are not limited to: ▪ Alternative work schedules/ flex-time ▪ Carpool parking ▪ Bicycle parking and shower facilities ▪ Information center for transportation alternatives ▪ Rideshare vehicle loading areas ▪ Vanpool vehicle accessibility ▪ Bus stop improvements ▪ On-site child care facilities ▪ Onsite amenities such as cafeterias ▪ Transit incentives for employees, such as subsidy of bus passes ▪ Use of low and/or ultra-low fleet vehicles The proposed project would be required to implement feasible methods, including but not limited to those listed, to reduce work-related vehicle trips by 6.5 percent.
T-5: Traffic Signal Coordination Incorporate technology to synchronize and coordinate traffic signals along local arterials.	**Not Applicable.** This objective is aimed at government agencies, not private developers.
T-6: Density Improve jobs-housing balance and reduce vehicle miles traveled by increasing household and employment densities.	**Consistent.** The project would increase employment opportunities in the City of Riverside by approximately 273 jobs. It is assumed that many of these jobs would be filled by local residents. By providing local jobs, the project would improve the jobs-housing balance and help reduce vehicle miles traveled by local residents.
T-7: Mixed-Use Development Provide for a variety of development types and uses.	**Not Applicable.** This objective is aimed at government agencies, not private developers. Furthermore, the project site is not designated mixed-use.
T-8: Pedestrian-Only Areas Encourage walking by providing pedestrian-only community areas	**Consistent.** Hunter Business Park provides a pedestrian network along streets and onsite internal pedestrian walkways. Sidewalks are required on all arterial and collector streets. Inclusion of plans for pedestrian access and circulation for this project would be submitted for review and approval as a condition of the City's Design Review Process. The project would also be required to comply with RMC Chapter 19.580.080 G regarding pedestrian access and circulation, with primary pedestrian access proposed from Research Park Drive. In addition, the Hunter Business Park Specific Plan encourages development projects exceeding 250 employees or 15 acres to include employee open space. The project includes the development of a ten-foot-wide multi-use trail, made of decomposed granite material as specified by City of Riverside Parks and Recreation Department, which would run along the southern and eastern sides of the project. The trail

	would be sloped to a drainage ditch/channel that generally runs along the southern and eastern side of the trail for storm water protection. As the trail is needed for fire protection, the trail would provide 12-foot clearance for fire service vehicles and designed to keep the maximum slope no greater than 15 percent where feasible. The trail will also be used for maintenance purposes to help maintain the proposed graded slopes and the storm water protection system, which consists of the drainage ditch/channel adjacent to the trail and the proposed storm drain that is proposed under the trail. Lastly the trail will be used as a public recreational trail as part of the City of Riverside trail network. The project would improve access by pedestrians, hikers, mountain bikers, or equestrian to the 15 miles of trails throughout Box Springs Mountain Reserve Park located along the southern border of the project site and be able to encourage employees to utilize the open space area.
T-9: Limit Parking Requirements for New Development Reduce requirements for vehicle parking in new development projects.	**Not Applicable.** This objective is aimed at government agencies, not private developers. The project would comply with applicable City parking requirements.
T-10: High Frequency Transit Service Implement bus rapid transit service in the subregion to provide alternative transportation options.	**Not Applicable.** This objective is aimed at government agencies, not private developers. However, the proposed project would be located a half-mile from the Riverside-Hunter Park bus stop, which would encourage employees to use transit.
T-11: Voluntary Transportation Demand Management Encourage employers to create TDM programs for their employees	**Consistent.** Pursuant to Chapter 19.88 of the RMC, businesses generating one hundred or more employees shall prepare and submit a trip reduction plan to reduce work-related vehicle trips by 6.5 percent from the number of trips related to the project as indicated in the most current edition of the Trip Generation Handbook published by the Institute of Traffic Engineers (ITE). Methods to achieve the vehicle reduction targets may include, but are not limited to: • Alternative work schedules/ flex-time • Carpool parking • Bicycle parking and shower facilities • Information center for transportation alternatives • Rideshare vehicle loading areas • Vanpool vehicle accessibility • Bus stop improvements • On-site child care facilities • Onsite amenities such as cafeterias • Transit incentives for employees, such as subsidy of bus passes • Use of low and/or ultra-low fleet vehicles The proposed project would be required to implement feasible methods, including but not limited to those listed, to reduce work-related vehicle trips by 6.5 percent.
T-12: Accelerated Bike Plan Implementation Accelerate the implementation of all or specified components of a jurisdiction's adopted bike plan.	**Not Applicable.** This objective is aimed at government agencies, not private developers. However, the proposed project would not obstruct the implementation of the adopted bike plan.
T-13: Fixed Guideway Transit By 2020, complete feasibility study and by 2025 introduce a fixed route transit service in the jurisdiction.	**Not Applicable.** This objective is aimed at government agencies, not private developers.
T-14: Neighborhood Electric Vehicle Programs Implement development requirements to accommodate Neighborhood Electric Vehicles and supporting infrastructure.	**Not Applicable.** This objective is aimed at government agencies, not private developers.
T-15: Subsidized Transit Increase access to transit by providing free or reduced passes	**Consistent.** Pursuant to Chapter 19.88 of the RMC, businesses generating one hundred or more employees shall prepare and submit a trip reduction plan to reduce work-related vehicle trips by 6.5 percent from the number of trips related to the project as indicated in the most current edition of the Trip Generation Handbook published by the

	Institute of Traffic Engineers (ITE). Methods to achieve the vehicle reduction targets may include, but are not limited to: • Alternative work schedules/ flex-time • Carpool parking • Bicycle parking and shower facilities • Information center for transportation alternatives • Rideshare vehicle loading areas • Vanpool vehicle accessibility • Bus stop improvements • On-site child care facilities • Onsite amenities such as cafeterias • Transit incentives for employees, such as subsidy of bus passes • Use of low and/or ultra-low fleet vehicles The proposed project would be required to implement feasible methods, including but not limited to those listed, to reduce work-related vehicle trips by 6.5 percent.
T-16: Bike Share Program Create nodes offering bike sharing at key locations throughout the City.	**Not Applicable.** This objective is aimed at government agencies, not private developers.
T-17: Car Share Program Offer Riverside residents the opportunity to use car sharing to satisfy short-term mobility needs.	**Consistent.** Pursuant to Chapter 19.88 of the RMC, businesses generating one hundred or more employees shall prepare and submit a trip reduction plan to reduce work-related vehicle trips by 6.5 percent from the number of trips related to the project as indicated in the most current edition of the Trip Generation Handbook published by the Institute of Traffic Engineers (ITE). Methods to achieve the vehicle reduction targets may include, but are not limited to: • Alternative work schedules/ flex-time • Carpool parking • Bicycle parking and shower facilities • Information center for transportation alternatives • Rideshare vehicle loading areas • Vanpool vehicle accessibility • Bus stop improvements • On-site child care facilities • Onsite amenities such as cafeterias • Transit incentives for employees, such as subsidy of bus passes • Use of low and/or ultra-low fleet vehicles The proposed project would be required to implement feasible methods, including but not limited to those listed, to reduce work-related vehicle trips by 6.5 percent.
T-18: SB 743 - Alternative to LOS Use SB 743 to incentivize development in the downtown and other areas served by transit.	**Not Applicable.** This objective is aimed at government agencies, not private developers. Furthermore, the project is not located in a transit priority area.
T-19: Alternative Fuel & Vehicle Technology and Infrastructure Promote the use of alternative fueled vehicles such as those powered by electric, natural gas, biodiesel, and fuel cells by Riverside residents and workers.	**Consistent.** Pursuant to Chapter 19.88 of the RMC, businesses generating one hundred or more employees shall prepare and submit a trip reduction plan to reduce work-related vehicle trips by 6.5 percent from the number of trips related to the project as indicated in the most current edition of the Trip Generation Handbook published by the Institute of Traffic Engineers (ITE). Methods to achieve the vehicle reduction targets may include, but are not limited to: • Alternative work schedules/ flex-time • Carpool parking • Bicycle parking and shower facilities • Information center for transportation alternatives • Rideshare vehicle loading areas

	• Vanpool vehicle accessibility • Bus stop improvements • On-site child care facilities • Onsite amenities such as cafeterias • Transit incentives for employees, such as subsidy of bus passes • Use of low and/or ultra-low fleet vehicles • The proposed project would be required to implement feasible methods, including but not limited to those listed, to reduce work-related vehicle trips by 6.5 percent.
T-20: Eco-Corridor/Green Enterprise Zone Create a geographically defined area(s) featuring best practices in sustainable urban design and green building focused on supporting both clean-tech and green businesses.	**Not Applicable.** This objective is aimed at government agencies, not private developers.
Water Measure	
W-1: Water Conservation and Efficiency Reduce per capita water use by 20 percent by 2020.	**Consistent.** The proposed project would be required to be consistent with applicable water efficiency requirements detailed in the Green Building Standards Code (Title 24, California Code of Regulations). As such, the project would be equipped with low-flow plumbing fixtures that reduce water use.
Solid Waste Measures	
SW-1: Yard Waste Collection Provide green waste collection bins community-wide.	**Consistent.** This objective is aimed at government agencies, not private developers. Nonetheless, the project would comply with applicable solid waste requirements.
SW-2: Food Scrap and Compostable Paper Diversion Divert food and paper waste from landfills by implementing commercial and residential collection program.	**Consistent.** The project would be required to participate in applicable waste diversion programs. The project would also be subject to all applicable State and City requirements for solid waste reduction.
Food, Agriculture, and Urban Forest Measures	
A-1: Local Food and Agriculture Promote local food and agricultural programs	**Not Applicable.** This objective is aimed at government agencies, not private developers.
A-2: Urban Forest Augment City's Urban and Community Forest Program to include an Urban Forest Management Plan	**Consistent.** The project would be required to comply with the Hunter Business Park Specific Plan Landscape requirements, the City of Riverside Landscape Design Guidelines, and Chapter 19.62 of the RMC. The proposed landscape plan includes the planting of approximately 150 new trees around the building.

Source: Rincon Consultants 2017c.

As shown in Table 8, the project would be consistent with all applicable GHG reduction strategies of the RRG-CAP, a qualified GHG reduction plan. Furthermore, the project would be consistent with applicable land use and zoning designations (further discussed in Section 10, *Land Use and Planning*), would not conflict with any state regulations intended to reduce GHG emissions statewide, and would be consistent with applicable plans and programs designed to reduce GHG emissions. Therefore, the project would have a **less than significant impact**. No mitigation is required.

8. HAZARDS & HAZARDOUS MATERIALS Would the project:				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐

8a. Response (*Source: GP 2025 Public Safety Element, GP 2025 FPEIR, California Health and Safety Code, Title 49 of the Code of Federal Regulations, Hunter Business Park Specific Plan*)

Less Than Significant Impact. Potential hazardous materials, such as fuel, paint products, lubricants, solvents, and cleaning products, may be used and/or stored on site during the construction and/or occupancy of the proposed project. However, due to the limited quantities of these materials to be used by the project, they are not considered hazardous to the public at large. In accordance with the City's Hazardous Materials Policy, the transport, use, and storage of hazardous materials during the

construction and operation of the site would be conducted pursuant to all applicable local, State and federal laws, including but not limited to Title 49 of the Code of Federal Regulations implemented by Title 13 of the California Code of Regulations (CCR), which describes strict regulations for the safe transportation of hazardous materials, and in cooperation with the County's Department of Environmental Health. As required by California Health and Safety Code Section 25507, a business shall establish and implement a Hazardous Materials Business Emergency Plan for emergency response to a release or threatened release of a hazardous material in accordance with the standards prescribed in the regulations adopted pursuant to Section 25503 if the business handles a hazardous material or a mixture containing a hazardous material that has a quantity, at any one time, above the thresholds described in Section 25507(a)(1) through (6). Furthermore, the proposed land use, as warehouse and associated office space, would not entail the manufacturing or disposal of hazardous materials. Compliance with all applicable local, State, and federal laws would ensure a **less than significant impact** from the routine transport, use, or disposal of hazardous materials. No mitigation is required.

b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☐	☒

8b. Response (*Source: GP 2025 Public Safety Element, GP 2025 FPEIR Tables 5.7 A through D, Hunter Business Park Specific Plan*)

No Impact. The proposed building would not entail the manufacturing or distribution of hazardous materials. As stated in response to 8a, potential hazardous materials such as fuel, paint products, lubricants, solvents, and cleaning products may be used and/or stored on site during the construction and/or operation of the building. However, due to the limited quantities of these materials to be used by the project, they are not considered hazardous to the public at large. Therefore, the project would have **no impact** for creating a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. No mitigation is required.

c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒

8c. Response (*Source: GP 2025 Public Safety and Education Elements, GP 2025 FPEIR Table 5.7-D CalARP RMP Facilities in the Project Area, Figure 5.13-2 RUSD Boundaries, Table 5.13-D RUSD Schools, Hunter Business Park Specific Plan*)

No Impact. The nearest schools are Highland Elementary School (700 Highlander Drive) and University Heights Middle School (1155 Massachusetts Avenue), both located approximately 0.8 miles south of the project site. It is not anticipated that the use of the proposed warehouse building would include the emission or handling of hazardous materials, substances, or waste. The project would have **no impact** regarding emitting hazardous emissions or handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school directly, indirectly or cumulatively. No mitigation is required.

d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒

8d. Response (*Source: GP 2025 Figure PS-5 Hazardous Waste Sites, GP 2025 FPEIR Tables 5.7-A CERCLIS Facility Information, Figure 5.7-B Regulated Facilities in TRI Information and 5.7-C DTSC EnviroStor Database Listed Sites*)

No Impact. A review of the Cortese List database and the Federal government's Superfund Site database found that the project site is not listed as a hazardous materials site. The nearest hazardous materials site is located at 875 Michigan Avenue, approximately 2,000 feet north of the project site, and is not included on the national priorities list since soil contaminants of concern (sodium hydroxide) were removed from the site (EPA 2017). There are no other hazardous sites listed within a 1,000-foot radius of the project site. Therefore, the project would have **no impact** on creating a significant hazard to the public or environment. No mitigation is required.

e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒

8e. Response (*Source: GP 2025 Figure PS-6 Airport Safety Zones and Influence Areas, Riverside County Airport Land Use Compatibility Plan [RCALUCP 2014]*)

No Impact. The project site is not located within two miles of a public airport. The nearest airport is Flabob Airport, located 4.5 miles west. March Air Reserve Base/Inland Port Airport is located approximately 7 miles southeast. The project site is within the March Air Reserve Base/Inland Port Airport Land Use Compatibility Plan influence area. The project was reviewed by the Airport Land Use Commission on July 13, 2017 and was found to be consistent with the Airport Land Use Compatibility Plan. Therefore, the project would have **no impact** on airport use or aviation-related safety hazards for people residing or working in the project area.

f. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒

8f. Response (*Source: GP 2025 Figure PS-6 Airport Safety Zones and Influence Areas*)

No Impact. The project site is not located in the vicinity of a private airstrip. Therefore, the project would have **no impact** related to the safety of people near private airstrips. No mitigation is required.

g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒

8g. Response (*Source: GP 2025 FPEIR Chapter 5.7 Hazards and Hazardous Materials, City of Riverside's Emergency Operations Plan, Riverside Multi-Jurisdictional LHMP, Hunter Business Park Specific Plan*)

No Impact. Project implementation would not alter or otherwise interfere with public rights-of-way and, therefore, would not interfere with an emergency response or evacuation plan. The project would be required to comply with applicable California Fire Code (Title 24, California Code of Regulations, Section 9) requirements. Therefore, the project would have **no impact** on existing City-wide emergency response or evacuation plans. No mitigation is required.

h. Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☒	☐

8h. Response (*Source: GP 2025 Figure PS-7 Fire Hazard Areas, CalFIRE VHFHSZ in LRA for Western Riverside 2010, City of Riverside's EOP, Riverside Multi-Jurisdictional LHMP, Hunter Business Park Specific Plan*)

Less Than Significant Impact. The project site is adjacent to Box Springs Mountain Reserve Park, which is in a Very High Fire Severity Zone (VHFSZ) under County responsibility, and is also noted as such in Figure PS-7 of the GP 2025. The project site itself is also located in the VHFSZ. The project site plans indicate the provision of required access roads around the proposed structures to meet the minimum roadway widths stated in Title 18 (Subdivision) of the RMC and the City's Fire Code Section 503 (California Fire Code 2007). The project site plan indicates clearance around the proposed structures, comprised of parking spaces with minimal vegetation. The project also includes the development of a ten-foot-wide multi-use trail, made of decomposed granite material as specified by City of Riverside Parks and Recreation Department, which will run along the southern and eastern sides of the project. As the trail is needed for fire protection, the trail will provide a 12-foot clearance for fire service vehicles and will be designed to keep the maximum slope no greater than 15 percent. With implementation of GP 2025 policies, compliance with existing codes and standards, and adherence to Riverside Fire Department (RFD) practices, the project would have a **less than significant impact** related to wildland fires. No mitigation is required.

9. HYDROLOGY AND WATER QUALITY Would the project:				
a. Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or	☐	☐	☒	☐

siltation on- or off-site?				
d. Substantially alter the existing drainage pattern of the site or area, including the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or offsite?	☐	☐	☒	☐
e. Would the project create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐
f. Would the project otherwise substantially degrade water quality?	☐	☐	☒	☐

9a, c-f. Response (*Source: GP 2025 FPEIR Section 5.8 Hydrology and Water Quality, GP 2025 FPEIR Table 5.8-A Beneficial Uses Receiving Water, Hydrologic Analysis [Rick Engineering June 2017a], Water Quality Management Plan [Rick Engineering June 2017c]*)

Less Than Significant Impact. The project site is located within the Santa Ana River Watershed. Surface drainage in the Santa Ana River Watershed generally flows in a northerly direction into the Santa Ana River and to the Pacific Ocean. A hydrologic analysis was completed by Rick Engineering (Rick Engineering 2017a). There are no detention requirements for the project site. The existing condition of the project site has limited infiltration capacity. It has an average natural slope of approximately ten percent across the site, which limits the infiltration capacity and promotes sheet flow across the site. Artificial fill is another existing characteristic that not conducive to storm water infiltration. Based on geotechnical investigations completed at the site, the results indicate that the natural soils generally consisted of silty sands and sands; however there is one significant location and three minor locations that have dense artificial fill. Storm water cannot infiltrate into the ground at areas with artificial fill because the ground is too compacted. Water from the entire site currently enters into the existing Riverside County Flood Control 36-inch storm drain on Marlborough Avenue.

Flood control and water quality basins can help infiltrate water by allowing water to remain in a flat area where infiltration can be achieved. The proposed bio-filtration basin at the south end of the project is designed to promote infiltration as a feature of the basin design. Infiltration testing performed at the proposed bio-retention basin location indicates favorable infiltration rates. The proposed basin will allow for water to infiltrate into the earth, thus promoting ground water replenishment. This project proposes to install bio-retention facilities to collect storm water and filter it through a soil media with specified plants to assist in the natural uptake of pollutants. Current storm water requirements from the State Regional Water Quality Control Board (Santa Ana Region) require that all storm water is treated to remove pollutants to a high level of efficiency, before any water is released from the site into a public owned storm drain system, street right of way, or natural conveyance channel. This includes all paved areas, rooftops, parking lots, and sidewalks. Storm Water from these areas will be collected onsite and directed to a bio-filtration system. Therefore, the project would maintain the existing overall drainage pattern while collecting all run-on and diverting flows around the proposed building before ultimately connecting to the existing storm drain, before ultimately conveying flows to Lake Evans. Flow analysis concluded that the project would be able to discharge into the existing pipe without needing to increase the capacity of the existing storm drain.

The project would entail site grading and compaction, pouring of concrete and asphalt, and construction of a single structure. The project site clearing and grading phases would disturb any existing vegetation and surface soils, which may cause minor erosion and sedimentation. Since the proposed project would entail ground disturbance activities greater than one acre in area, the project would be subject to National Pollution Discharge Elimination System (NPDES) requirements, administered by the Santa Ana Regional Water Quality Control Board (RWQCB). In accordance with provisions for construction site inspections and new development per the NPDES applicable to the City (Order No. R8-2010-0033, NPDES No. CAS 618033), any contaminated water would be treated prior to discharge or disposed of at an appropriate disposal facility or wastewater treatment plant. Per the NPDES permit, the project must implement a Storm Water Pollution Prevention Plan (SWPPP). Implementation of site-specific best management practices (BMPs) as established by the SWPPP, such as site watering, would limit impacts related to erosion and sedimentation from ground disturbance.

Furthermore, the project would also comply with RMC Title 16 (Buildings and Construction) and Title 17 (Grading), which requires a Notice of Intent submittal to the State Water Board prior to issuance of a grading permit, and development and implementation of a SWPPP concurrent with the commencement of clearing and grading activities. Given compliance with all applicable local, state, and federal laws regulating surface water quality and the fact that the project is not anticipated to result in significant impacts to any water quality standards or waste discharge, the project would result in **less than significant** impacts related to water quality, erosion, flooding, and runoff pollution. No mitigation is required.

b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☒	☐

9b. Response (*Source: GP 2025 Table PF-1 Riverside Public Utilities Projected Domestic Water Supply (AC-FT/YR), Table PF-2 RPU Projected Water Demand, Table PF-3 Western Municipal Water District Projected Domestic Water Supply (AC-FT/YR), RPU 2015 Urban Water Management Plan*)

Less Than Significant Impact. The project site is located within the Riverside South Water Basin, at the base of the Box Springs Mountain Reserve. Water absorption on the adjacent hillside and the natural state of Reserve land will not be impacted by development of the project site. Groundwater was not found at any test location on the site. The project site plans indicate paved parking areas around the building, with pervious surfaces maintained in the sloped area to the northeast and east of the site. According to the hydrologic analysis conducted for the project, the project would be able to discharge into the existing storm drain pipe on Marlborough Avenue (Rick Engineering 2017a).

Domestic water demand in the City is expected to increase from 91,048 acre-feet per year in 2015 to 99,835 acre-feet per year in 2025 in normal water years, and Riverside Public Utilities (RPU) anticipates a water supply of 112,671 acre-feet per year in the year 2025 with a projected water surplus of approximately 12,836 acre-feet per year[1] under a Typical Growth Scenario. During single dry year conditions, supply is expected to exceed demand by 4,754 acre-feet in 2025, and under multiple dry year conditions, supply is expected to exceed demand by 10,830 acre-feet in 2025. According to the GP 2025 and the GP 2025 FPEIR, safe yield will be maintained in RPU's groundwater basins and development under the GP 2025 would have impacts that are considered less than significant.

The proposed land uses would be consistent with the GP 2025 and zoning ordinance, and would not induce population growth above that which is forecast for the City since there are no dwelling units that would be built as part of the project. The project would remain consistent with the typical growth scenario expected under the GP 2025, where future water supply was determined to be adequate.

The project would incorporate design features that utilize water conservation such as low-flush toilets and low-flow faucets in compliance with the California Green Building Standards, and drought-tolerant landscaping in compliance with the City's Water Efficient Landscape Ordinance (RMC Section 19.570). Furthermore, the project would be required to comply with all NPDES requirements, which would further ensure the project would not substantially deplete groundwater supplies or interfere with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level. Therefore, the project would have a **less than significant impact** to groundwater supplies and recharge. No mitigation is required.

g. Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒

9g. Response (*Source: GP 2025 Figure PS-4 Flood Hazard Areas, and FEMA Flood Hazard Maps No. 06065C0727G*)

No Impact. A review of the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (Map Number 06065C0727G, effective date August 28, 2008) and Figure 5.8-2 Flood Hazard Areas of the GP 2025 FPEIR, shows that the project site is not located within or near a 100-year flood hazard area. The proposed building would not include any residential dwellings. Therefore, the project would not place a residential structure in a 100-year flood hazard area that would impede or redirect flood waters, and the project would have **no impact**. No mitigation is required.

h. Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	☒

9h. Response (*Source: GP 2025 Figure PS-4 Flood Hazard Areas, and FEMA Flood Hazard Maps No. 06065C0727G*)

[1] 112,761 acre-feet/year (anticipated 2025 supply) – 99,835 acre-feet/year (anticipated 2025 demand) = 12,836 acre-feet/year (anticipated 2025 surplus)

No Impact. A review of the FEMA Flood Insurance Rate Map (Map Number 06065C0727G, effective date August 28, 2008) and Figure 5.8-2 Flood Hazard Areas of the GP 2025 FPEIR, shows that the project site is not located within or near a 100-year flood hazard area. Therefore, the proposed building would not be constructed in a 100-year flood hazard area that would impede or redirect flood waters, and the project would have **no impact**. No mitigation is required.

i. Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒

9i. Response (*Source: GP 2025 Figure PS-4 Flood Hazard Areas, GP 2025 FPEIR Figure 5.8-2 Flood Hazard Areas, and FEMA Flood Hazard Maps No. 06065C0727G*)

No Impact. The project site is not located in or near a flood hazard area as depicted on Figure 5.8-2 of the GP 2025 FPEIR and the FEMA Flood Insurance Rate Map. The project site is not located in an area subject to dam inundation, according to Figure 5.8-2. Therefore, the project would not place a structure within a flood hazard or dam inundation area that would expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam. The project would have **no impact**. No mitigation is required.

j. Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

9j. Response (*Source: GP 2025 FPEIR Chapter 5.8 Hydrology and Water Quality*)

No Impact. Tsunamis are large waves that occur in coastal areas. The City is not located in a coastal area; the project site is nearly 65 miles east of the coastline. The project site has relatively flat topography, though adjacent to the slopes of Box Springs Mountain Reserve park to the northeast and east of the project site. There are no bodies of water in the immediate vicinity of the project site; the Santa Ana River is approximately 3.25 miles west of the project site. Therefore, **no impact** from inundation by seiche, tsunami, or mudflow is expected to occur at the project site. No mitigation is required.

10. LAND USE AND PLANNING Would the project:				
a. Physically divide an established community?	☐	☐	☐	☒

10a. Response (*Source: GP 2025 Land Use and Urban Design Element, Hunter Business Park Specific Plan, Project Site Plan*)

No Impact. The proposed project involves construction of a 346,330 square foot industrial building comprised of approximately 339,510 square feet of unrefrigerated warehouse space and 6,820 square feet of office space, on an approximately 22.34 gross-acre site. The project would include 86,698 square feet of surface parking lot, with 364 standard vehicular parking spaces, eight ADA parking spaces, and 12 trailer parking spaces, on an infill site in the Hunter Business Park area. The project would not include new roads off-site and would be limited to the boundary of the project site. The project would be compatible with surrounding land uses, which consist of office and light industrial uses, and would not divide an established community. Therefore, the project would have **no impact**. No mitigation is required.

b. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐

10b. Response (*Source: GP 2025 Figure LU-7 Redevelopment Areas Map, Figure LU-10 Land Use Policy Map, Table LU-5 Zoning/General Plan Consistency Matrix, Hunter Business Park Specific Plan, RMC*)

Less Than Significant Impact. The project site has a GP 2025 land use designation of Business/Office Park (B/OP) and is zoned BMP-SP – Business and Manufacturing Park and Specific Plan (Hunter Business Park) Overlay Zones. The project site is located in the Industrial Park District of the Hunter Business Park Specific Plan. The proposed building would be used for warehouse operations with associated office space, consistent with the General Plan, zoning regulations and the Hunter Business Park Specific Plan. The project would be similar to and compatible with existing surrounding land uses to the west and north, which are office and light industrial uses. Therefore, the project would fully integrate with the established light industrial uses surrounding the project site. The tables below compare the project to applicable policies of the three policy documents.

Table 9 General Plan 2025 Consistency Analysis

GP 2025 Policies	Analysis
Land Use and Urban Design Element	
Policy LU-4.2. Enforce the hillside grading provisions of the City's Grading Code (Title 17) to minimize ground disturbance associated with hillside development; respect existing land contours to maximum feasible extent.	**Consistent with Issuance of a Grading Exception.** According to project site plans, retaining walls would be installed in select areas along the perimeter of paved areas to preserve Gage Canal (along the western boundary of the site) and the northwestern foothill of Box Springs Mountain Reserve (along the eastern boundary of the site). The installation of such retaining walls limits the extent of development that can occur on the site and ensures proper buffering from hillsides and existing contours. However, due to project design features, the retaining walls would not minimize ground disturbance or follow existing land contours as intended by Policy LU-4.2 and the City's Hillside Grading Ordinance. Therefore, the proposed project includes a request for a Grading Exception to allow for a variance to this policy. The requested Grading Exception would need to be obtained in conjunction with the other project permits in order for the project to be consistent with Policy LU-4.2.
Policy LU-7.2. Design new development adjacent and in close proximity to native wildlife in a manner which protects and preserves habitat.	**Consistent.** Retaining walls would be placed along the eastern boundary of paved areas on site, adjacent to the northwestern foothill of Box Springs Mountain Reserve to prevent development from encroaching on wildlife habitat and ensure proper buffering. The existing drainage pattern would be preserved such that runoff is captured in a basin on the southwest corner of the site before being conveyed to existing drains along Marlborough Avenue.
Circulation and Community Mobility Element	
Policy CCM-13.1. Ensure that new development provides adequate parking.	**Consistent.** The project would include 372 standard vehicular parking spaces and 12 trailer parking spaces. Per RMC Section 19.580.060, the project is required to provide 1 space/ 1,000 square feet of warehouse floor area plus 1 space/250 square feet of office area. The project would be required to provide 340 spaces for the warehouse and 28 spaces for the associated offices, for a total of 368 spaces. The project would provide 7 standard parking spaces beyond the requirement. The development would provide adequate parking.
Noise Element	
Policy N-2.1. Ensure that new development can be made compatible with the noise environment by using noise/land use compatibility standards (Figure N-10 Noise/Land Use Noise Compatibility Criteria) and the airport noise contour maps (found in the RCALUCPs) as guides to future planning and development decisions.	**Consistent.** The noise study completed for the proposed project demonstrated that operational noise would be within acceptable noise standards, with the exception of night-time operations of the facility. In order to ensure noise impacts would be less than significant, the project would implement mitigation measures NOI-1 through ~~4~~ 5 (further discussed in Section 12, *Noise*). The nearest airport to the project site is Flabob Airport, located 4.5 miles west. March Air Reserve Base/Inland Port Airport is located approximately 7 miles southeast. The project site is within the March Air Reserve Base/Inland Port Airport Land Use Compatibility Plan Zone E. Noise Impacts in Zone E are "Low" with occasional overflights being intrusive to some outdoor activities. The project was reviewed by the Airport Land Use Commission on July 13, 2017 and was found to be consistent with the Airport Land Use Compatibility Plan. .
Open Space and Conservation Element	
Policy OS-8.2. Require incorporation of energy conservation features in the design of all new construction and substantial rehabilitation projects pursuant to Title 24, and encourage the installation of conservation devices in existing developments.	**Consistent.** The proposed building would incorporate CBC Title 24 measures, and also include large fans for indoor air handling and temperature control.
Policy OS-8.5. Require all new development to incorporate energy-efficient lighting, heating and cooling systems pursuant to the Uniform Building Code and Title 24.	
Public Facilities and Infrastructure Element	
Policy PF-1.3. Continue to require that new development fund fair-share costs associated with the provision of water	**Consistent.** The project applicant would be required to pay water service connection fees, determined by the City's Building and Safety

service.	Division and Public Utilities Division.
Policy PF-3.2. Continue to require that new development fund fair-share costs associated with the provision of wastewater service.	**Consistent.** The project applicant would be required to pay sewer connection fees, determined according to RMC Section 14.08.080.
Parks and Recreation Element	
Policy PR-2.3. Improve and create more connections and increase the safety of the bicycling, equestrian, and pedestrian trail system within the City.	**Consistent.** Site plans indicate the preservation and enhancement of an existing trail connection that starts along Gage Canal at the southwest corner of the project site and runs along the southern and eastern boundary of the site, which is part of the Sugarloaf Trails of the Box Springs Mountain Reserve. The trail would remain publicly accessible for bicycling and hiking. The trail will provide a 12-foot clearance for fire service vehicles and will be designed to keep the maximum slope no greater than 15 percent. Warehouse employees may also access the trail during midday breaks.

The project site is located in the Hunter Business Park Specific Plan area. The table below compares the project to applicable development standards and design guidelines included in the Hunter Business Park Specific Plan.

Table 10 Hunter Business Park Specific Plan Consistency Analysis

Development Standards	Minimum/ Maximum	Project	Consistent
Lot Standards			
Lot Area	5 acres min	Approx. 22.34 gross-acres	Yes
Lot Width	300 ft min	Approx. 650 ft.	Yes
Site Coverage	50 percent max	47.5 percent	Yes
Building Height	45 ft max.	42 feet max.	Yes
Setbacks	20 ft min, side and rear	149 ft. min. from eastern lot line 119 ft. min. from western lot line 115 ft. min. from southern lot lines	Yes
Access			
One access point per 300 feet of frontage		Primary access from Marlborough Drive Secondary access from Research Park Drive	Yes
Parking (RMC Section 19.580.060)			
Warehousing and Wholesale Distribution Centers 1 space per 1,000 SF floor area, plus 1 space per 250 SF office area	340 (339,510 SF / 1,000 SF) + 28 (6,820 SF/250 SF) Total Required: 368 spaces	379 stalls (375 regular stalls, 4 ADA stalls), plus 12 trailer spaces	Yes

The project site is located in the BMP zone. The table below compares the project to standards for BMP zones, per RMC Section 19.130.030.

Table 11 Riverside Municipal Code Zoning Consistency Analysis

Development Standards	Minimum/ Maximum	Project	Consistent
Floor-Area-Ratio	1.5 max.	Approx. 0.5	Yes
Lot Area	40,000 sf min.	979,904 SF (gross) 729,243 SF (net)	Yes
Lot Width	140 ft min.	Approx. 650 ft.	Yes
Lot Depth	100 ft min.	Approx. 1,300 ft	Yes
Building Height	45 ft max.	42 feet max.	Yes
Front Yard Setback			Yes

Buildings over 30 ft in height Along an arterial street	50 ft min.[1] 40 ft min.[2]	65 ft. min. from northern lot line	
Side Yard Setbacks: Interior Side Adjacent to Street or Alley	 0 ft min. 0 ft min.	 149 ft. min. from eastern lot line 119 ft. min. from western lot line	 Yes
Rear yard Setback Adjacent to Streets Same as Front Yard	0 ft min. 40 ft min.	115 ft. min. from southern lot lines	Yes

Source: adapted from Table 19.130.030(A) of the RMC Chapter 19.130.

1 In the BMP Zone, 20-feet of the required 50-foot front yard setback shall be landscaped.

[2] A 40-foot front yard setback shall be permitted if it is landscaped in its entirety.

Based on the analyses provided above, the project would be consistent with all applicable GP 2025 policies, and development standards and guidelines in the Hunter Business Park Specific Plan and for the BMP zone. Therefore, the project would have **less than significant impact**. No mitigation is required.

c. Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☒	☐	☐

10c. Response (*Source: GP 2025 Figure LU-7 Redevelopment Areas Map, Figure LU-10 Land Use Policy Map, Table LU-5 Zoning/General Plan Consistency Matrix, Figure OS-6 SKR-HCP, Figure OS-7 MSHCP Cores and Linkages, Figure OS-8 MSHCP Cell Areas, GP 2025 FPEIR Figure 5.4-2 MSHCP Area Plans, Figure 5.4-4 MSHCP Criteria Cells and Subunit Areas, Figure 5.4-6 MSHCP Narrow Endemic Plant Species Survey Area, Figure 5.4-7 MSHCP Criteria Area Species Survey Area, Figure 5.4-8 MSHCP Burrowing Owl Survey Area, Hunter Business Park Specific Plan*)

Less Than Significant Impact with Mitigation Incorporated. As discussed in Section 4, *Biological Resources* above, the project is consistent with the SKR-HCP (Stephens' Kangaroo Rat - Habitat Conservation Plan) and with GP 2025 Policy OS-5.3. The project would be mostly consistent with the guidelines of the MSHCP, including Section 6.1.4 (Guidelines Pertaining to the Urban/Wildlife Interface) and related policies in the GP 2025, including Policy LU-7.4. However, as further discussed in Section 1, *Aesthetics*, and Section 12, *Noise*, several mitigation measures would be implemented to ensure new sources of light and temporary construction noise and operational noise would not significantly impact the surrounding natural open space area. Such measures include limiting glare from new light sources (AES-1), and reducing construction noise impacts (mitigation measures NOI-~~3~~ 4 and NOI-~~4~~5) by restricting hours for construction activities, implementing temporary sound attenuation barriers, and the use of mufflers on all equipment. Measures to reduce operational noise impacts (mitigation measures NOI-1, NOI-2 and NOI-~~2~~3) include restricted operations during nighttime hours and the installation of noise-attenuating barriers around any rooftop mechanical equipment. Therefore, the project would have a **less than significant impact with mitigation incorporated** associated with potential inconsistencies with the MSHCP and/or SKR-HCP to the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan.

11. MINERAL RESOURCES Would the project:				
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒

11a. Response (*Source: GP 2025 Figure OS-1 Mineral Resources*)

No Impact. The project would not involve extraction of mineral resources. According to the California Department of Conservation, Division of Mines and Geology, the project site is designated Mineral Resource Zone 3 (MRZ-3), which denotes areas that contain mineral deposits whose significance cannot be evaluated from available data. The GP 2025 provides no specific policies regarding property identified as MRZ-3 and has not designated the project site for mineral resource related uses. Additionally, there is no historical use of the site or surrounding area for mineral extraction purposes. Therefore, the project would have **no impact** on mineral resources directly, indirectly or cumulatively. No mitigation is required.

b. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific	☐	☐	☐	☒

plan or other land use plan?				

11b. Response (*Source: GP 2025 Figure OS-1 Mineral Resources*)

No Impact. As discussed in Response 11a above, the proposed project is in a zone with a classification of MRZ-3. The General Plan indicates that quarrying of mineral resources no longer plays a major role in the City's economy, with the exception of the areas classifies as MRZ-2 zones, between Market Street and Mission Boulevard between the Santa Ana River and Lake Evans, as shown in the City of Riverside General Plan Figure OS-1. The project is consistent with the GP 2025. Therefore, there is **no impact**. No mitigation is required.

12. NOISE Would the project result in:				
a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐

12a. Response (*Source: GP 2025 Figure N-1 2003 Roadway Noise, Figure N-2 2003 Freeway Noise, Figure N-5 2025 Roadway Noise, Figure N-6 2025 Freeway Noise, Figure N-9 March ARB Noise Contours, Figure N-10 Noise/Land Use Noise Compatibility Criteria, GP 2025 FPEIR Table 5.11-I Existing and Future Noise Contour Comparison, Table 5.11-E Interior and Exterior Noise Standards, GP 2025 FPEIR Appendix G Noise Existing Conditions Report, Riverside Municipal Code Title 7 Noise Code, Noise Study [Rincon Consultants 2017e]*)

Less Than Significant Impact. Noise is unwanted sound that disturbs human activity. Environmental noise levels typically fluctuate over time, and different types of noise descriptors are used to account for this variability. Noise level measurements include intensity, frequency, and duration, as well as time of occurrence. Noise level (or volume) is generally measured in decibels (dB) using the A-weighted sound pressure level (dBA). Because of the way the human ear works, a sound must be about 10 dBA greater than the reference sound to be judged as twice as loud. In general, a 3 dBA change in community noise levels is noticeable, while 1-2 dBA changes generally are not perceived. Quiet suburban areas typically have noise levels in the range of 40-50 dBA, while arterial streets are in the 50-60+ dBA range. Normal conversational levels are in the 60-65 dBA range, and ambient noise levels greater than 65 dBA can interrupt conversations.

Noise levels typically attenuate at a rate of 6 dBA per doubling of distance from point sources (such as construction equipment). Noise from lightly traveled roads typically attenuates at a rate of about 4.5 dBA per doubling of distance. Noise from heavily traveled roads typically attenuates at about 3 dBA per doubling of distance, while noise from a point source typically attenuates at about 6 dBA per doubling of distance. Noise levels may also be reduced by the introduction of intervening structures. For example, a single row of buildings between the receptor and the noise source reduces the noise level by about 5 dBA, while a solid wall or berm that breaks the line-of-sight reduces noise levels by 5 to 10 dBA. The construction style for new buildings in California generally provides a reduction of exterior-to-interior noise levels of about 30 dBA with closed windows (Federal Highway Administration [FHWA] 2017).

The Noise Element of the Riverside General Plan (2007) identifies sources of noise and provides objectives and policies designed to incorporate noise control in the planning process. To ensure different land uses are developed in compatible noise environments, the City's Noise Element establishes noise guidelines for land use planning, shown in Table 12. The Noise Element requires protection of sensitive receptors from excessive noise associated with commercial and industrial businesses and agricultural activities. During the preliminary stage of the development process, potential noise impacts and appropriate mitigation are to be identified.

The Noise Element includes specific policies to reduce noise that apply to new development:

- Policy N-1.3. Enforce that the City of Riverside Noise Control Code to ensure that stationary noise and noise emanating from construction activities, private developments/residences, and special events are minimalized.
- Policy N-1.4. Incorporate noise considerations into the site plan review process, particularly with regard to parking and loading areas, ingress/egress points and refuse collection areas.
- Policy N-1.5. Avoid locating noise-sensitive land uses in existing and anticipated noise-impacted areas.
- Policy N-1.8. Continue to consider noise concerns in evaluating all proposed development decisions and roadway projects

Table 12 Noise/Land Use Noise Compatibility Criteria

Land Use Category	Community Noise Equivalent Level (CNEL) or Day-Night Level (Ldn), dBA			
	Normally Acceptable	**Conditionally Acceptable**	**Normally Unacceptable**	**Conditionally Unacceptable**
Single Family Residential	60	65	70	90
Infill Single Family Residential	65	75	80	90
Commercial (Motels, Hotels, Lodging)	60	70	80	90
Schools, Libraries, Churches, Hospitals, Nursing Homes	60	70	80	90
Amphitheaters, Concert Hall, Auditorium, Meeting Hall	N/A	65	N/A	90
Sports Arenas, Outdoor Spectator Sports	N/A	70	N/A	90
Playgrounds, Neighborhood Parks	70	N/A	75	90
Golf Courses, Riding Stables, Water Rec, Cemeteries	70	N/A	80	90
Office Buildings, Business, Commercial, Professional	65	75	90	N/A
Industrial, Manufacturing, Utilities, Agriculture	**70**	**80**	**90**	**N/A**
Freeway Adjacent Commercial, Office, and Industrial Uses	65	80	90	N/A

Source: Riverside General Plan 2025 (adopted 2007)

The City of Riverside Municipal Code sets forth the City's standards, guidelines, and procedures concerning the regulation of operational noise. Specifically, Title 7, Noise Control, of the Code regulates noise levels in the City. These regulations are intended to implement the goals, objectives, and policies of the General Plan, protect the public health, safety, and welfare of the City, and to control unnecessary, excessive, and/or annoying noise in the City.

Section 7.25.010 of the Municipal Code establishes exterior noise standards for various land use categories over certain periods of time. Per the Municipal Code, noise from operations at any land use cannot exceed the exterior noise limit of another land use, as measured at the property line. City exterior noise standards are shown in Table 13.

Table 13 City of Riverside Exterior Noise Standards

Land Use Category	Time Period	Noise Level
Residential	Night (10 PM to 7 AM) Day (7 AM to 10 PM)	45 dBA 55 dBA
Office/Commercial	Anytime	65 dBA
Industrial	Anytime	70 dBA
Community Support	Anytime	60 dBA
Public Recreation Facility	Anytime	65 dBA
Nonurban	Anytime	70 dBA

Source: City of Riverside Municipal Code, Table 7.25.010A

Furthermore, any noise exceeding the following is prohibited:

- The exterior noise standard of the applicable land use category, plus up to five decibels, for a cumulative period of more than thirty minutes in any hour; or
- The exterior noise standard of the applicable land use category, plus five decibels for a cumulative period of more than fifteen minutes in any hour; or
- The exterior noise standard of the applicable land use category, plus ten decibels, for a cumulative period of more than five minutes in any hour; or
- The exterior noise standard of the applicable land use category, plus fifteen decibels, for a cumulative period of

more than one minute in any hour; or

- The exterior noise standard for the applicable land use category, plus twenty decibels or the maximum measured ambient noise level, for any period of time.

Per Implementation Tool N-1 of the GP 2025 Noise Element, this project has been reviewed to ensure that noise standards and compatibility issues have been addressed. A noise study was prepared for the project by Rincon Consultants in December 2017. The noise study concluded that the project meets the City's noise standards as set forth in Title 7 of the Municipal Code, and is compliant with the Noise/Land Use Noise Compatibility Criteria Matrix (Figure N-10) of the Noise Element for exposure of people to noise. Therefore, the project would have a **less than significant impact** on the exposure of persons to or the generation of noise levels in excess of established City standards. No mitigation is required.

However, though not included in the Riverside GP 2025 Noise Element as a noise sensitive receptor, Box Springs Mountain Reserve Park is considered a sensitive receptor pursuant to the Western Riverside County MSHCP. For planning purposes, wildlife within the MSHCP Conservation Area should not be subject to noise that would exceed residential noise standards. The southern and eastern boundaries of the project site are abutting the northern side of the Box Springs Mountain Reserve Park hills, which act as a natural buffer to the rest of the reserve area. Proposed noise generating land uses affecting the MSHCP Conservation Area shall incorporate setbacks, berms, or walls to minimize the effects of noise on MSHCP Conservation Area resources pursuant to applicable rules, regulations, and guidelines related to land use noise standards. Potential impacts to Box Springs Mountain Reserve Park are discussed in Section 12c below.

b. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐

12b. Response (*Source: GP 2025 Figure N-1 2003 Roadway Noise, Figure N-2 2003 Freeway Noise, Figure N-5 2025 Roadway Noise, Figure N-6 2025 Freeway Noise, Figure N-9 March ARB Noise Contours, GP 2025 FPEIR Table 5.11-G Vibration Source Levels For Construction Equipment, GP 2025 FPEIR Appendix G Noise Existing Conditions Report, Noise Study [Rincon Consultants 2017e]*)

Less Than Significant Impact. Vibration is a unique form of noise because its energy is carried through buildings, structures, and the ground, whereas noise is simply carried through the air. Thus, vibration is generally felt rather than heard. The ground motion caused by vibration is measured as particle velocity in inches per second and is referenced as vibration decibels (VdB) in the U.S. The City has not adopted any thresholds or regulations addressing vibration. The vibration velocity level threshold of perception for humans is approximately 65 VdB.

The Federal Railroad Administration (FRA) provides the following thresholds for assessing ground-borne vibration impacts:

- 65 VdB where low ambient vibration is essential for interior operations, such as hospitals and recording studios
- 72 VdB for residences and buildings where people normally sleep, including hotels
- 75 VdB for institutional land uses with primary daytime use, such as churches and schools
- 95 VdB for physical damage to extremely fragile historic buildings
- 100 VdB for physical damage to buildings

The City of Riverside has not adopted any thresholds for construction or operational groundborne vibration impacts. However, the California Department of Transportation (Caltrans) has set vibration criteria for various land uses, as shown in Table 14.

Table 14 Caltrans Vibration Impact Criteria

Land Use Category	Vibration Impact Level for Frequent Events (VdB)[1]	Vibration Impact Level for Infrequent Events (VdB)[2]
Building where low ambient vibration is essential for interior operations	65	65
Residences and buildings where people normally sleep	72	80
Institutional land uses with primary daytime use	75	83

Source: Transportation and Construction Vibration Guidance Manual 2013, Caltrans

[1] Frequent events are defined as more than 70 events per day.

[2] Infrequent events are defined as fewer than 70 events per day.

Construction-related activities, although short term, are the most common source of groundborne noise and vibration that could affect occupants present at neighboring existing buildings. The potential for noise and ground-borne vibration impacts related to noise land use compatibility, construction-related noise per GP 2025 FPEIR, Table 5.11-G, Vibration Source Levels for Construction Equipment, on-site stationary noise sources, and vehicular-related noise were analyzed in the noise study. The vibration velocity level threshold of perception for humans is approximately 65 VdB (Federal Transit Administration 2006). A vibration velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels for many people. The range of interest is from approximately 50 VdB to 100 VdB. 100 VdB is the threshold where minor damage to fragile buildings may occur. The general human response to different levels of groundborne vibration velocity levels is described below.

Table 15 Groundborne Vibration Velocity Levels

Vibration Velocity Level	Human Reaction
65 VdB	Approximate threshold of perception for many people
75 VdB	Approximate dividing line between barely perceptible and distinctly perceptible. Many people fine that transportation-related vibration at this level is unacceptable.
85 VdB	Vibration acceptable only if there are an infrequent number of events per day.
Source: Federal Transit Administration, 2006	

Vibration could exceed 85 VdB at adjacent industrial properties 25 feet to the east and north. However, such events would be intermittent and temporary, and vibration would not reach levels that could cause building damage (100 VdB). Moreover, the adjacent uses, which consist of office and light industrial uses, are not vibration sensitive. Groundborne vibration at the closest sensitive receptor, residences 2,500 feet south of the project site, would not exceed 65 VdB. The following table lists ground-borne vibration levels from various types of construction equipment.

Table 16 Groundborne Vibration Levels from Various Types of Construction Equipment

	Approximate VdB at Nearest Receptors	
Equipment	**25 Feet**	**2,500 Feet**
Large Bulldozer	87	27
Loaded Trucks	86	26
Small Bulldozer	58	N/A
Source: Federal Transit Administration, 2006		

The noise study concluded the project to be in compliance with the Caltrans' vibration standards and found impacts related to groundborne vibration and groundborne noise levels as a result of the project to be a **less than significant** impact. No mitigation is required.

c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☒	☐	☐

12c. Response (*Source: GP 2025 Figure N-1 2003 Roadway Noise, Figure N-2 2003 Freeway Noise, Figure N-5 2025 Roadway Noise, Figure N-6 2025 Freeway Noise, Figure N-9 March ARB Noise Contours, Figure N-10 Noise/Land Use Noise Compatibility Criteria, GP 2025 FPEIR Table 5.11-I Existing and Future Noise Contour Comparison, Table 5.11-E Interior and Exterior Noise Standards, GP 2025 FPEIR Appendix G Noise Existing Conditions Report, Riverside Municipal Code Title 7 Noise Code, Noise Study [Rincon Consultants 2017e], Traffic Impact Analysis [Rick Engineering 2017b]*)

Less Than Significant with Mitigation Incorporated. As discussed above, though not included in the Riverside General Plan 2025 Noise Element as a noise sensitive receptor, Box Springs Mountain Reserve Park is considered a sensitive receptor pursuant to the Western Riverside County MSHCP. The southern and eastern boundaries of the project site are abutting the northern side of the Box Springs Mountain Reserve Park hills. These hills act as a natural buffer to the rest of the reserve area. For planning purposes, wildlife within the MSHCP Conservation Area should not be subject to noise that would exceed residential noise standards (MSHCP 2003). The portion of the Box Springs Mountain Reserve Park that is adjacent to the subject project does not provide picnicking or camping facilities, nor does it allow for nighttime access. The use of the Reserve by people would be limited to the hiking trail that traverses the southern and eastern property line. Noise impacts to

people would be infrequent and limited in duration and therefore, would be less than significant. The discussion below focuses on potential wildlife noise exposure to a permanent increase in ambient noise levels.

A noise study was prepared by Rincon Consultants in November 2017 to determine whether the project would result in a permanent increase in ambient noise levels. Noise measurements, shown in the Table 17 below, were taken on May 4, 2017 during evening peak traffic hour to represent the ambient noise levels at the project site. Two additional noise measurements (5 and 6) were taken on August 16, 2017, ~~adjacent to Box Springs Mountain Reserve Park~~on the project site and along Research Park Drive to estimate the ambient nighttime noise levels at both locations. Noise measurement 7 was conducted on April 5, 2018 along the southeastern property line, adjacent Box Springs Mountain Reserve Park to estimate the ambient nighttime noise level at the Reserve. Figure 5 details each noise measurement location.

Table 17 Ambient Noise

#	Measurement Location	Sample Times	Approximate Distance to Primary Noise Source	Leq[15] (dBA)[1]
1	Onsite	4:18 PM – 4:33 PM	200 feet[2]	50.7
2	Existing warehouse in vicinity (comparison)	6:06 PM – 6:21 PM	400 feet[3]	51.3
3	Off-site as Hunter Park on Iowa Avenue	5:40 PM – 5:55 PM	30 feet[4]	70.0
4	Off-site Residences on Columbia Avenue	4:50 PM – 5:05 PM	50 feet[5]	73.0
5	Onsite nighttime ambient noise~~Off-site Box Springs Mountain Reserve Park~~	6:30 AM – 6:45 AM	100 feet[6]	49.4
6	Off-site on Research Park Drive	6:03 AM – 6:18 AM	50 feet[7]	56.0
7	Southeastern property line, adjacent Box Springs Mountain Reserve Park	6:39 AM – 6:54 AM	100 to 1,000 feet[8]	43.6

Source: Rincon Consultants 2017d, field measurements on May 4, 2017 (measurements 1-4), ~~and~~ August 16, 2017 (measurements 5-6), and April 5, 2018 (measurement 7) field using ANSI Type II Integrating sound level meter.

[1] The equivalent noise level (Leq) is defined as the single steady A-weighted level that is equivalent to the same amount of energy as that contained in the actual fluctuating levels over a period of time (essentially, the average noise level). For this measurement, the Leq was over a 15-minute period (Leq[15]).

[2]Approximate distance to Marlborough Avenue.

[3]Approximate distance to rooftop equipment noise.

[4]Distance to centerline of Iowa Avenue.

[5]Distance to centerline of Columbia Avenue.

[6]Distance to nearby warehouse (primary noise source).

[7]Distance to centerline of Research Park Drive.

[8]Distance to chirping birds (100 feet) and background traffic noise from Marlborough Avenue (1,000 feet)

Daytime Operational Noise. The nearest noise inducing operational activity (accelerating from a stop) would be located a minimum 95 feet from the Reserve. The majority of operational activities (noise associated with loading/unloading activities) would take place 200 feet or more from the sensitive receptor. The proposed building would include 34 loading docks on the western side of the warehouse and 15 loading docks on the southern side of the warehouse. Noise from the western docks would be attenuated by the warehouse building itself and would not result in any impacts to the Box Springs Mountain Reserve Park. The southern and eastern boundaries of the project site are abutting the northern side of the Box Springs Mountain Reserve Park hills. The elevation of the hillside begins to climb while still on the subject property and would act as a natural buffer to the rest of the reserve area. Furthermore, the project would incorporate a 6- to 21-foot tall retaining wall along the eastern property boundary that would reduce the noise from the warehouse operations. Table 18 details the likely noise sources related to loading and unloading operations.

Figure 5 Noise Measurement Locations

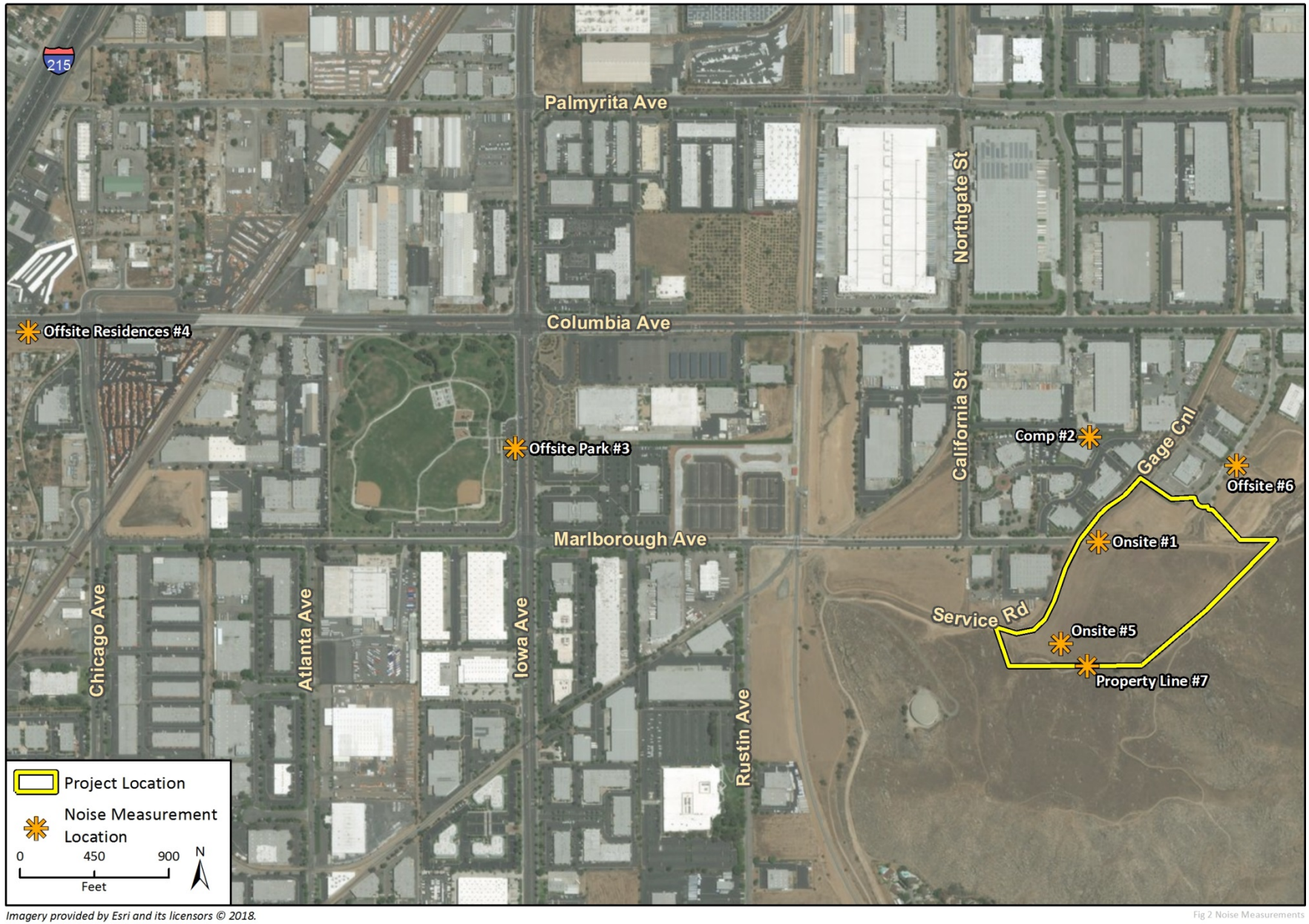


Table 18 Noise from Loading/Unloading Operations

Truck-Related Noise Source	Assumed Sound Level	Nearest Distance to Sensitive Receptor[1]	Assumed Sound Level at Sensitive Receptor	Potentially Exceeds Daytime Threshold of 55 dBA?	Potentially Exceeds Nighttime Threshold of 45 dBA?
Pass-by[2]	68 dBA at 30 ft[3]	240 ft	49.9 dBA	No	**Yes**
Airbrakes	72 dBA at 25 ft	200 ft	53.9 dBA	No	**Yes**
Backup Alarm	79 dBA at 30 ft	200 ft	62.5 dBA	**Yes**	**Yes**
Brief Idle before Engine Shutoff	70 dBA at 25 ft	200 ft	51.9 dBA	No	**Yes**
Engine Ignition + Airbrakes	71 dBA at 25 ft	200 ft	52.9 dBA	No	**Yes**
Accelerating from Stop	74 dBA at 25 ft	95 ft	62.4 dBA	**Yes**	**Yes**

Source: Adapted from Midpoint at 237, Loading Dock Noise Study. Charles M. Salter Associates, Inc. 2014.
1 Box Springs Mountain Reserve Park
2 Arrivals and departures
3 ft = feet

Daytime operational noise involving backup alarms and general acceleration of trucks on the south side of the building will exceed the daytime noise level threshold of 55 dBA at the adjacent Reserve. RMC Section 7.25.010 indicates noise levels may exceed the base standard in incremental amounts over shortening amounts of time each hour as follows:

- Up to five decibels for a cumulative period of up to 30 minutes in any hour; or
- Plus five decibels for a cumulative period of up to 15 minutes in any hour; or
- Plus 10 decibels for a cumulative period of up to five minutes in any hour; or
- Plus 15 decibels for a cumulative period of up to one minute in any hour; or
- No more than 20 decibels for any period of time.

Enterprises generally seek efficiency of freight transport operations, including dealing with traffic congestion and loading and unloading delays, in order to reduce costs. Research conducted in 2013 found that the execution of steps from arrival to departure for a semi-truck being unloaded was 146 minutes (2 hours, 26 minutes), while the arrival to departure time for a truck being loaded was 173 minutes (2 hours, 53 minutes) (Burdzik et al. 2014). The proposed project includes 15 docking bays on the south facing side of the building. This would allow for a maximum of 15 trucks at any given time to be located along this portion of the building. However, generally, urban delivery trucks across many sectors must aim to arrive at stops for loading and unloading during scheduled time windows that are 15 minutes to 2 hours in length (MTI 2003).

Typical warehouse facility logistics therefore allow for the assumption that four or five trucks would be arriving in any given hour, while four or five may be leaving. Therefore, approximately 10 trucks may be creating noise from backup alarms or acceleration during any given hour. Using the five minute limitation on these noise sources, this equates to 30 seconds per truck. Acceleration noise, as conservatively calculated at 62.5 dBA, would occur when the truck speed hit around 12.4 miles per hour (Babu and Pattnaik 1997). The departing trucks would only be traveling approximately 250 feet, and given typical speed restrictions on warehouse parking lots (5 to 10 miles per hour), the five existing trucks would not likely even get up to speed that result in the most conservative noise estimates. However, if the trucks were to accelerate quickly enough to reach 12.4 miles per hour, they would be to the exit gate within 15 seconds, well below the allowed 30 seconds. Backup alarms for the five arriving trucks would be less than 30 seconds in duration each due to the short back up distance required to dock (approximately 100 feet).

Therefore, it is logical to assume that each of the noise sources listed in Table 18 would be short in duration and would occur sporadically throughout the day. ~~and/or night. RMC Section 7.25.010 indicates noise levels may exceed the base standard in incremental amounts over shortening amounts of time each hour as follows:~~

~~- Up to five decibels for a cumulative period of up to 30 minutes in any hour; or~~
~~- Plus five decibels for a cumulative period of up to 15 minutes in any hour; or~~
~~- Plus 10 decibels for a cumulative period of up to five minutes in any hour; or~~
~~- Plus 15 decibels for a cumulative period of up to one minute in any hour; or~~
~~- No more than 20 decibels for any period of time.~~

~~Despite the proposed building setbacks and a 6- to 21 foot retaining wall along the eastern project boundary, daytime~~

~~operational noise involving backup alarms and general acceleration of trucks on the south side of the building would still exceed base acceptable noise levels of 55 dBA at the adjacent Box Springs Reserve Park. However, the City noise ordinance allows noise of up to 10 dBA over the 55 dBA daytime residential standard for events lasting less than five cumulative minutes over one hour. It is presumed that backup alarms and acceleration of the trucks at the nearest points to the sensitive receptor would occur infrequently, would be cumulatively less than five minutes in duration in any given hour, and would therefore meet the standards of the City noise ordinance.~~ No noise reducing measures would be necessary during daytime operation. Regardless, in order to ensure reduced daytime operational noise at the nearby Reserve Park, mitigation measure NOI-1 would be implemented to reduce potential noise impacts to nearby sensitive receptors to **less than significant with mitigation incorporated**.

> **MM NOI-1: Volume Adjustable Backup Alarms.** To reduce noise associated with the use of backup alarms, either ambient-sensitive self-adjusting backup alarms or manually adjustable alarms shall be used on all equipment in use on the project site that requires a backup alarm. Ambient-sensitive self-adjusting backup alarms increase or decrease their volume based on background noise levels. The alarm self-adjusts to produce a tone that is readily noticeable over ambient noise levels (a minimum increment of 5 decibels is typically readily noticeable), but not so loud as to be a constant annoyance to neighbors. Close attention shall be given to the alarm's mounting location on the machine in order to minimize engine noise interference, which can be sense by the alarm as the ambient noise level. These alarms shall be mounted as far to the rear of the machine as possible. An alarm mounted directly behind a machine radiator will sense the cooling fan's noise and adjust accordingly.
>
> If manually-adjustable alarms are used, each alarm shall be set at the beginning of each day and night shift. The manual setting feature eliminates the machine mounting location problem of the ambient-sensitive self-adjustable backup alarms. Alternatively, backup movements can be supervised with a guide and flagging system.

Nighttime Operational Noise. Nighttime operational noise from all anticipated noise sources would exceed acceptable noise levels of 45 dBA. It is worth noting that, as shown in Table 1, the existing onsite noise level is approximately 49.4 dBA or less before 7 AM, which means that the ambient nighttime noise level already exceeds the City's threshold of 45 dBA. However, City regulations allowing for an exceedance of noise level thresholds for specified amounts of time, apply the 45 dBA threshold, despite ambient noise levels, and therefore, ambient noise itself exceeds the allowed "Up to five decibels for a cumulative period of up to 30 minutes in any hour" as discussed in Section 2.2.2 and on the page above. In theory, any nighttime operation along the southern portion of the proposed building would produce noise at plus 5 decibels above threshold (50 to 55 dBA), limiting operations along the south-facing loading docks to no more than 15 minutes per hour (the allowed "Plus 5 decibels for a cumulative period of up to 15 minutes in any hour").

The noise produced from back up alarms and truck acceleration at locations nearest to Box Springs Mountain would produce noise at more than 20 decibels above threshold (60+ dBA), which is prohibited for any duration. Accelerating truck noise falls below maximum allowed noise levels (60 dBA) at 125 feet from the source. Back up alarms fall below maximum allowed noise levels (60 dBA) at 270 feet from the source. In order to reduce nighttime noise impacts to below maximum allowed noise levels, nighttime operations along the south-facing loading docks would have to be significantly limited, with only one or two of the westernmost south-facing bays in operation. In addition, the noise produced cumulatively from the back up alarms and truck acceleration would be limited to no more than one minute per hour ("Plus 15 decibels for a cumulative period of up to one minute in any hour"). Construction of a barrier (i.e. solid wall) to mitigate noise impacts would be infeasible due to the clearance required for truck movement which, in turn, would place the barrier too far from the noise source to effectively capture the impact. Therefore, in order to avoid potential nighttime noise impacts to wildlife in the Box Springs Mountain Reserve Park, mitigation measure NOI-~~1~~ 2 would be implemented to reduce potential noise impacts to **less than significant with mitigation incorporated**.

> **MM NOI-~~1~~2: Restricted Loading Dock Use.** Prohibit the use of the south-facing loading docks between the hours of 10 PM and 7 AM.

Rooftop Mounted Equipment. Rooftop ventilation and heating systems would result in some onsite noise. Noise levels from commercial heating, ventilation and air conditioning (HVAC) equipment can reach 100 dBA at a distance of three feet without shielding (EPA 1971). However, HVAC equipment typically includes noise shielding cabinets placed on the roof or is located within mechanical equipment rooms. If HVAC equipment is placed in the interior of the building the noise would not be perceptible to nearby noise sensitive receptors.

The nearest portion of the proposed rooftop is approximately 100 feet west of Box Springs Mountain Reserve Park. Conservatively assuming the HVAC equipment is placed on this portion of the roof, noise from HVAC equipment would be approximately 56.5 dBA Leq at 100 feet from the source (EPA 1971). Therefore, unshielded HVAC equipment could exceed noise level standards at Box Springs Mountain Reserve Park for both daytime standards (55 dBA) and nighttime

standards (45 dBA). As designed however, it is assumed that rooftop HVAC equipment would be placed above the office portion of the building, nearly 600 feet west of Box Springs Mountain Reserve Park. Noise from this location would be 40.9 dBA, well below thresholds. Since the ultimate location of rooftop equipment is undetermined at this time, mitigation measure NOI-~~2~~ 3 would be implemented to reduce potential noise impacts to nearby sensitive receptors to **less than significant with mitigation incorporated**.

> **MM NOI-~~2~~3: Rooftop Mechanical Equipment Shielding.** A noise-attenuating barrier shall be installed around any new rooftop mechanical equipment to reduce operational noise at Box Springs Mountain Reserve Park to equal to or less than pre-project ambient noise of 49.4 dBA.

Trash and Delivery Trucks. Operation of the project would include delivery and trash hauling trucks going to and from the project site. The California Motor Vehicle Code establishes maximum sound levels for trucks operating at speeds less than 35 miles per hour (Section 23130) of 86 dBA Leq at 50 feet, equivalent to 92 dBA Leq at 25 feet. However, maximum noise levels generated by passage of medium duty delivery trucks generally range from 61 to 70 dBA Leq at a distance of 25 feet, depending on the speed at which the truck is driving (Olson 1972). The minimum distance between the assumed delivery and trash truck routes and delivery points (i.e. office entrances) and the adjacent sensitive receptor would be 75 feet. Therefore, noise from delivery and trash truck movement through the site would be a maximum of 65 dBA. The adjacent Box Springs Mountain Reserve Park restricts noise impacts to no more than 55 dBA during daytime hours when delivery and trash trucks would be in operation. The City noise ordinance allows noise of up 10 dBA over the 65 dBA commercial standard for events lasting less than five cumulative minutes over one hour. It is presumed that deliveries and trash hauling activities would occur infrequently, would be cumulatively less than five minutes in duration in any given hour, and would therefore meet the standards of the City noise ordinance. There would be **less than significant impacts** related to trash and delivery trucks

Off-Site Traffic Noise. A doubling of sound energy is equivalent to an increase of 3 dBA. In general, a 3 dBA change in the ambient noise level is noticeable, while 1-2 dBA changes generally are not perceived. Areas adjacent to arterial streets are typically in the 50-60+ dBA range. As indicated in Table 17 above, noise measurements from Locations 3, 4, and 6 were collected from off-site locations, along Iowa Avenue, Columbia Avenue, and Research Park Drive, respectively, in order to establish ambient noise levels from traffic.

In order to determine potential changes in noise levels based on project trip generation, the Traffic Impact Analysis prepared by Rick Engineering (Rick Engineering 2017b) was reviewed. The proposed project would generate approximately 1,468 total daily trips. This analysis assumes that a majority of project trips would access and leave the site via Marlborough Avenue (approximately 1,100 trips), with the remaining trips accessing and leaving the site via Research Park Drive (approximately 370 trips). The daily trip increase has been calculated for Columbia Avenue because nearly 70 percent of the project-generated trips ultimately utilize the route to access Interstate 215 and briefly pass through a residential neighborhood. Trips along Iowa Avenue were analyzed because the road passes by Hunter Park. In addition, traffic increases along Research Park Drive were analyzed since that route is adjacent to Box Springs Mountain Reserve Park.

Based on the Traffic Impact Analysis review of existing plus cumulative plus project conditions, there will be an estimated 24,300 trips on Iowa Avenue, ~~25,880~~28,059 on Columbia Avenue, and ~~2,355~~ 2,391 trips on Research Park Drive (Rick Engineering 2017b). Table 19 shows project trip generation in relation to future cumulative conditions.

Table 19 Project Trip Generation in Relation to Future Cumulative Conditions

Road Segment	Future Cumulative Conditions	Net Trips Generated by Project	Percent Change in Trips, Associated with the Project	Change in dBA
Columbia Avenue	~~25,880~~28,059	1,013	3.6~~4~~%	0.4
Iowa Avenue	24,300	749	3%	0.4
Research Park Drive	~~2,355~~2,391	367	~~20~~15%	0.~~8~~7

Source: Rick Engineering 2017b.

The traffic volume increase of ~~four~~ 3.6 percent along Columbia Avenue and the increase of ~~three~~ 3 percent along Iowa Avenue would increase the overall noise level on those streets by 0.4 dBA, and the increase of ~~20~~ 15 percent along Research Business Park would increase the overall noise level by 0.~~8~~ 7 dBA. These noise level increases resulting from the increase based on project traffic would be below a perceivable increase in noise levels. There would not be a noticeable increase in traffic noise along these routes and therefore, the impacts to sensitive receptors related to increased traffic noise levels would be **less than significant**.

d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☒	☐☒	☐

12d. Response (*Source: GP 2025 FPEIR Table 5.11-J Construction Equipment Noise Levels, GP 2025 FPEIR Appendix G Noise Existing Conditions Report, Noise Study [Rincon Consultants 2017e]*)

Less Than Significant with Mitigation Incorporated~~Impact~~. Construction of a warehouse would generate temporary noise that exceeds existing ambient noise levels in the project site vicinity, but would cease upon project completion. Noise impacts associated with construction activity are a function of the noise generated by construction equipment, the location and sensitivity of nearby land uses, and the timing and duration of the noise-generating activities. Table 20 shows typical peak noise levels associated with various types of heavy construction equipment expected during each construction phase along with their noise levels at 25 feet, representing the distance to adjacent industrial and open space uses. While noise levels would increase at adjacent business properties, industrial uses are not generally considered sensitive. Additionally, RMC Section 7.35.020.G exempts noise associated with construction. However, the increase in noise levels from construction would affect Box Springs Mountain Reserve Park.

Table 20 Typical Noise Levels Generated by Construction Equipment

Equipment	Type	Typical Lmax (dBA) 25 feet from the source
Air Compressor	Stationary	87
Backhoe	Mobile	86
Concrete Mixer	Stationary	91
Dozer	Mobile	88
Front End Loader	Mobile	85
Grader	Mobile	89
Paver	Mobile	95
Roller	Mobile	86
Saw	Stationary	76
Scraper	Mobile	95
Source: FHWA 2006		

As shown in the Table 21, operation of equipment during various phases of construction could generate Leqs of approximately 40-51 dBA and maximum (Lmax) noise levels of approximately 44-56 dBA at the closest residences located 2,500 feet south of project site. Noise levels generated by construction could generate Leqs of approximately 80-91 dBA and Lmax noise levels of approximately 84-96 dBA at the nearest sensitive receptor, Box Springs Mountain Reserve Park, located along the southern border of the site. These estimates do not take into account the adjacent ridgeline or intervening structures that would block noise from construction. Therefore, these estimates are conservative. Equipment noise levels are based on a standard noise attenuation rate of 6 dBA per doubling of distance from the highest-volume individual pieces of equipment.

Table 21 Construction Equipment Noise

Phase	Equipment	Estimated Noise at:			
		25 feet (dBA Lmax)	25 feet (dBA Leq)	2,500 feet (dBA Lmax)	2,500 feet (dBA Leq)
Site Preparation	Grader, Loader, Backhoe, Scraper	91	90	51	50
Grading	Saw, Dozer, Loader, Backhoe	96	91	56	51
Building Construction	Crane, Forklift, Loader, Backhoe	87	85	47	45
Architectural Coating	Air Compressor	84	80	44	40
Paving	Concrete and Mortar Mixers, Paver, Roller, Loader, Backhoe	87	88	47	48

Source: See Appendix B of the Noise Study for equipment noise impact data sheets and assumptions.

As noted above, the City of RMC Section 7.35.010 restricts construction to between the hours of 7:00 AM and 7:00 PM on weekdays and 8:00 AM and 5:00 PM on Saturdays, and prohibits construction on Sundays and federal holidays. Construction noise could exceed acceptable noise levels of 55 dBA during the day and 45 dBA at night at the adjacent Box Springs Mountain Reserve Park. However, noise sources associated with permitted construction, repair, remodeling, or grading activities that comply with the Municipal Code construction hour restrictions are exempt from these noise standards pursuant to RMC Section 7.35.020.G. Regardless, in order to reduce construction noise at the nearby Reserve Park, mitigation measures NOI-~~3~~ 4 and NOI-5 would be implemented to reduce potential noise impacts to nearby sensitive receptors to **less than significant with mitigation incorporated**.

MM NOI-~~3~~4: Construction Management Plan. Prior to the issuance of grading permits, the applicant shall submit a Construction Management Plan satisfactory to the City of Riverside. The Building Official, or appropriately assigned City staff member, shall be responsible for enforcing noise attenuating construction requirements. The Construction Management Plan shall include, but not be limited to, the following:

- *Excavation, grading, and other construction activities.* These activities shall be restricted to the hours allowed under RMC Section 7.35.010. Any deviations from these standards shall comply with the provisions in Title 7 (Noise Control).
- *Staging Area*. Provide staging areas on-site to minimize off-site transportation of heavy construction equipment. These areas shall be located to maximize the distance between activity and sensitive receptors. This should reduce noise levels associated with most types of idling construction equipment.
- *Avoid Operating Equipment Simultaneously*. Whenever possible, ensure that construction activities are scheduled so as to avoid operating several pieces of equipment simultaneously, which causes high noise levels.
- *Inspections*. The contractor shall inspect construction equipment to ensure that such equipment is in proper operating condition and fitted with standard factory silencing features. Construction equipment shall utilize all standard factory silencing features, such as equipment mufflers, enclosures, and barriers.

MM NOI-45: Construction Noise Reduction. The following measures shall be followed during construction of the proposed project and associated site improvements:

- *Newest Power Construction Equipment*. The newest available power construction equipment with standard recommended noise shielding and muffling devices shall be used.
- *Mufflers*. During project grading and construction, all equipment, fixed or mobile, shall be operated with closed engine doors and shall be equipped with properly operating and maintained mufflers consistent with manufacturers' standards. Use of manufacturer-certified mufflers associated with construction equipment has been shown to reduce noise levels by 8 to 10 dBA.

- *Smart Back-up Alarms*. Mobile construction equipment shall have smart back-up alarms that automatically adjust the sound level of the alarm in response to ambient noise levels. Alternatively, back-up alarms should be disabled and replaced with human spotters to ensure safety when mobile construction equipment is moving the reverse direction.
- *Idling*. All construction vehicles, such as bulldozers and haul trucks, shall be prohibited from idling in excess of 5 minutes, which is consistent with recommended strategies to reduce and/or eliminate diesel idling for warehouse distribution facilities according to the City's *Good Neighbor Guidelines* (2008).

With implementation of mitigation measures NOI-~~3~~ 4 and NOI-~~4~~5, temporary and periodic increase in noise level impacts on sensitive receptors due to construction activities which may result from the project would be **less than significant with mitigation incorporated**.

e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

12e. Response (*Source: GP 2025 Figure N-8 Riverside and Flabob Airport Noise Contours, Figure N-9 March ARB Noise Contour, Figure N-10 Noise/Land Use Noise Compatibility Criteria, Noise Study [Rincon Consultants 2017e]*)

No Impact. The project site is not located within two miles of a public airport. The nearest airport to the project site is Flabob Airport, located 4.5 miles west. March Air Reserve Base/Inland Port Airport is located approximately 7 miles southeast. The project site is within the March Air Reserve Base/Inland Port Airport Land Use Compatibility Plan Zone E. Noise impacts to Zone E properties are "Low" with occasional overflights being intrusive to some outdoor activities. The project was reviewed by the Airport Land Use Commission on July 13, 2017 and was found to be consistent with the Airport Land Use Compatibility Plan. . Therefore, the project would have **no impact** on aviation-related noise levels. No mitigation is required.

f. For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

12f. Response (*Source: GP 2025 Figure PS-6 Airport Safety Zones and Influence Areas*)

No Impact. Per the GP 2025 Program FPEIR, there are no private airstrips within the City that would expose people working or residing in the City to excessive noise levels. Because the project consists of development anticipated under the GP 2025, is not located in proximity of a private airstrip, and does not entail the construction and operation of a private airstrip on the project site, the project would not expose people residing or working in the City to excessive noise levels related to a private airstrip and would have **no impact**. No mitigation is required.

13. POPULATION AND HOUSING Would the project:				
a. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐

13a. Response (*Source: GP 2025 Table LU-3 Land Use Designations, FPEIR Table 5.12-A SCAG Population and Households Forecast, Table 5.12-B General Plan Population and Employment Projections 2025, Table 5.12-C 2025 General Plan and SCAG Comparisons, Table 5.12-D General Plan Housing Projections 2025, Capital Improvement Program and SCAG's Regional Comprehensive Plan and RTP*)

Less Than Significant Impact. The current population of Riverside is 326,792 (DOF 2017), but is forecast to increase to 386,600 by 2040 (SCAG 2016). The project consists of constructing a warehouse building in an existing light industrial area. According to an employee density study prepared for SCAG in 2001, warehouse uses in Riverside County employ, on average, 16.32 employees per net-acre. Thus, the project would be expected to employ approximately 273 persons (16.32 employees/acre x 16.7 net acres). According to SCAG, an additional 80,500 employees are anticipated to work in Riverside

by 2040 compared to 2012. The 273 employees working at the proposed building would account for 0.3 percent of SCAG's employment growth forecast for Riverside, and be within the range of employment growth anticipated under the GP 2025. The project is anticipated to draw upon employees from Riverside and regional Riverside area. Therefore, the project would not result in substantial population growth in the project area that would require new housing, roads, or other infrastructure. Therefore, the project would have **a less than significant impact**. No mitigation is required.

b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

13b, c. Response (*Source: GP 2025 Table LU-3 Land Use Designations, FPEIR Table 5.12-A SCAG Population and Households Forecast*)

No Impact. The project site is currently vacant, and there are no existing housing units or people occupying the site. Implementation of the project would not displace any existing housing or require the construction of replacement housing, nor would it displace a substantial number of people that would trigger the need for replacement housing. The project is anticipated to draw upon employees from Riverside and regional Riverside area. Therefore, the project would not provide new jobs that would result in substantial population growth in the project area. The GP 2025 housing projections through 2025 would be sufficient in meeting the nominal potential increase in housing demand as a result of the project. Therefore, the project would have **no impact** on existing housing. No mitigation is required.

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

14a. Response (Source: *FPEIR Table 5.13-B Fire Station Locations, Table 5.13-C RFD Statistics and Ordinance 5948 § 1*)

Less Than Significant Impact. The Riverside Fire Department (RFD) provides fire protection services to the City and the project site. The closest fire station, Station 6 Northside, is located at 1077 Orange Street, located approximately 2.1 miles west of the project site. The average on-site response time is five minutes and 30 seconds, according to the GP 2025 FPEIR. The RFD's goal is to maintain a five-minute response time for the first arriving units 90 percent of the time for all emergency medical services and fire-related incidents.

The project site is located in an urbanized area and consists of construction and operation of warehouse light industrial building totaling 339,510 square feet of warehouse and 6,820 square feet of associated office space. The proposed building would be constructed pursuant to the 2013 California Fire Code as adopted and amended by the City of Riverside. The building would include installation of an automatic fire sprinkler system in accordance with City ordinance 16.32.080 (*Fire Prevention*), and would be subject to inspection and approval by the City Fire Department prior to occupancy. Since the project entails office and warehouse uses and no residential uses, the project site would not be continuously occupied by the maximum number of possible individuals. The project also includes improvements to a hiking and fire access trail that runs along the eastern and southern boundary of the project site. As the trail is needed for fire protection, the trail will provide a 12-foot clearance for fire service vehicles and will be designed to keep the maximum slope no greater than 15 percent. Therefore, the project would cause an incremental increase in the need for fire protection services in an area already served by the RFD, though it would not create the need for new or altered fire services. Therefore, the project has **a less than significant impact** on the demand for fire department facilities and services. No mitigation is required.

b. Police protection?	☐	☐	☒	☐

14b. Response (*Source: GP 2025 Figure PS-8 Neighborhood Policing Centers*)

Less than Significant Impact. The Riverside Police Department (RPD) provides police protection services to the City and

the project site. The two nearest RPD stations are located at 4102 Orange Street and 3775 Fairmount Boulevard, 3.7 miles southwest of the project site. The average response time for priority calls is within seven minutes, and within 12 minutes for second priority calls, according to the GP 2025 FPEIR.

The project site is located in an urbanized area, in an area currently served by the RPD. The proposed land use is expected to employ approximately 273 employees and would operate 24 hours a day, 7 days a week, with the exception of some holidays. Since the project does not contain any residential uses, the project site would not be continuously occupied by the maximum number of possible individuals. The project would cause an incremental increase in the need for police protection services in an area already served by the RPD. However, it would not create the need for new or altered police services. Therefore, the project would have **a less than significant impact** on the demand for police department facilities and services. No mitigation is required.

c. Schools?	☐	☐	☐	☒

14c. Response (*Source: GP 2025 FPEIR Figure 5.13-2 RUSD Boundaries, Table 5.13-D RUSD, Figure 5.13-3 AUSD Boundaries, Table 5.13-E AUSD, Table 5.13-G Student Generation for RUSD and AUSD By Education Level, and Figure 5.13-4 Other School District Boundaries*)

No Impact. The project site is located in boundaries of the Riverside Unified School District (RUSD). Highland Elementary School, 700 Highlander Drive and University Heights Middle School (1155 Massachusetts Avenue), both located approximately 0.8 mile south. The proposed project does not include residential development and would not increase the population of school age children in the area. Therefore, the project would have **no impact** on the demand for additional school facilities or services. No mitigation is required.

d. Parks?	☐	☐	☐	☒

14d. Response (*Source: GP 2025 Figure PR-1 Parks, Open Spaces and Trails, Table PR-4 Park and Recreation Facilities, Parks Master Plan 2003, GP 2025 FPEIR Table 5.14-A Park and Recreation Facility Types, and Table 5.14-C Park and Recreation Facilities Funded in the Riverside Renaissance Initiative*)

No Impact. Parks and recreation facilities are addressed in Section 15 (Recreation) of this IS. The proposed project does not include residential development that would permanently increase the population. Therefore, project would have **no impact** on the demand for additional park facilities or services. No mitigation is required.

e. Other public facilities?	☐	☐	☐	☒

14e. Response (*Source: GP 2025 Figure LU-8 Community Facilities, FPEIR Figure 5.13-5 Library Facilities, Figure 5.13-6 Community Centers, Table 5.3-F Riverside Community Centers, Table 5.13-H Riverside Public Library Service Standards*)

No Impact. The Highgrove Library, managed under the Riverside County Library System, is located at 530 Center Street, two miles north of the project site. The Ruth Lewis Community Center is located 2.6 miles west of the project site. The proposed project does not include residential development that would permanently increase the population and would not substantially increase the demand for other public services in the City. Therefore, the project would have **no impact** on other public facilities. No mitigation is required.

15. RECREATION				
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒

15a. Response (*Source: GP 2025 Figure PR-1 Parks, Open Spaces and Trails, Table PR-4 Park and Recreation Facilities, Figure CCM-6 Master Plan of Trails and Bikeways, Parks Master Plan 2003, GP 2025 FPEIR Table 5.14-A Park and Recreation Facility Types, and Table 5.14-C Park and Recreation Facilities Funded in the Riverside Renaissance Initiative, Table 5.14-D Inventory of Existing Community Centers, RMC Chapter 16.60 Local Park Development Fees, Bicycle Master Plan May 2007, Hunter Business Park Specific Plan*)

No Impact. The northwestern portion of Box Springs Mountain Reserve Park, managed by Riverside County Parks, borders

the southern portion of the project site. Hunter Park, managed by the City's Parks, Recreation and Community Services Department, is located 0.7 mile west of the project site. The proposed warehouse project does not include residential development that would permanently increase the population. The City's adopted standard for developed park acreage of 3 acres per 1,000 residents would not be adversely affected with implementation of the proposed building. In accordance with RMC Sections 16.60 and 16.44, a Local Park Development Fee and a Regional Park and Reserve Park Development Fee is imposed on the construction or placement of all nonresidential units.

Site plans indicate the preservation and enhancement of an existing trail connection that starts along Gage Canal at the southwest corner of the project site and runs along the southern and eastern boundary of the site, which is part of the Sugarloaf Trails of the Box Springs Mountain Reserve. The trail would remain publicly accessible for bicycling and hiking. The trail will provide a 12-foot clearance for fire service vehicles and will be designed to keep the maximum slope no greater than 15 percent. Warehouse employees may also access the trail during midday breaks. Therefore, the project would have **no impact** on existing neighborhood and regional parks. No mitigation is required.

b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

15b. Response (*Source: Project Description*)

No Impact. The project does not include new recreational facilities or require the construction or expansion of recreational facilities. Site plans indicate the preservation and enhancement of an existing trail connection that starts along Gage Canal at the southwest corner of the project site and runs along the southern and eastern boundary of the site, which is part of the Sugarloaf Trails of the Box Springs Mountain Reserve. The trail would remain publicly accessible for bicycling and hiking. The proposed building would be used for office and warehouse operations with no residential dwellings that would permanently increase the population. Therefore, the construction or expansion of recreational facilities in the absence of a population increase is not necessary and the project would have **no impact**. No mitigation is required.

16. TRANSPORTATION/TRAFFIC Would the project result in:				
a. Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☒	☐	☐
b. Conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☒	☐	☐

16a and 16b. Response (*Source: GP 2025 Figure CCM-4 Master Plan of Roadways, FPEIR Figure 5.15-4 Volume to Capacity (V/C) Ratio and Level of Service (LOS) (Typical 2025), Table 5.15-D Existing and Future Trip Generation Estimates, Table 5.15-H Existing and Typical Density Scenario Intersection Levels of Service, Table 5.15-I Conceptual General Plan Intersection Improvement Recommendations, Table 5.15-J Current Status of Roadways Projected to Operate at LOS E or F in 2025, Table 5.15.-K Freeway Analysis Proposed General Plan, Appendix H Circulation Element Traffic Study and Traffic Study Appendix, SCAG's RTP, and Traffic Impact Analysis [Rick Engineering 2017b]*)

Less Than Significant Impact with Mitigation Incorporated. Rick Engineering prepared a traffic impact analysis (TIA) for the project to assess project traffic impacts. In coordination with the City of Riverside Traffic Engineering staff, Rick Engineering used the "manufacturing" ITE category (Land Use Code [LUC] 140) rather than the "high cube warehouse" ITE category (LUC 152) in the project traffic analysis. Although the project is described as a warehouse project, the land is zoned to allow for manufacturing uses. In addition, the traffic volumes calculated for the Warehouse land use and the volumes calculated for the Manufacturing land use show that although the Warehouse classification does give a higher Average Daily Traffic count, the Manufacturing land use has higher peak hour volumes. For the purpose of this analysis, the Manufacturing category was used as peak hour volumes have a more significant impact on intersection operations. This is

consistent with the City's approach for this type of facility.

The traffic analysis evaluated potential project-related traffic impacts at 14 key intersections in the vicinity of the project site:

Signalized Intersections:

- Columbia Avenue/Primer Street
- Columbia Avenue/ E. La Cadena Drive
- Columbia Avenue/Chicago Avenue
- Columbia Avenue/Iowa Avenue
- Marlborough Avenue/Iowa Avenue

Unsignalized Intersections:

- Interchange Street/W. La Cadena Drive/I-215 SB Ramps
- I-215 NB Ramps/E. La Cadena Drive
- Columbia Avenue/Northgate Street
- Columbia Avenue/ Research Park Drive
- Palmyrita Avenue/Michigan Avenue
- Marlborough Avenue/ Chicago Avenue
- Marlborough Avenue/Atlanta Avenue
- Marlborough Avenue/Rustin Avenue
- Marlborough Avenue/Northgate Street

A Level of Service (LOS) A through D is considered acceptable for roadway segments, according to the City's Roadway Capacity Exhibit D in the City of Riverside's *Traffic Impact Analysis Preparation Guide* (2016c). The TIA determined that all project area intersections currently operate at LOS D or better during the AM and PM peak hours, with the exception of the following:

- Interchange Street/W. La Cadena Drive/I-215 SB Ramps – LOS E during PM Peak Hour
- I-215 NB Ramps/E. La Cadena Drive – LOS F during AM and PM Peak Hour

Existing Plus Ambient Plus Project Traffic Volumes. Trip generation for the project was estimated using trip generation rates for Manufacturing Facilities (~~item~~ LUC 140) and General Office (~~item~~ LUC 710) provided in the Institute of Transportation Engineers *Trip Generation Manual*. The project would generate an estimated total of 1,468 new daily trips with 274 trips during the AM peak hour and 335 trips during the PM peak hour. Because the project would operate 24 hours a day, ~~five~~ seven days a week, it is anticipated that many project-generated trips would occur outside of peak traffic periods. The City requires mitigation if project traffic would deteriorate roadway LOS to below target LOS E.

To estimate the opening year (2018) ambient/background traffic volumes, the existing traffic volumes were increased by two percent from 2017 measurements. This growth rate was provided by the City of Riverside, consistent with anticipated buildout under the GP 2025. The 2018 expected traffic volumes are therefore used as a baseline from which to compare project traffic impacts. The TIA determined that the addition of project-related trips to existing + ambient traffic levels would have no new impact on study intersections. Table 22 details Existing + Ambient + Project traffic volumes and impacts.

Table 22 Existing + Ambient + Project Traffic Volumes

Intersection	Delay	LOS	Significant Impact	With Mitigation[1] Delay/LOS
Columbia Avenue/Primer Street				
AM Peak	~~18.5~~19.1	B	--	
PM Peak	~~21.6~~19.8	~~C~~B		
Interchange Street/W. La Cadena Drive/I-215 SB				
AM Peak	~~23.2~~25.2	C		
PM Peak	**~~67.5~~76.5**	**F**	**YES**	**~~46.0~~54.3/D**
I-215 NB Ramps/E. La Cadena Drive				
AM Peak	**~~153.4~~188.4**	**F**	**YES**	**~~7.4~~7.7/A**
PM Peak	**~~743.2~~00.0+**	**F**	**YES**	**~~7.3~~8.2/A**
Columbia Avenue/ E. La Cadena Drive				
AM Peak	~~33.1~~35.8	~~C~~D	--	

PM Peak	~~29.8~~34.0	C		
Columbia Avenue/Chicago Avenue				
AM Peak	~~28.1~~28.9	C	--	
PM Peak	~~29.9~~30.5	C		
Columbia Avenue/Iowa Avenue				
AM Peak	~~41.8~~48.7	D	--	
PM Peak	~~45.5~~52.6	D		
Columbia Avenue/Northgate Street				
AM Peak	~~13.9~~14.2	B	--	
PM Peak	~~13.6~~13.9	B		
Columbia Avenue/ Research Park drive				
AM Peak	~~11.1~~11.5	B	--	
PM Peak	~~19.9~~21.5	C		
Palmyrita Avenue/Michigan Avenue				
AM Peak	~~10.5~~10.7	B	--	
PM Peak	~~17.1~~17.8	C		
Marlborough Avenue/ Chicago Avenue				
AM Peak	~~26.1~~28.6	D	--	
PM Peak	~~31.6~~27.9	D		
Marlborough Avenue/Atlanta Avenue				
AM Peak	~~10.4~~10.5	B	--	
PM Peak	~~10.9~~11.0	B		
Marlborough Avenue/Iowa Avenue				
AM Peak	~~27.9~~34.5	C	--	
PM Peak	~~37.1~~42.0	D		
Marlborough Avenue/Rustin Avenue				
AM Peak	~~20.1~~21.2	C	--	
PM Peak	~~25.0~~25.9	C		
Marlborough Avenue/Northgate Street				
AM Peak	~~11.4~~11.6	B	--	
PM Peak	~~12.2~~12.4	B		

Source: Adapted from Rick Engineering Company 2017b.
Notes: Delay is measured in seconds; LOS = Level of Service
[1]Mitigation for Intersections 3 and 4 are analyzed to assume signalization of the intersection with protected left turns where applicable

Cumulative Traffic Volumes. The City of Riverside Planning Division staff provided Rick Engineering with a list of cumulative projects to be included in the traffic analysis. Information on four projects within a 1.5 mile radius of the project, for which permits had been issued, was provided. The following projects were considered for the cumulative analysis:

- 925-975 Marlborough Avenue – 62,000sf of warehouse/industrial land use
- Northeast corner of Stacy Court and Paige Drive – 3,008sf vehicle repair facility
- 1080 Marlborough Avenue – 5 warehouse buildings ranging in size from 10,000sf – 13,850sf
- • Columbia Business Park – 3 Project Buildings A, B, and C

Trip generation was performed for each of the projects. The cumulative trips were distributed to the project area intersections and roadways based on anticipated trip distribution patterns. Trip generation and traffic assignment figures can be found in Appendix F of the TIA. The cumulative traffic volumes were then added to the existing + ambient + project traffic volumes. ~~The TIA presented a list of cumulative projects within 1.5 miles of the project in order to determine cumulative impacts from anticipated existing + ambient (year when the project is to be operational) + cumulative + project traffic volumes.~~ Table 23 detailed the anticipated traffic volumes.

Table ~~22~~ 23 Existing + Ambient + Cumulative + Project Traffic Volumes

Intersection	Delay	LOS	Significant Impact	With Mitigation[1] Delay/LOS
Columbia Avenue/Primer Street				
AM Peak	~~19.2~~20.6	B	--	
PM Peak	~~21.8~~20.4	~~C~~B		
Interchange Street/W. La Cadena Drive/I-215 SB				
AM Peak	~~26.7~~35.2	~~D~~**E**	**YES**	**54.9/D**
PM Peak	~~74.5~~101.0	**F**	**YES**	**~~48.5~~54.6/D**

I-215 NB Ramps/E. La Cadena Drive					
	AM Peak	~~170.8~~230.0+	**F**	**YES**	**~~7.4~~7.8/A**
	PM Peak	~~895.0~~200.0+	**F**	**YES**	**~~7.5~~10.0/A**
Columbia Avenue/ E. La Cadena Drive					
	AM Peak	~~34.3~~43.3	~~C~~D	--	
	PM Peak	~~31.4~~39.5	~~C~~D		
Columbia Avenue/Chicago Avenue					
	AM Peak	~~28.6~~30.7	C	--	
	PM Peak	~~30.3~~31.3	C		
Columbia Avenue/Iowa Avenue					
	AM Peak	~~50.7~~54.8	D	--	
	PM Peak	~~49.1~~54.6	D		
Columbia Avenue/Northgate Street					
	AM Peak	~~14.4~~18.3	~~B~~C	--	
	PM Peak	~~14.0~~17.7	~~B~~C		
Columbia Avenue/ Research Park drive					
	AM Peak	~~11.1~~13.0	B	--	
	PM Peak	~~20.0~~30.8	~~C~~D		
Palmyrita Avenue/Michigan Avenue					
	AM Peak	~~10.6~~11.3	B	--	
	PM Peak	~~17.2~~26.9	~~C~~D		
Marlborough Avenue/ Chicago Avenue					
	AM Peak	~~26.2~~28.7	D	--	
	PM Peak	~~25.5~~28.8	D		
Marlborough Avenue/Atlanta Avenue					
	AM Peak	~~10.5~~10.6	B	--	
	PM Peak	~~11.0~~11.1	B		
Marlborough Avenue/Iowa Avenue					
	AM Peak	~~35.2~~49.6	D	--	
	PM Peak	~~42.4~~50.8	D		
Marlborough Avenue/Rustin Avenue					
	AM Peak	~~26.3~~28.2	D	--	
	PM Peak	~~28.1~~29.1	D		
Marlborough Avenue/Northgate Street					
	AM Peak	~~11.7~~11.9	B	--	
	PM Peak	~~12.3~~12.5	B		

Source: Adapted from Rick Engineering Company 2017b.

Notes: Delay is measured in seconds; LOS = Level of Service

[1]Mitigation for Intersections 3 and 4 are analyzed to assume signalization of the intersection with protected left turns where applicable

As shown, the intersections of Interchange Street/W La Cadena Drive/I-215 SB Ramps and 215 NB Ramps/E. La Cadena Drive are currently operating below acceptable levels of service and are anticipated to remain at unacceptable levels with the addition of project traffic. Interchange Street/W La Cadena Drive/I-215 SB Ramps is expected to operate an LOS F with the addition of project traffic. The addition of project traffic to the intersection increases the intersection delay by more than 15 seconds in the PM peak hour. 215 NB Ramps/E. La Cadena Drive is expected to operate an LOS F with the addition of project traffic. The addition of project traffic to the intersection increases the intersection delay by more than 30 seconds in the AM and PM peak hours. For the intersections to operate at an LOS D or better under project operation, the intersections would need to be signalized. There are currently no plans by the City of Riverside to improve this intersection. Therefore the following mitigation measures will be required:

> **MM T-1: Fair Share Contributions - Interchange Street/W La Cadena Drive/I-215 SB Ramps.** For the intersection at Interchange Street/W La Cadena Drive/I-215 SB Ramps to operate at an LOS D or better under project operation, the intersection would need to be signalized. With the current lane configuration at this intersection, the signal would have to provide split phases for all directions. Prior to the issuance of occupancy permits, the project proponent shall make a fair-share contribution towards the improvement of

the intersection of Interchange Street/W La Cadena Drive/I-215 SB Ramps ~~and 215 NB Ramps/E. La Cadena Drive~~, calculated to be ~~7~~ 6 percent.

MM T-2: Fair Share Contributions - I-215 NB Ramps/E La Cadena Drive. For the intersection at I-215 NB Ramps/E La Cadena Drive to operate at an LOS D or better under project operation, the intersection would need to be signalized. With the current lane configuration at this intersection, the signal would have to provide permissive phases for the northbound and southbound movements and a split phase for the eastbound traffic off the freeway. Prior to the issuance of occupancy permits, the project proponent shall make a fair-share contribution towards the improvement of the intersection of 215 NB Ramps/E. La Cadena Drive, calculated to be 6.5 percent.

With the implementation of mitigation measures T-1 and T-2 and associated improvements, the intersections would operate acceptably per the City of Riverside's Guidelines and the project would have a **less than significant impact with mitigation incorporated**.

c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒

16c. Response (*Source: GP 2025 Figure PS-6 Airport Safety Zones and Influence Areas, RCALUCP*)

No Impact. The project site is not located within two miles of a public airport. The nearest airport to the project site is Flabob Airport, located 4.5 miles west. March Air Reserve Base/Inland Port Airport is located approximately 7 miles southeast. The project site is within the March Air Reserve Base/Inland Port Airport Land Use Compatibility Plan Zone E. Risk levels to Zone E properties are "Low" as the land falls within outer or occasionally used portions of the flight corridors. The project was reviewed by the Airport Land Use Commission on July 13, 2017 and was found to be consistent with the Airport Land Use Compatibility Plan. This project would have no effects on demand for local air service or volumes of air traffic. Therefore, the project would not alter air traffic patterns, and would have **no impact**. No mitigation is required.

d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☒	☐	☐

16d. Response: (*Source: Project Site Plans, TIA [Rick Engineering 2017b]*)

Less Than Significant Impact with Mitigation Incorporated. The proposed building would be accessible through driveways via Marlborough Avenue and Research Park Drive. The project building would comply with California Building Code standards and would not include any design features that would increase circulation hazards. Operation of an office and warehouse facility would not result in roadway uses that would be incompatible with the existing land uses surrounding the area. The project would not result in any changes to the lane or street configuration of Research Park Drive. The project would extend the eastern terminus of Marlborough Avenue to include a cul-de-sac and two driveways to the project site. These changes would not affect the overall configuration or accessibility of Marlborough Avenue, however, the extension of Marlborough Avenue across the Gage Canal would result in a break in the use of the Canal as a bikeway and pedestrian path. This design change will require people using the Canal path to stop at the roadway and walk around the cul-de-sac using the proposed sidewalk improvements. The placement of the egress/ingress driveways along the eastern curve of the cul-de-sac could create result in a potential hazard to pedestrians and bicyclist using this route due to truck leaving the project site. In addition, the public may be tempted to simply cross at the roadway to connect to the other end of the pathway, which would result in the crossing of the public street where no crosswalk would be present. Therefore, the following mitigation measures shall be required:

MM T-~~2~~3: Route Signage. Prior to occupancy, the applicant shall install signage on each side of the cul-de-sac where the Gage Canal meets the road extension in order to notify the pedestrians and bicyclists of the break in the Gage Canal pathway. The signage shall direct the public to utilize the sidewalk to reconnect to the remainder of the pathway.

MM T-~~3~~4: Stop Signs Install at Egress Points along Marlborough. Prior to occupancy, the applicant shall install additional stop signs to be placed at the egress points of the Marlborough Avenue driveways from the project located outside of public right-of-way.

The implementation of mitigation measures T-~~2~~ 3 and T-~~3~~ 4 will help ensure the safety of pedestrians and cyclists using the Gage Canal pathway. This direction signage would encourage people to use the sidewalk improvements rather than cross the street where there would be no crosswalk. The stop signs would require trucks to navigate the steep driveway slower in order to come to a complete stop, which will help drivers be aware of pedestrian and bicycle traffic on Marlborough Avenue.

Therefore, the project would have a **less than significant impact with mitigation incorporated.**

e. Result in inadequate emergency access?	☐	☐	☒	☐

16e. Response (*Source: Caltrans Highway Design Manual, RMC, and 2016 California Fire Code*)

Less Than Significant Impact. The proposed building would be accessible via a 119-foot driveway on Marlborough Avenue and a 70-foot driveway on Research Park Drive. Project site plans indicate a 40-foot wide driveway on site, along the perimeter of the building and through the parking areas, which exceeds the City's 12-foot minimum for fire apparatus access roads according to RMC Section 16.32.290. RMC Section 18.210.030(F) states that the minimum turn area radius for fire access is 36 feet, provided at the end of cul-de-sacs and dead-end streets. ROW improvements would be made to the eastern terminus of Marlborough include the primary driveway access to the project site, which would be 119 feet wide. Internal roadways within the project site vary from 40 feet in width along the west and north sides of the building, 35 feet along the east side of the building with single-rows of parking on both sides of the roadway, and 62 feet along the south side of the building. Therefore, project site plans indicate adequate turn area radii and roadway access for fire apparatus. The project would have a **less than significant impact** on emergency access. No mitigation is required.

f. Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities)?	☐	☐	☒	☐

16f. Response (*Source: GP 2025 FPEIR, GP 2025 Land Use and Urban Design Element, Circulation and Community Mobility and Education Elements, City of Riverside Bicycle Master Plan*)

Less Than Significant Impact. The project site and surrounding area are served by pedestrian and bicycle facilities. There are Riverside Transit Agency public transit stops along Iowa Avenue, approximately 3,000 feet west of the project site. Class II bicycle lanes and sidewalks exist on both sides of Marlborough Avenue, though the sidewalk on the south side of the street ends at Northgate Street. The project would not result in any changes to the lane or street configuration of Research Park Drive. The project would extend the eastern terminus of Marlborough Avenue to include a cul-de-sac and driveway to the project site. These changes would not affect the overall configuration or accessibility of Marlborough Avenue, nor impact the performance or safety of alternative transportation modes. Therefore, the project would have a **less than significant impact** on adopted policies, plans, or programs supporting alternative transportation. No mitigation is required.

17. TRIBAL CULTURAL RESOURCES Would the project:				
a. Cause a substantial adverse change in the significance of a tribal cultural resource, defined in a Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?	☐	☒	☐	☐

17.a.i. Response (*Source: GP 2025 and GP 2025 FPEIR Figure 5.5-1 Archaeological Sensitivity and Figure 5.5.-2 Prehistoric Cultural Resources Sensitivity, Cultural Resources Survey [Rincon Consultants 2017a]*)

Less Than Significant with Mitigation Incorporated. The project site is located in a developed area, adjacent to office and light industrial uses. The project site was previously disturbed, and no documented cultural or tribal resources within the project site were identified in the archival records search and pedestrian survey of the project site conducted as part of Rincon Consultants' site assessment. Chapter 532, Statutes of 2014 (i.e., Assembly Bill [AB] 52), requires Lead Agencies evaluate a project's potential to impact "tribal cultural resources." Such resources include "[s]ites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe that are eligible for inclusion in the California Register of Historical Resources or included in a local register of historical resources." AB 52 also gives Lead Agencies the discretion to determine, supported by substantial evidence, whether a resource qualifies as a "tribal cultural resource." Per AB 52, Native American consultation is required upon request by a California Native American tribe that has previously requested that the City provide it with notice of such projects.

The City commenced tribal notification in accordance with AB 52 on July 11, 2017. The 30-day notification response

window closed on August 10, 2017. The Pechanga Tribe of Luiseño Indians and the San Manuel Band of Mission Indians each commented on the proposed project and the Cultural Resources study prepared for the project, but did not initially indicate the presence of tribal cultural resources within or adjacent to the project site. However, during the site visit conducted as part of the tribal consultation process, a potential tribal artifact was identified near the southeast portion of the project site, by the existing trail. Therefore, mitigation measures CR-1 through CR-6 shall be implemented during ground-disturbing activities associated with construction and trail improvements at 750 Marlborough Avenue to ensure potential impacts to archaeological and tribal resources are **less than significant with mitigation incorporated**.

ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Cod Section 2024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significant of the resource to a California Native American tribe.	☐	☒	☐	☐

17.a.ii. Response (*Source: Cultural Resources Survey [Rincon Consultants 2017a]*)

Less Than Significant with Mitigation Incorporated. CEQA defines a "historical resource" as a resource that meets one or more of the following criteria: (1) is listed in or determined eligible for listing in, the California Register of Historical Resources (CRHR); (2) is listed in a local register of historical resources as defined in PRC Section 5020.1(k); (3) is identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g); or (4) is determined to be a historical resource by a project's Lead Agency (PRC Section 21084.1 and *State CEQA Guidelines* Section 15064.5[a]).

Rincon Consultants prepared a Cultural Resource Survey for the project, which included an archival records search and pedestrian survey of the project site. There were no previously recorded cultural resources within the project site, based on the archival records search. A pedestrian survey of the project area resulted in the identification of previously unrecorded remnants of a historical-period irrigation system. The system is no longer in use and has been damaged and vandalized, and it was determined that the irrigation system cannot be demonstrated to be associated with events or persons significant in our past. The system does not embody the distinctive characteristics of a type, period, or method of installation nor would it yield information important to history. The irrigation system has been recorded on Department of Parks and Recreation Series 523 forms, and has been recommended ineligible for listing in the CRHR.

No documented tribal resources within the project site were identified in the archival records search and pedestrian survey of the project site conducted as part of Rincon Consultants' site assessment. However, during the site visit conducted as part of the tribal consultation process, a potential tribal artifact was identified near the southeast portion of the project site, by the existing trail. Therefore, mitigation measures CR-1 through CR-6 shall be implemented during ground-disturbing activities associated with construction and trail improvements at 750 Marlborough Avenue to ensure potential impacts to archaeological and tribal resources are **less than significant with mitigation incorporated**.

18. UTILITIES AND SYSTEM SERVICES Would the project:				
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☒	☐
b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
e. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐

18a, b, e. Response (*Source: GP 2025 Figure PF-2 Sewer Facilities Map, GP 2025 FPEIR Figure 5.16-5 Sewer Service Areas, City of Riverside Public Utilities Department 2015 Urban Water Management Plan*)

Less Than Significant Impact. According to FPEIR Figure 5.16-5, the City of Riverside Public Works (PW) Department

provides sewer service to the project site. The City of Riverside PW Department collects, treats, and disposes wastewater at the project site through the Riverside Regional Water Quality Control Plant (RRWQCP), and complies with state and federal requirements governing the treatment and discharge of wastewater. The wastewater collection system has over 776 miles of gravity sewers that range in size from six to 54 inches in diameter and includes 18 wastewater pump stations. In 2015, RRWQCP's plant capacity was expanded to 46 million gallons per day (mgd) (Riverside, City of 2016b). The RRWQCP serves approximately 295,000 people, who generate approximately 18 mgd.

Wastewater flows associated with the proposed office and warehouse building would consist of substances typically generated by office use, as no industrial production activities would occur on site. The project is anticipated to employ 273 people, who would generate approximately 0.017 mgd of wastewater per day, or less than one percent of total daily wastewater generation for the City of Riverside PW Department's service area[2]. Since the RRWQCP is currently at only 40 percent capacity, the project would not require the construction of new or expanded wastewater facilities. Furthermore, sewer connection fees would be determined per RMC Section 14.08.080. Therefore, the project would have a **less than significant impact** related to wastewater treatment. No mitigation is required.

c. Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐

18c. Response (*Source: GP 2025 FPEIR Figure 5.16-2 Drainage Facilities*)

Less Than Significant Impact. Implementation of the project would increase the amount of impervious surface areas at the project site. Project site plans include a proposed catch basin inlet at the improved cul-de-sac at Marlborough Avenue. The catch basin would connect to the existing 36 inch storm drain on Marlborough Avenue to maintain the overall drainage pattern. A series of bioretention facilities are proposed to capture sheet flow around the paved parking areas on site, before conveying water to the existing storm drain on Marlborough Avenue. RMC Section 18.240.020 requires drainage fees to be paid to the City for new construction, which are then transferred into a drainage facilities fund maintained by the Riverside County Flood Control and Water Conservation District and compliant with California Government Code Section 66483.

Furthermore, GP 2025 Policies PF 4.1 and PF 4.3 require the City to continue to routinely monitor its storm drain system and to fund and improve those systems as identified in the City's Capital Improvement plan. Implementation of these policies would ensure that the City is adequately served by drainage systems. Therefore, the project would have a **less than significant impact** on existing storm water drainage facilities that would not require the expansion of existing facilities. No mitigation is required.

d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☒	☐

18d. Response (*Source: GP 2025 FPEIR Figure 5.16-3 Water Service Areas, Figure 5.16-4 Water Facilities, City of Riverside Public Utilities Department 2015 Urban Water Management Plan*)

Less Than Significant Impact. The project site is served by Riverside Public Utilities (RPU), which supplied 74,928 acre feet (24,415 million gallons) of water to 295,000 people within its service area in 2015. According to CalEEMod analysis, the project would use approximately 80 million gallons of water per year. The RPU Department's 2015 Urban Water Management Plan plans on supplying 124,703 acre feet (40,634 million gallons) of water by 2040 to meet increasing demand under anticipated buildout from GP 2025. Annual estimated project water use would account for three percent of total water supplied by RPU in 2015, and 0.2 percent of total water projected to be supplied in 2040. Therefore, RPU has adequate water supply to serve the project from existing entitlements, and the project would have a **less than significant impact**. No mitigation is required.

f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐
g. Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☒	☐

[2] Project wastewater generation as a percentage of total daily wastewater generation: (18 mgd / 295,000 people) * 273 employees = 16,543 gallons/day; (16,543 gallons/day) / 18 mgd = 0.000925 ≈ 0.093 %

18f, g. Response (*Source: GP 2025 FPEIR Table 5.16-A Existing Landfills and Table 5.16-M Estimated Future Solid Waste Generation from the Planning Area*)

Less Than Significant Impact. The City of Riverside PW Department collects trash from 70 percent of Riverside households and the remainder is collected by private contractors. According to Public Resources Code Section 41780, the City must divert at least 50 percent of the waste generated from landfills. GP Policy PF-5.1 states waste should be diverted from landfills and that the City should achieve 100 percent recycling citywide for both residential and non-residential development. In 2015, the per employee disposal rate was 14.3 pounds per day, below the target of no more than 19.5 pounds per day (CalRecycle 2017c).

The majority of Riverside waste in 2016 went to the Badlands Sanitary Landfill (333,491 tons) and the El Sobrante Landfill (36,326 tons; CalRecycle 2017d). The Badlands Sanitary Landfill, located in Moreno Valley, has a permitted daily capacity of 4,800 tons, a permitted total capacity of 34,400,000 cubic yards, and a remaining capacity of 15,748,799 cubic yards. The landfill is projected to close in 2022 (CalRecycle 2017a). The El Sobrante Landfill, located in Corona, has a permitted daily capacity of 16,054 tons, a permitted total capacity of 184,930,000 tons, and a remaining capacity of 145,530,000 tons. It is projected to close in 2045 (CalRecycle 2017b).

According to CalEEMod analysis, the proposed office and warehouse uses would generate an estimated 326 tons of solid waste per year, which equates to approximately 0.9 tons of waste per day. The amount of solid waste generated by the project would be negligible, and both the Badlands Sanitary Landfill and the El Sobrante Landfill have adequate capacity to accommodate project-generated waste. Therefore, the project would have a **less than significant impact**. No mitigation is required.

19. MANDATORY FINDINGS OF SIGNIFICANCE				
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or an endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐

19a. Response (*Source: GP 2025 Figure OS-6 SKR-HCP, Figure OS-7 MSHCP Cores and Linkages, Figure OS-8 MSHCP Cell Areas, GP 2025 FPEIR Figure 5.4-2 MSHCP Area Plans, Figure 5.4-4 MSHCP Criteria Cells and Subunit Areas, Figure 5.4-6 MSHCP Narrow Endemic Plant Species Survey Area, Figure 5.4-7 MSHCP Criteria Area Species Survey Area, Figure 5.4-8 MSHCP Burrowing Owl Survey Area, MSHCP Section 6.1.2 Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools, and Burrowing Owl Focused Surveys [Rincon Consultants 2017d] and Habitat Assessment [Rincon Consultants 2017b], GP 2025 FPEIR Figure 5.5-1 Archaeological Sensitivity and Figure 5.5-2 Prehistoric Cultural Resources Sensitivity, GP 2025 Policy HP-1.3,GP 2025 FPEIR Table 5.5-A Historical Districts and Neighborhood Conservation Areas and Appendix D, Title 20 of the RMC, Cultural Resources Survey [Rincon Consultants 2017a]*)

Less Than Significant with Mitigation Incorporated. Potential impacts related to habitat of fish or wildlife species were discussed in the Biological Resources Section of this IS. Mitigation measure BIO-1 would be implemented prior to ground-disturbing activities associated with construction activities at 750 Marlborough Avenue to ensure potential impacts to biological resources are **less than significant with mitigation incorporated.** Additionally, potential impacts to cultural, archaeological and paleontological resources related to major periods of California and the City of Riverside's history or prehistory were discussed in the Cultural Resources Section of this IS. Mitigation measures CR-1, CR-2 and CR-3 would be implemented during ground-disturbing activities associated with construction activities at 750 Marlborough Avenue to ensure potential impacts to cultural resources are **less than significant with mitigation incorporated**.

b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☒	☐	☐

19b. Response (*Source: FPEIR Section 6 Long-Term Effects/ Cumulative Impacts for the GP 2025 Program*)

Less Than Significant Impact With Mitigation Incorporated. The proposed project involves construction of a 346,330 square foot industrial building comprised of approximately 339,510 square feet of unrefrigerated warehouse space and 6,820 square feet of office space, on an approximately 22.34 gross-acre site. No new land uses or changes to the existing land use designations are proposed, and the project would be consistent with the City's General Plan 2025. Implementation of the project would result in less than significant environmental impacts with implementation of the identified mitigation measures. Cumulative impact analyses are specifically included for certain issue areas such as air quality, greenhouse gas emissions, noise and traffic. Impacts would be less than significant with incorporation of identified mitigation measures NOI-1 through NOI-54. Other impacts associated with the project would generally be localized at the project site and would not combine with other projects to cause cumulatively considerable environmental impacts. With mitigation as identified in this Initial Study, the project would not result in impacts that are individually limited, but cumulatively considerable. Therefore, cumulative impacts would be **less than significant with mitigation incorporated**.

c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

19c. Response (*Source: FPEIR Section 5 Environmental Impact Analysis for the GP 2025 Program*)

Less Than Significant. The proposed project would include a warehouse building with associated office space and will largely affect disturbed/developed lands within the City of Riverside. Potential effects of the project on human beings (e.g. air quality, noise, population and housing, hazards and hazardous materials, and traffic) have been evaluated herein within this Initial Study. Impacts resulting with the project have been found to be less than significant or it has been determined that impacts could be reduced to less than significant with mitigation measures incorporated. Therefore, based on the above analysis and the conclusions identified in this Initial Study, the project would not cause substantial adverse effects, directly or indirectly, to human beings. Therefore, potential direct and indirect impacts on human beings resulting from the proposed project would be **less than significant**. No mitigation is required.

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Staff Recommended Mitigation Measures

Impact Category	Mitigation Measures	Implementation Timing	Responsible Monitoring Party	Monitoring/ Reporting Method
Aesthetic Resources	**MM AES-1: Photometric Plan.** Prior to the issuance of building permits, the applicant shall submit a photometric (lighting) plan for approval by the Community & Economic Development Department, Planning Division. The approved light design requirements shall be included on the final building plan sheets. The lighting plan shall incorporate the following requirements: ▪ The project shall be designed in such a manner as to prevent light spillage from the project to the adjacent and nearby open space areas ▪ Project lighting shall not exceed an intensity of one foot-candle ▪ Shielding shall be employed, where feasible ▪ Any night lighting shall be directed away from natural open space areas and directed downward and towards the center of the development ▪ No project lights shall blink, flash, oscillate, or be of unusually high intensity or brightness ▪ Energy-efficient LPS or HPS lamps shall be used exclusively throughout the project site to dampen glare ▪ Exterior lights shall be only "warm" LED lights (<3000K color temperature)	Prior to the issuance of building permits	Community & Economic Development Department, Planning and Building & Safety Divisions	Approval of Plans
Biological Resources	**MM BIO-1: Burrowing Owl Pre-Construction Survey.** A pre-construction survey shall be conducted by a qualified biologist within 30 days prior to initiating ground disturbing activities per Objective 6 of the MSHCP BUOW Species Account. If owls are not present on the project site during the pre-construction survey, the proposed disturbance activities may proceed. In the event that owls are discovered and may be affected by the proposed project, avoidance measure shall be	Within 30 days prior to initiating vegetation removal and/or ground disturbing activities	Community & Economic Development Department, Planning and Building & Safety Divisions	Preconstruction Survey Report submitted to the City

Impact Category	Mitigation Measures	Implementation Timing	Responsible Monitoring Party	Monitoring/ Reporting Method
	developed in compliance with the MSHCP and in coordination with the CDFW and/or Western Riverside County Regional Conservation Authority.		California Department of Fish and Wildlife if relocation of owls is required.	
Biological Resources	**MM BIO-2: Nesting Bird Survey.** A pre-construction survey shall be conducted by a qualified biologist within 30 days prior to initiating vegetation removal and/or ground disturbing activities. Vegetation removal and initial ground disturbance should occur outside the nesting bird breeding season between the months of February through August. If project activities occur during the nesting season, which can vary based on annual climatic conditions, geographic location, and avian species requirements; or if potential nesting activity is observed by qualified project personnel, then a nesting bird survey should be conducted by a qualified biologist within one (1) week of proposed construction activities. If active nests of protected native species are located, construction work should be delayed until after the nesting season or until the young are no longer dependent upon the nest site. Construction in the vicinity of an active nest should be conducted at the discretion of a biological monitor	Within 30 days prior to initiating vegetation removal and/or ground disturbing activities	Community & Economic Development Department, Planning and Building & Safety Divisions	Preconstruction Survey Report submitted to the City
Cultural Resources	**MM CR-1: Plan Review.** Prior to grading permit issuance, if there are any changes to project site design and/or proposed grades, the Applicant and the City shall contact interested tribes to provide an electronic copy of the revised plans for review. Additional consultation shall occur between the City and interested tribes to discuss any proposed changes and review any new impacts and/or potential avoidance/preservation of the cultural resources on the project site. The City and the Applicant shall make all attempts to avoid and/or preserve in place as many cultural and paleontological resources as possible that are located on the project site if the site design and/or proposed grades should be revised.	Prior to issuance of grading permits, if there are any changes to project site design and/or proposed grades	Community & Economic Development Department, Planning and Historic Preservation Divisions Applicant	Consultation logs showing Applicant's effort to contact interested tribes and the outcome of any such consultation

Impact Category	Mitigation Measures	Implementation Timing	Responsible Monitoring Party	Monitoring/ Reporting Method
Cultural Resources	**MM CR-2: Archaeological and Paleontological Monitoring.** At least 30 days prior to application for a grading permit and before any grading, excavation and/or ground disturbing activities on the site take place, the Project Applicant shall retain a Secretary of Interior Standards qualified Archaeological Monitor and Native American Tribal Monitor(s) from the consulting tribes to monitor all ground-disturbing activities in an effort to identify any unknown archaeological resources. 1. The Project Archaeologist, in consultation with interested tribes, the Developer and the City, shall develop an Archaeological Monitoring Plan to address the details, timing and responsibility of all archaeological and cultural activities that will occur on the project site. Details in the Plan shall include: a. Project grading and development scheduling; b. The development of a rotating or simultaneous schedule in coordination with the applicant and the Project Archeologist for designated Native American Tribal Monitors from the consulting tribes during grading, excavation and ground disturbing activities on the site: including the scheduling, safety requirements, duties, scope of work, and Native American Tribal Monitors' authority to stop and redirect grading activities in coordination with all Project archaeologists; c. The protocols and stipulations that the Applicant, tribes and project archaeologist/paleontologist will follow in the event of inadvertent cultural resources discoveries, including any newly discovered cultural resource deposits, or nonrenewable paleontological resources that shall be subject to a cultural resources evaluation; d. Treatment and final disposition of any cultural and paleontological resources, sacred sites, and human remains if discovered on the project site; and e. The scheduling and timing of the Cultural Sensitivity Training noted in mitigation measure **MM CR-3**.	30 days prior to issuance of grading permit.	Community & Economic Development Department, Planning and Historic Preservation Divisions Qualified Archeological Monitor Native American Tribal Monitor	Archeological Monitoring Plan Evidence that a qualified archeological monitor has been retained shall be provided to the City Evidence that a Native American Tribal monitor has been retained shall be provided to the City

Impact Category	Mitigation Measures	Implementation Timing	Responsible Monitoring Party	Monitoring/ Reporting Method
	2. In the case of inadvertent discoveries, the consulting Native American tribes or bands will be contacted and provided information of the find, and permitted/invited to perform a site visit when the Project Archaeologist and Tribal monitor makes his/her assessment, so as to provide input. In the case of inadvertent discoveries, the consulting Native American tribes or bands have the right to elect to monitor the project moving forward, should the consulting Native American tribes or bands choose to do so after assessment of the find(s). 3. During the project duration, the consulting Native American tribes or bands will be provided copies of any daily/weekly/etc. logs completed by the archaeologist(s) and tribal monitor(s) for review. In addition, the consulting Native American tribes or bands will be provided a copy of the final monitoring report(s) for review.			
Cultural Resources	**MM CR-3: Cultural Sensitivity Training.** The Project Archaeologist and Native American Monitors from consulting tribes shall attend the pre-grading meeting with the developer/permit holder's contractors to provide Cultural Sensitivity Training for all construction personnel. This shall include the procedures to be followed during ground disturbance in sensitive areas and protocols that apply in the event that unanticipated resources are discovered. Only construction personnel who have received this training can conduct construction and disturbance activities in sensitive areas. A sign in sheet for attendees of this training shall be included in the Phase IV Monitoring Report.	During pre-grading meeting	Community & Economic Development Department, Planning and Historic Preservation Divisions Qualified Archeological Monitor Native American Tribal Monitor	Phase IV Monitoring Report
Cultural Resources	**MM CR-4: Treatment and Disposition of Cultural Resources:** In the event that Native American cultural resources are inadvertently discovered during the course of grading for this Project. The following procedures will be carried out for treatment and disposition of the discoveries: 1. **Temporary Curation and Storage:** During the	On-going through ground disturbance	Community & Economic Development Department, Planning and Historic Preservation Divisions	Report prepared that documents the finding and disposition of any Native American cultural resources If resources are found and curated, a copy of the curation agreement shall be provided to the City

Impact Category	Mitigation Measures	Implementation Timing	Responsible Monitoring Party	Monitoring/ Reporting Method
	course of construction, all discovered resources shall be temporarily curated in a secure location onsite or at the offices of the project archaeologist. The removal of any artifacts from the project site will need to be thoroughly inventoried with tribal monitor oversite of the process; and 2. **Treatment and Final Disposition:** The landowner(s) shall relinquish ownership of all cultural resources, including sacred items, burial goods, and all archaeological artifacts and non-human remains as part of the required mitigation for impacts to cultural resources. The applicant shall relinquish the artifacts through one or more of the following methods and provide the City of Riverside Community and Economic Development Department with evidence of same: a. Accommodate the process for onsite reburial of the discovered items with the consulting Native American tribes or bands. This shall include measures and provisions to protect the future reburial area from any future impacts. Reburial shall not occur until all cataloguing and basic recordation have been completed; b. A curation agreement with an appropriate qualified repository within Riverside County that meets federal standards per 36 CFR Part 79 and therefore would be professionally curated and made available to other archaeologists/researchers for further study. The collections and associated records shall be transferred, including title, to an appropriate curation facility within Riverside County, to be accompanied by payment of the fees necessary for permanent curation; c. If more than one Native American tribe or band is involved with the project and cannot come to an agreement as to the disposition of cultural		Project Applicant Landowner Qualified Archeological Monitor Native American Tribal Monitor	Completed Phase IV Monitoring Report

Impact Category	Mitigation Measures	Implementation Timing	Responsible Monitoring Party	Monitoring/ Reporting Method
	materials, they shall be curated at the Western Science Center or Riverside Metropolitan Museum by default; and d. At the completion of grading, excavation and ground disturbing activities on the site a Phase IV Monitoring Report shall be submitted to the City documenting monitoring activities conducted by the project Archaeologist and Native Tribal Monitors within 60 days of completion of grading. This report shall document the impacts to the known resources on the property; describe how each mitigation measure was fulfilled; document the type of cultural resources recovered and the disposition of such resources; provide evidence of the required cultural sensitivity training for the construction staff held during the required pre-grade meeting; and, in a confidential appendix, include the daily/weekly monitoring notes from the archaeologist. All reports produced will be submitted to the City of Riverside, Eastern Information Center and interested tribes.			
Cultural Resources	**MM CR-5: Human Remains.** Cease ground-disturbing activities and notify County Coroner if human remains are encountered. If human remains are unearthed during implementation of the Proposed Project, the City of Riverside and the Applicant shall comply with State Health and Safety Code Section 7050.5. The City of Riverside and the Applicant shall immediately notify the County Coroner and no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to PRC Section 5097.98. If the remains are determined to be of Native American descent, the coroner has 24 hours to notify the Native American Heritage Commission (NAHC). The NAHC shall then identify the person(s) thought to be the Most Likely Descendent (MLD). After the MLD has inspected the remains and the site, they have 48 hours to provide recommendations to the landowner. If the NAHC is unable to identify a MLD, or the	Grading and construction activities	Community & Economic Development Department, Planning, Historic Preservation, and Building & Safety Divisions Project Applicant	Notify the County Coroner

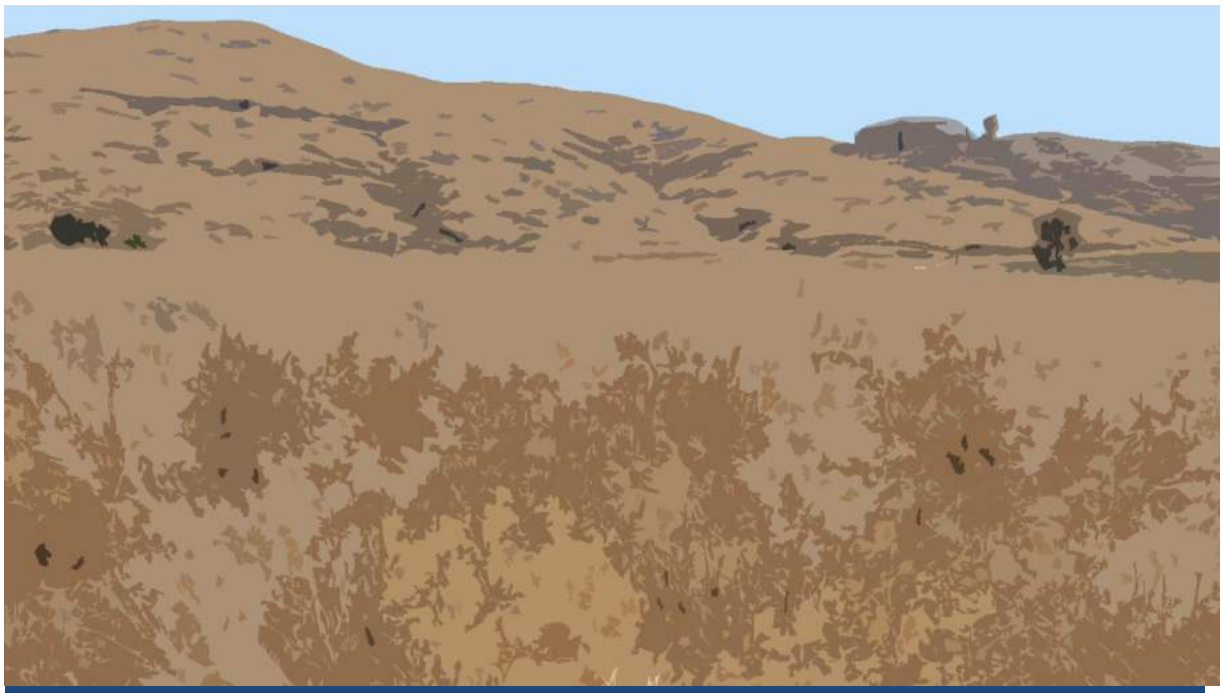
Impact Category	Mitigation Measures	Implementation Timing	Responsible Monitoring Party	Monitoring/ Reporting Method
	MLD identified fails to make a recommendation, or the landowner rejects the recommendation of the MLD and the mediation provided for in Subdivision (k) of Section 5097.94, if invoked, fails to provide measures acceptable to the landowner, the landowner or his or her authorized representative shall inter the human remains and items associated with Native American human remains with appropriate dignity on the property in a location not subject to further and future subsurface disturbance.			
Cultural Resources	**MM CR-6: Native American Cultural Resources.** Prior to any grading, the Project Applicant will meet with the Project Archeologist, and the consulting Native American tribes or bands in order to assess the feature, identified during consultation, located on the southeast border of the project boundary to determine the suitability for relocation to a permanent open space area. The consulting Native American tribes or bands shall work with the Project Archaeologist, Project Applicant and the Grading Contractor or appropriate personnel to determine whether the features can be relocated safely and will discuss the most appropriate methods for relocation. Before construction activities may resume in the affected area, any visible artifacts shall be recovered and the features recorded using professional archaeological methods. The current Department of Parks and Recreation (DPR) Forms shall be updated, detailing which features were relocated, the process taken and updated maps provided documentation of the features' new location. The site record should clearly indicate that the features are not in their original location and why they were relocated.	Prior to Grading Activity	Project Applicant Qualified Archeological Monitor Native American Tribal Monitor	Provide an updated DPR Form to the Planning Division detailing the relocation of features
Noise	**MM NOI-1: Volume Adjustable Backup Alarms.** To reduce noise associated with the use of backup alarms, either ambient-sensitive self-adjusting backup alarms or manually adjustable alarms shall be used on all equipment in use on the project site that requires a backup alarm. Ambient-sensitive self-adjusting backup alarms increase or decrease their volume based on background noise levels. The alarm self-adjusts to produce a tone that is readily noticeable over ambient noise levels (a minimum increment of 5 decibels is typically readily noticeable),	Project Operations	Community & Economic Development Department, Code Enforcement Division Project Applicant Building Operators	Evidence of language in lease agreement requiring the use of either ambient-sensitive self-adjustable backup alarms or manually adjustable alarms on all equipment in use on the project site that requires a backup alarm shall be provided to the Community & Economic Development Department, Planning Division prior to the issuance of

Impact Category	Mitigation Measures	Implementation Timing	Responsible Monitoring Party	Monitoring/ Reporting Method
	but not so loud as to be a constant annoyance to neighbors. Close attention shall be given to the alarm's mounting location on the machine in order to minimize engine noise interference, which can be sense by the alarm as the ambient noise level. These alarms shall be mounted as far to the rear of the machine as possible. An alarm mounted directly behind a machine radiator will sense the cooling fan's noise and adjust accordingly. If manually-adjustable alarms are used, each alarm shall be set at the beginning of each day and night shift. The manual setting feature eliminates the machine mounting location problem of the ambient-sensitive self-adjustable backup alarms. Alternatively, backup movements can be supervised with a guide and flagging system.			certificate of occupancy
Noise	**MM NOI-~~1~~2: Restricted Loading Dock Use.** Prohibit the use of the south-facing loading docks between the hours of 10 PM and 7 AM.	On-going	Community & Economic Development Department, Planning Division Project Applicant Building Operator	Evidence of language in lease agreement(s) prohibiting trucks from using the south-facing loading docks between the hours of 10 p.m. and 7 a.m. shall be provided to the Community & Economic Development Department, Planning Division prior to issuance of a certificate of occupancy
Noise	**MM NOI-~~2~~3: Rooftop Mechanical Equipment Shielding.** A noise-attenuating barrier shall be installed around any new rooftop mechanical equipment to reduce operational noise at Box Springs Mountain Reserve Park to equal to or less than pre-project ambient noise of 49.4 dBA.	Prior to issuance of Building Permits	Community & Economic Development Department, Planning and Building & Safety Divisions	Approval of Plans
Noise	**MM NOI-~~3~~4: Construction Management Plan.** Prior to the issuance of grading permits, the applicant shall submit a Construction Management Plan satisfactory to the City of Riverside. The Building Official, or appropriately assigned City staff member, shall be responsible for enforcing noise attenuating construction requirements. The Construction Management Plan shall include, but not be limited to, the	Prior to issuance of Grading Permits	Community & Economic Development Department, Building & Safety Division Public Works Department	Approved Construction Management Plan

Impact Category	Mitigation Measures	Implementation Timing	Responsible Monitoring Party	Monitoring/ Reporting Method
	following: *Excavation, grading, and other construction activities.* These activities shall be restricted to the hours allowed under RMC Section 7.35.010. Any deviations from these standards shall comply with the provisions in Title 7 (Noise Control). *Staging Area.* Provide staging areas on-site to minimize off-site transportation of heavy construction equipment. These areas shall be located to maximize the distance between activity and sensitive receptors. This should reduce noise levels associated with most types of idling construction equipment. *Avoid Operating Equipment Simultaneously*. Whenever possible, ensure that construction activities are scheduled so as to avoid operating several pieces of equipment simultaneously, which causes high noise levels. *Inspections*. The contractor shall inspect construction equipment to ensure that such equipment is in proper operating condition and fitted with standard factory silencing features. Construction equipment shall utilize all standard factory silencing features, such as equipment mufflers, enclosures, and barriers.			
Noise	**MM NOI-45: Construction Noise Reduction.** The following measures shall be followed during construction of the proposed project and associated site improvements: *Newest Power Construction Equipment.* The newest available power construction equipment with standard recommended noise shielding and muffling devices shall be used. *Mufflers.* During project grading and construction, all equipment, fixed or mobile, shall be operated with closed engine doors and shall be equipped with properly operating and maintained mufflers consistent with manufacturers' standards. Use of manufacturer-certified mufflers associated with construction equipment has been shown to reduce noise levels by 8 to 10 dBA. *Smart Back-up Alarms.* Mobile construction equipment shall have smart back-up alarms that automatically adjust the sound	On-going through Construction Activities	Community & Economic Development Department, Building & Safety Division	Building Inspection Reports

Impact Category	Mitigation Measures	Implementation Timing	Responsible Monitoring Party	Monitoring/ Reporting Method
	level of the alarm in response to ambient noise levels. Alternatively, back-up alarms should be disabled and replaced with human spotters to ensure safety when mobile construction equipment is moving the reverse direction. *Idling*. All construction vehicles, such as bulldozers and haul trucks, shall be prohibited from idling in excess of five minutes, consistent with the City's *Good Neighbor Guidelines*.			
Traffic	**MM T-1: Fair Share Contributions - Interchange Street/W La Cadena Drive/I-215 SB Ramps.** For the intersection at Interchange Street/W La Cadena Drive/I-215 SB Ramps to operate at an LOS D or better under project operation, the intersection would need to be signalized. With the current lane configuration at this intersection, the signal would have to provide split phases for all directions.. Prior to the issuance of occupancy permits, the project proponent shall make a fair-share contribution towards the improvement of the intersections of Interchange Street/W La Cadena Drive/I-215 SB Ramps ~~and 215 NB Ramps/E. La Cadena Drive~~, calculated to be 7 percent.	Prior to Occupancy	Public Works Department	Certificate of Occupancy
Traffic	**MM T-2: Fair Share Contributions - I-215 NB Ramps/E La Cadena Drive.** For the intersection at I-215 NB Ramps/E La Cadena Drive to operate at an LOS D or better under project operation, the intersection would need to be signalized. With the current lane configuration at this intersection, the signal would have to provide permissive phases for the northbound and southbound movements and a split phase for the eastbound traffic off the freeway. Prior to the issuance of occupancy permits, the project proponent shall make a fair-share contribution towards the improvement of the intersection of 215 NB Ramps/E. La Cadena Drive, calculated to be 6.5 percent.	Prior to Occupancy	Public Works Department	Certificate of Occupancy
Traffic	**MM T-~~2~~3: Route Signage.** Prior to occupancy, the applicant shall install signage on each side of the cul-de-sac where the Gage Canal meets the road extension in order to notify the pedestrians and bicyclists of the break in the Gage Canal pathway. The signage shall direct the public to utilize the sidewalk to reconnect to	Prior to Occupancy	Public Works Department	Certificate of Occupancy

Impact Category	Mitigation Measures	Implementation Timing	Responsible Monitoring Party	Monitoring/ Reporting Method
	the remainder of the pathway.			
Traffic	**MM T-~~3~~4: Stop Signs Install at Egress Points along Marlborough.** Prior to occupancy, the applicant shall install additional stop signs to be placed at the egress points of the Marlborough Avenue driveways from the project located outside of public right-of-way.	Prior to Occupancy	Public Works Department	Certificate of Occupancy



750 Marlborough Drive Project

Cultural Resources Study

prepared for
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Executive Summary

Rincon Consultants, Inc. (Rincon) was retained by Guthrie Pericles, LLC to conduct a Phase I cultural resources assessment for the 750 Marlborough Drive Project located in the City of Riverside, Riverside County, California. The project site includes approximately 22 acres (project site) of undeveloped land. The proposed project is subject to the California Environmental Quality Act (CEQA).

This study includes a cultural resources records search, Sacred Lands File search, a pedestrian survey of the project area, and preparation of this report. The cultural resource records search identified no previously recorded cultural resources within the project site. The survey of the project site resulted in the identification of a previously unrecorded historical-period irrigation system (GP-1). Site GP-1 has been recommended ineligible for listing in the CRHR. Thus, impacts to this resource would not be considered significant.

The project will include the extension of Marlborough Avenue across the Gage Canal to provide access to the proposed project. However, the Gage Canal runs underground at this location and will not be impacted by project construction. The Gage Canal is crossed by paved roads numerous times throughout its alignment, including by Columbia Avenue approximately 400 meters (0.25 miles) north of Marlborough Avenue. Thus, the project will not impact the Gage Canal.

The project site has been disturbed by the initial planting, replanting, and removal of the orchard that once occupied the property. The project site is located at the foot of the Box Springs Mountains, though only three prehistoric archaeological sites have been recorded within a 1-mile radius of the project site and no archaeological resources were identified during the pedestrian survey. Thus, the project site is not considered sensitive for archaeological resources.

Based on the results of the current study, Rincon recommends a finding of less than significant impact to historical resources with mitigation incorporated under CEQA. The following measures are recommended in the case of the unanticipated discovery of cultural resources during project construction.

MM-CUL-1 Prior to grading permit issuance, if there are any changes to project site design and/or proposed grades, the Applicant and the City shall contact interested tribes to provide an electronic copy of the revised plans for review. Additional consultation shall occur between the City and interested tribes to discuss any proposed changes and review any new impacts and/or potential avoidance/preservation of the cultural resources on the project site. The City and the Applicant shall make all attempts to avoid and/or preserve in place as many cultural and paleontological resources as possible that are located on the project site if the site design and/or proposed grades should be revised.

MM-CUL-2 **Archaeological and Paleontological Monitoring:** At least 30-days prior to application for a grading permit and before any grading, excavation and/or ground disturbing activities on the site take place, the Project Applicant shall retain a Secretary of Interior Standards qualified archaeological monitor to monitor all ground-disturbing activities in an effort to identify any unknown archaeological resources.

1. The Project Archaeologist, in consultation with interested tribes, the Developer and the City, shall develop an Archaeological Monitoring Plan to address the details, timing and responsibility of all archaeological and cultural activities that will occur on the project site. Details in the Plan shall include:

    a. Project grading and development scheduling;
    b. The development of a rotating or simultaneous schedule in coordination with the applicant and the Project Archeologist for designated Native American Tribal Monitors from the consulting tribes during grading, excavation and ground disturbing activities on the site: including the scheduling, safety requirements, duties, scope of work, and Native American Tribal Monitors' authority to stop and redirect grading activities in coordination with all Project archaeologists;

    c. The protocols and stipulations that the Applicant, tribes and project archaeologist/paleontologist will follow in the event of inadvertent cultural resources discoveries, including any newly discovered cultural resource deposits, or nonrenewable paleontological resources that shall be subject to a cultural resources evaluation;

    d. Treatment and final disposition of any cultural and paleontological resources, sacred sites, and human remains if discovered on the project site; and

    e. The scheduling and timing of the Cultural Sensitivity Training noted in mitigation measure **MM-CUL-3**.

2. In the case of inadvertent discoveries, the consulting Native American tribes or bands will be contacted and provided information of the find, and permitted/invited to perform a site visit when the Project Archaeologist and Tribal monitor makes his/her assessment, so as to provide input. In the case of inadvertent discoveries, the consulting Native American tribes or bands have the right to elect to monitor the project moving forward, should the consulting Native American tribes or bands choose to do so after assessment of the find(s).

3. During the project duration, the consulting Native American tribes or bands will be provided copies of any daily/weekly/etc. logs completed by the archaeologist(s) and tribal monitor(s) for review. In addition, the consulting Native American tribes or bands will be provided a copy of the final monitoring report(s) for review.

MM-CUL-3 **Cultural Sensitivity Training:** The Project Archaeologist and Native American Monitors from consulting tribes shall attend the pre-grading meeting with the developer/permit holder's contractors to provide Cultural Sensitivity Training for

all construction personnel. This shall include the procedures to be followed during ground disturbance in sensitive areas and protocols that apply in the event that unanticipated resources are discovered. Only construction personnel who have received this training can conduct construction and disturbance activities in sensitive areas. A sign in sheet for attendees of this training shall be included in the Phase IV Monitoring Report.

MM-CUL-4 **Treatment and Disposition of Cultural Resources:** In the event that Native American cultural resources are inadvertently discovered during the course of grading for this Project. The following procedures will be carried out for treatment and disposition of the discoveries:

1. **Temporary Curation and Storage:** During the course of construction, all discovered resources shall be temporarily curated in a secure location onsite or at the offices of the project archaeologist. The removal of any artifacts from the project site will need to be thoroughly inventoried with tribal monitor oversite of the process; and

2. **Treatment and Final Disposition:** The landowner(s) shall relinquish ownership of all cultural resources, including sacred items, burial goods, and all archaeological artifacts and non-human remains as part of the required mitigation for impacts to cultural resources. The applicant shall relinquish the artifacts through one or more of the following methods and provide the City of Riverside Community and Economic Development Department with evidence of same:

    a. Accommodate the process for onsite reburial of the discovered items with the consulting Native American tribes or bands. This shall include measures and provisions to protect the future reburial area from any future impacts. Reburial shall not occur until all cataloguing and basic recordation have been completed;

    b. A curation agreement with an appropriate qualified repository within Riverside County that meets federal standards per 36 CFR Part 79 and therefore would be professionally curated and made available to other archaeologists/researchers for further study. The collections and associated records shall be transferred, including title, to an appropriate curation facility within Riverside County, to be accompanied by payment of the fees necessary for permanent curation;

    c. If more than one Native American tribe or band is involved with the project and cannot come to an agreement as to the disposition of cultural materials, they shall be curated at the Western Science Center or Riverside Metropolitan Museum by default; and

    d. At the completion of grading, excavation and ground disturbing activities on the site a Phase IV Monitoring Report shall be submitted to the City documenting monitoring activities conducted by the project Archaeologist and Native Tribal Monitors within 60

days of completion of grading. This report shall document the impacts to the known resources on the property; describe how each mitigation measure was fulfilled; document the type of cultural resources recovered and the disposition of such resources; provide evidence of the required cultural sensitivity training for the construction staff held during the required pre-grade meeting; and, in a confidential appendix, include the daily/weekly monitoring notes from the archaeologist. All reports produced will be submitted to the City of Riverside, Eastern Information Center and interested tribes.

MM-CUL-5 Cease Ground-Disturbing Activities and Notify County Coroner If Human Remains Are Encountered. If human remains are unearthed during implementation of the Proposed Project, the City of Riverside and the Applicant shall comply with State Health and Safety Code Section 7050.5. The City of Riverside and the Applicant shall immediately notify the County Coroner and no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to PRC Section 5097.98. If the remains are determined to be of Native American descent, the coroner has 24 hours to notify the Native American Heritage Commission (NAHC). The NAHC shall then identify the person(s) thought to be the Most Likely Descendent (MLD). After the MLD has inspected the remains and the site, they have 48 hours to provide recommendations to the landowner. If the NAHC is unable to identify a MLD, or the MLD identified fails to make a recommendation, or the landowner rejects the recommendation of the MLD and the mediation provided for in Subdivision (k) of Section 5097.94, if invoked, fails to provide measures acceptable to the landowner, the landowner or his or her authorized representative shall inter the human remains and items associated with Native American human remains with appropriate dignity on the property in a location not subject to further and future subsurface disturbance.

MM-CUL-6 Prior to any grading, the Project Applicant will meet with the Project Archeologist, and the consulting Native American tribes or bands in order to assess the feature, identified during consultation, located on the southeast border of the project boundary to determine the suitability for relocation to a permanent open space area. The consulting Native American tribes or bands shall work with the Project Archaeologist, Project Applicant and the Grading Contractor or appropriate personnel to determine whether the features can be relocated safely and will discuss the most appropriate methods for relocation. Before construction activities may resume in the affected area, any visible artifacts shall be recovered and the features recorded using professional archaeological methods. The current Department of Parks and Recreation (DPR) Forms shall be updated, detailing which features were relocated, the process taken and updated maps provided documentation of the features' new location. The site record should clearly indicate that the features are not in their original location and why they were relocated.

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1 Introduction

Rincon Consultants, Inc. (Rincon) was retained by Guthrie Pericles, LLC to conduct a Phase I cultural resources study for the 750 Marlborough Drive Project (Project) in the city of Riverside. The project site is a 22-acre lot located at the east end of Marlborough Avenue (Figure 1) in the city of Riverside, California. The project proposes the construction of a 352,000 square-foot concrete tilt-up general industrial building. This cultural resources study includes a cultural resources records search, a pedestrian survey, and the preparation of this report according to the Archaeological Resources Management Report (ARMR) guidelines and in compliance with the requirements of the California Environmental Quality Act (CEQA).

1.1 Existing Condition

The project site is located in the City of Riverside at 750 Marlborough Avenue, Assessor's Parcel Number (APN) 257-030-042. The project site is located south of the Research Park Drive cul-de-sac, at the eastern terminus of Marlborough Avenue, approximately 1.5 miles east of Interstate 215 (I-215). The project site is currently occupied by vacant land designated in the City's General Plan as Business Office Park (B/OP) in a Business and Manufacturing Park Zone (BMP). Surrounding land uses including business office parks and light industrial uses and the Box Springs Mountain Reserve Park.

1.2 Regulatory Setting

1.2.1 Federal

The proposed project does not have a federal nexus; federal regulations are provided here for informational purposes only. Cultural resources are considered during federal undertakings chiefly under Section 106 of the National Historic Preservation Act (NHPA) of 1966 (as amended) through one of its implementing regulations, 36 CFR 800 (Protection of Historic Properties), as well as the National Environmental Policy Act (NEPA). Properties of traditional religious and cultural importance to Native Americans are considered under Section 101(d)(6)(A) of NHPA. Other federal laws include the Archaeological and Historic Preservation Act of 1974, the American Indian Religious Freedom Act (AIRFA) of 1978, the Archaeological Resources Protection Act (ARPA) of 1979, and the Native American Graves Protection and Repatriation Act (NAGPRA) of 1989, among others.

Section 106 of the NHPA (16 United States Code [USC] 470f) requires federal agencies to take into account the effects of their undertakings on any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register of Historic Places (NRHP) and to afford the Advisory Council on Historic Preservation (ACHP) a reasonable opportunity to comment on such undertakings (36 CFR 800.1). Under Section 106, the significance of any adversely affected cultural resource is assessed and mitigation measures are proposed to reduce any impacts to an acceptable level. Significant cultural resources are those resources that are listed in or are eligible for listing in the NRHP per the criteria listed below (36 CFR 60.4).

The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and that:

a) Are associated with events that have made a significant contribution to the broad patterns of our history; or

b) Are associated with the lives of persons significant in our past; or

c) Embody the distinctive characteristics of a type, period, or method of installation, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

d) Have yielded, or may be likely to yield, information important in prehistory or history.

1.2.2 State

CEQA requires a lead agency determine whether a project may have a significant effect on historical resources, including prehistoric or historic archaeological resources (Public Resources Code [PRC], Section 21084.1). If it can be demonstrated that a project will cause damage to a unique archaeological resource, the lead agency may require reasonable efforts be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that resources cannot be left undisturbed, mitigation measures are required (PRC, Section 21083.2[a], [b], and [c]).

PRC, Section 21083.2(g) defines a unique archaeological resource as an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

A. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information;

B. Has a special and particular quality such as being the oldest of its type or the best available example of its type; or

C. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

A historical resource is a resource listed in, or determined to be eligible for listing, in the CRHR, a resource included in a local register of historical resources or any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant (State CEQA Guidelines, Section 15064.5[a][1-3]).Section 15064.5(a)(3) also states that a resource shall be considered by the lead agency to be “historically significant” if the resource meets the criteria for listing on the CRHR, which is listed above in section 1.2.1.

1.2.3 Local

The City of Riverside General Plan 2025 contains the following objectives and policies related to cultural resources:

Objective HP-1: To use historic preservation principles as an equal component in the planning and development process.

Policy HP-1.1: The City shall promote the preservation of cultural resources to ensure that citizens of Riverside have the opportunity to understand and appreciate the City's unique heritage.

Policy HP-1.2: The City shall assume its direct responsibility for historic preservation by protecting and maintaining it’s publicly owned cultural resources. Such resources may include, but are not limited to, buildings, monuments, landscapes, and right-of-way improvements, such as retaining walls, granite curbs, entry monuments, light standards, street trees, and the scoring, dimensions, and patterns of sidewalks, driveways, curbs and gutters.

Policy HP-1.3: The City shall protect sites of archaeological and paleontological significance and ensure compliance with all applicable State and federal cultural resources protection and management laws in its planning and project review process.

Policy HP-1.4: The City shall protect natural resources such as geological features, heritage trees, and landscapes in the planning and development review process and in park and open space planning. Policy HP-1.5: The City shall promote neighborhood/city identity and the role of historic preservation in community enhancement.

Policy HP-1.6: The City shall use historic preservation as a tool for "smart growth" and mixed use development.

Policy HP-1.7: The City shall ensure consistency between this Historic Preservation Element and all other General Plan elements, including subsequent updates of the General Plan.

Objective HP-2: To continue an active program to identify, interpret and designate the City's cultural resources.

Policy HP-2.1: The City shall actively pursue a comprehensive program to document and preserve historic buildings, structures, districts, sites (including archaeological sites), objects, landscapes, and natural resources.

Policy HP-2.2: The City shall continually update its identification and designation of cultural resources that are eligible for listing in local, state and national registers based upon the 50 year age guideline for potential historic designation eligibility.

Policy HP-2.3: The City shall provide information to citizens, and the building community about what to do upon the discovery of archaeological resources and burial sites, as well as, the treatment, preservation, and repatriation of such resources.

Objective HP-3: To promote the City's cultural resources as a means to enhance the City's identity as an important center of Southern California history.

Policy HP-3.1: The City shall conduct educational programs to promote an understanding of the significance of the City's cultural resources, the criteria for historic designation, historic design review processes, building permit requirements, and methods for rehabilitating and preserving historic buildings, sites, and landscapes.

Policy HP-3.2: The Planning Division shall promote an understanding and appreciation of the importance of historic preservation by the City's departments, boards, commissions, and elected officials. Objective HP-4: To fully integrate the consideration of cultural resources as a major aspect of the City's planning, permitting and development activities.

Policy HP-4.1: The City shall maintain an up-to-date database of cultural resources and use that database as a primary informational resource for protecting those resources.

Policy HP-4.2: The City shall apply the California State Historical Building Code to ensure that City building code requirements do not compromise the integrity of significant cultural resources, at the property owner’s request.

Policy HP-4.3: The City shall work with the appropriate tribe to identify and address, in a culturally appropriate manner, cultural resources and tribal sacred sites through the development review process.

Objective HP-5: To ensure compatibility between new development and existing cultural resources. Policy HP-5.1: The City shall use its design and plot plan review processes to encourage new

construction to be compatible in scale and character with cultural resources and historic districts.

Policy HP-5.2: The City shall use its design and plot plan review processes to encourage the compatibility of street design, public improvements, and utility infrastructure with cultural resources and historic districts.

Objective HP-6: To actively pursue funding for a first-class historic preservation program, including money needed for educational materials, studies, surveys, staffing, and incentives for preservation by private property owners.

Policy HP-6.1: The City shall provide financial incentives to promote the restoration, rehabilitation, and adaptive reuse of cultural resources.

Policy HP-6.2: The City shall use financial resources from state, federal and private programs that assist in the identification, designation and preservation of cultural resources.

Policy HP-6.3: The City shall ensure adequate funds in its budget for the staffing and maintenance of a historic preservation program in compliance with the California State Office of Historic Preservation's Certified Local Government program.

Objective HP-7: To encourage both public and private stewardship of the City's cultural resources.

Policy HP-7.1: The City shall apply code enforcement, zoning actions, and building safety/construction regulations as tools for helping to protect cultural resources.

Policy HP-7.2: The City shall incorporate preservation as an integral part of its specific plans, general plan, and environmental processes.

Policy HP-7.3: The City shall coordinate historic preservation with other activities within its government structure.

Policy HP-7.4: The City shall promote the preservation of cultural resources controlled by other governmental agencies, including those related to federal, state, county, school district, and other agencies.

1.3 Personnel

Rincon Cultural Resources Principal Investigator Benjamin Vargas, M.A., Registered Professional Archaeologist (RPA), served as principal investigator for the study, and co-authored this report. Mr. Vargas meets the Secretary of the Interior’s Professional Qualifications Standards for prehistoric and historic archaeology (NPS 1983). Rincon archaeologist Breana Campbell, M.A., RPA, conducted the records search and fieldwork. Rincon archaeologist Hannah Haas served as primary author of this report. GIS Analyst Allysen Valencia prepared the figures found in this report. Rincon Vice President Duane Vander Pluym, D. Env, reviewed this report for quality control.

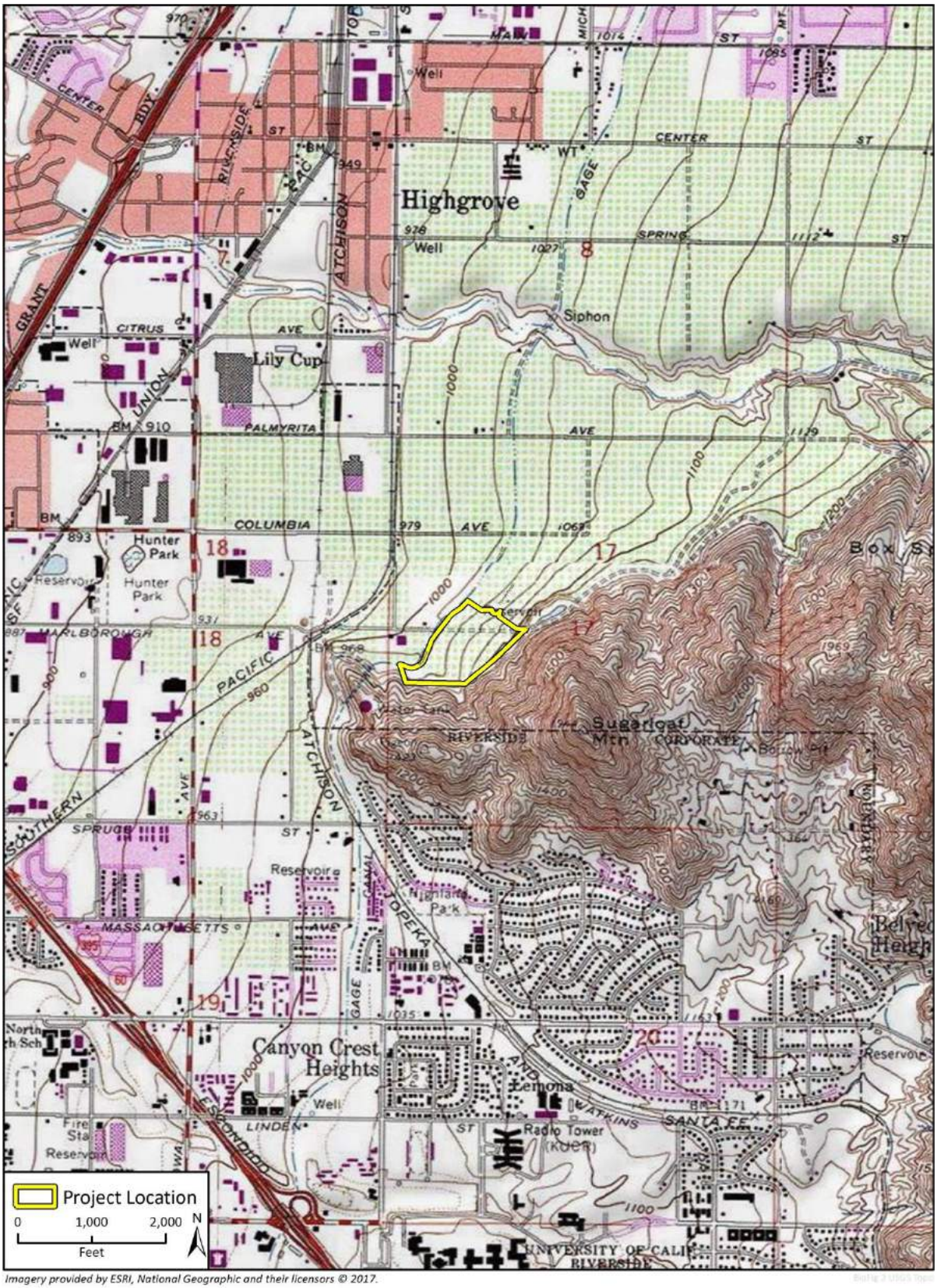

Figure 1. Project Site

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2 Natural and Cultural Setting

2.1 Natural Setting

The project site is located within the City of Riverside at the northern end of the Box Springs Mountains. The project site is situated at an elevation of 334 meters (1095 feet [ft]) above mean sea level (AMSL). Vegetation mainly consists of dried grasses.

2.2 Cultural Setting

2.2.1 Prehistoric Context

During the twentieth century, many archaeologists developed chronological sequences to explain prehistoric cultural changes within all or portions of southern California (c.f., Jones and Klar 2007; Moratto 1984). Wallace (1955, 1978) devised a prehistoric chronology for the southern California region based on early studies and focused on data synthesis that included four horizons: Early Man, Milling Stone, Intermediate, and Late Prehistoric. Though initially lacking the chronological precision of absolute dates (Moratto 1984:159), Wallace's (1955) synthesis has been modified and improved using thousands of radiocarbon dates obtained by southern California researchers over recent decades (Byrd and Raab 2007:217; Koerper and Drover 1983; Koerper et al. 2002; Mason and Peterson 1994). The prehistoric chronological sequence for southern California presented below is a composite based on Wallace (1955) and Warren (1968) as well as later studies, including Koerper and Drover (1983).

2.2.1.1 Early Man Horizon (ca. 10,000 – 6,000 B.C.)

Numerous pre-8000 B.C. sites have been identified along the mainland coast and Channel Islands of southern California (c.f., Erlandson 1991; Johnson et al. 2002; Jones and Klar 2007; Moratto 1984; Rick et al. 2001:609). The Arlington Springs site on Santa Rosa Island produced human femurs dated to approximately 13,000 years ago (Arnold et al. 2004; Johnson et al. 2002). On nearby San Miguel Island, human occupation at Daisy Cave (SMI-261) has been dated to nearly 13,000 years ago and included basketry greater than 12,000 years old, the earliest on the Pacific Coast (Arnold et al. 2004).

Although few Clovis or Folsom style fluted points have been found in southern California (e.g., Dillon 2002; Erlandson et al. 1987), Early Man Horizon sites are generally associated with a greater emphasis on hunting than later horizons. Recent data indicate that the Early Man economy was a diverse mixture of hunting and gathering, including a significant focus on aquatic resources in coastal areas (e.g., Jones et al. 2002) and on inland Pleistocene lakeshores (Moratto 1984). A warm and dry 3,000-year period called the Altithermal began around 6000 B.C. The conditions of the Altithermal are likely responsible for the change in human subsistence patterns at this time, including a greater emphasis on plant foods and small game.

2.2.1.2 Milling Stone Horizon (6000–3000 B.C.)

Wallace (1955:219) defined the Milling Stone Horizon as "marked by extensive use of milling stones and mullers, a general lack of well-made projectile points, and burials with rock cairns." The dominance of such artifact types indicate a subsistence strategy oriented around collecting plant foods and small animals. A broad spectrum of food resources were consumed including small and large terrestrial mammals, sea mammals, birds, shellfish and other littoral and estuarine species, near-shore fishes,

yucca, agave, and seeds and other plant products (Kowta 1969; Reinman 1964). Variability in artifact collections over time and from the coast to inland sites indicates that Milling Stone Horizon subsistence strategies adapted to environmental conditions (Byrd and Raab 2007:220). Lithic artifacts associated with Milling Stone Horizon sites are dominated by locally available tool stone and in addition to ground stone tools, such as manos and metates, chopping, scraping, and cutting tools, are very common. Kowta (1969) attributes the presence of numerous scraper-plane tools in Milling Stone Horizon collections to the processing of agave or yucca for food or fiber. The mortar and pestle, associated with acorns or other foods processed through pounding, were first used during the Milling Stone Horizon and increased dramatically in later periods (Wallace 1955, 1978; Warren 1968).

Two types of artifacts that are considered diagnostic of the Milling Stone period are the cogged stone and discoidal, most of which have been found within sites dating between 4,000 and 1,000 B.C. (Moratto 1984:149), though possibly as far back as 5,500 B.C. (Couch et al. 2009). The cogged stone is a ground stone object that has gear-like teeth on the perimeter and is produced from a variety of materials. The function of cogged stones is unknown, but many scholars have postulated ritualistic or ceremonial uses (c.f., Dixon 1968:64-65; Eberhart 1961:367) based on the materials used and their location near to burials and other established ceremonial artifacts as compared to typical habitation debris. Similar to cogged stones, discoidals are found in the archaeological record subsequent to the introduction of the cogged stone. Cogged stones and discoidals were often purposefully buried, or "cached." They are most common in sites along the coastal drainages from southern Ventura County southward and are particularly abundant at some Orange County sites, although a few specimens have been found inland as far east as Cajon Pass (Dixon 1968:63; Moratto 1984:149). Cogged stones have been collected in Riverside County and their distribution appears to center on the Santa Ana River basin (Eberhart 1961), within which the site lies.

2.2.1.3 Intermediate Horizon (3,000 B.C. – A.D. 500)

Wallace's Intermediate Horizon dates from approximately 3,000 B.C. - A.D. 500 and is characterized by a shift toward a hunting and maritime subsistence strategy, as well as greater use of plant foods. During the Intermediate Horizon, a noticeable trend occurred toward greater adaptation to local resources including a broad variety of fish, land mammal, and sea mammal remains along the coast. Tool kits for hunting, fishing, and processing food and materials reflect this increased diversity, with flake scrapers, drills, various projectile points, and shell fishhooks being manufactured.

Mortars and pestles became more common during this transitional period, gradually replacing manos and metates as the dominant milling equipment. Many archaeologists believe this change in milling stones signals a change from the processing and consuming of hard seed resources to the increasing reliance on acorn (e.g., Glassow et al. 1988; True 1993). Mortuary practices during the Intermediate typically included fully flexed burials oriented toward the north or west (Warren 1968:2-3).

2.2.1.4 Late Prehistoric Horizon (A.D. 500–Historic Contact)

During Wallace's (1955, 1978) Late Prehistoric Horizon the diversity of plant food resources and land and sea mammal hunting increased even further than during the Intermediate Horizon. More classes of artifacts were observed during this period and high quality exotic lithic materials were used for small finely worked projectile points associated with the bow and arrow. Steatite containers were made for cooking and storage and an increased use of asphalt for waterproofing is noted. More artistic artifacts were recovered from Late Prehistoric sites and cremation became a common mortuary custom. Larger, more permanent villages supported an increased population size and social structure (Wallace 1955:223).

Warren (1968) attributes this dramatic change in material culture, burial practices, and subsistence focus to the westward migration of desert people he called the Takic, or Numic, Tradition in Los Angeles,

Orange, and western Riverside counties. This Takic Tradition was formerly referred to as the "Shoshonean wedge" (Warren 1968), but this nomenclature is no longer used to avoid confusion with ethnohistoric and modern Shoshonean groups (Heizer 1978:5; Shipley 1978:88, 90). This Takic expansion remains a major question in southern California prehistory and has been a matter of debate in archaeological and linguistic research. Linguistic, biological, and archaeological evidence supports the hypothesis that Takic peoples from the Southern San Joaquin Valley and/or western Mojave Desert entered southern California ca. 3,500 years ago to occupy the Los Angeles/Orange County area (Sutton 2009). Modern Gabrielino/Tongva in western Riverside County are generally considered by archaeologists to be descendants of these prehistoric Uto-Aztecan, Takic-speaking populations that settled along the California coast during the Late Prehistoric Horizon. Sutton (2009) argues that surrounding Cupan groups (Serrano, Cahuilla, Cupeño, and Luiseño), were biologically Yuman peoples who were in the area prior to the Takic expansion but adopted Takic languages around 1,500 years ago.

2.2.2 Ethnographic Overview

The project site is situated in an area near the boundaries of several Native American groups identified by anthropologists in the early 20th century (e.g. Kroeber 1908). The historically-identified territories occupied by the Cahuilla, Gabrieleño, Luiseño, and Serrano all exist within a 15 to 20 mile range of the project site. While these boundaries are based on interviews with informants and research with records such as those of the Hispanic Catholic Missions in the region, it is likely that such boundaries were not static, rather, they were likely fluid, and may have changed through time. Below we provide brief synopses of ethnographic data for each of the four Native American groups. Cahuilla

The project site is situated within a region historically occupied by a Native American group known as the Cahuilla, though near the boundary with the Juaneño and Luiseño (Heizer 1978, Bean 1978, Kroeber 1925). The term Cahuilla likely derived from the native word *káwiya*, meaning "master" or "boss" (Bean 1978:575). Traditional Cahuilla ethnographic territory extended west to east from the present-day city of Riverside to the central portion of the Salton Sea in the Colorado Desert, and south to north from the San Jacinto Valley to the San Bernardino Mountains.

The Cahuilla, like their neighbors to west, the Luiseño and Juaneño, and the Cupeño to the south, are speakers of a Cupan language. Cupan languages are part of the Takic linguistic subfamily of the Uto-Aztecan language family. It is hypothesised that the Cahuilla migrated to southern California approximately 2,000 to 3,000 years ago, most likely from the southern Sierra Nevada mountain ranges of east-central California with other Takic speaking social groups (Moratto 1984:559).

Cahuilla social organization was hierarchical and contained three primary levels (Bean 1978:580). The highest level was the cultural nationality, encompassing everyone speaking a common language. The next level included the two patrimoieties of the Wildcats (*tuktum*) and the Coyotes (*'istam*). Every clan of the Cahuilla was in one or the other of these moieties. The lowest level consisted of the numerous political-ritual-corporate units called sibs, or a patrilineal clan (Bean 1978:580).

Cahuilla villages were usually located in canyons or on alluvial fans near a source of accessible water. The nearest named village to the project site is the village of *Wa'achanga* or Guachama, located near Loma Linda approximately 7 miles east of the project site, though ethnographers are unclear whether this village was of Cahuilla or Gabrieleño origin (Kroeber 1907; Thompson 2007).

Each lineage group maintained their own houses (*kish*) and granaries, and constructed ramadas for work and cooking. Sweat houses and song houses (for non-religious music) were also often present. Each community also had a separate house for the lineage or clan leader. A ceremonial house, or *kíš ʔámnawe*t, associated with the clan leader was where major religious ceremonies were held. Houses and ancillary structures were often spaced apart, and a "village" could extend over a mile or two. Each lineage had ownership rights to various resource collecting locations, "including food collecting, hunting,

and other areas. Individuals also owned specific areas or resources, e.g., plant foods, hunting areas, mineral collecting places, or sacred spots used only by shamans, healers and the like" (Bean 1990:2).

The Cahuilla hunted a variety of game, including mountain sheep, cottontail, jackrabbit, mice, and wood rats, as well as predators such as mountain lion, coyote, wolf, bobcat, and fox. Various birds were also consumed, including quail, duck, and dove, plus various types of reptiles, amphibians, and insects. A wide variety of tools and implements were employed by the Cahuilla to gather and collect food resources. For the hunt, these included the bow and arrow, traps, nets, slings and blinds for hunting land mammals and birds, and nets for fishing. Rabbits and hares were commonly brought down by the throwing stick; however when communal hunts were organized for these animals, the Cahuilla often utilized clubs and very large nets.

Foodstuffs were processed using a variety of tools, including portable stone mortars, bedrock mortars and pestles, basket hopper mortars, manos and metates, bedrock grinding slicks, hammerstones and anvils, and many others. Food was consumed from a number of woven and carved wood vessels and pottery vessels. The ground meal and unprocessed hard seeds were stored in large finely woven baskets, and the unprocessed mesquite beans were stored in large granaries woven of willow branches and raised off the ground on platforms to keep it from vermin. Pottery vessels were made by the Cahuilla, and also traded from the Yuman-speaking groups across the Colorado River and to the south.

The Cahuilla had adopted limited agricultural practices by the time Euro-Americans traveled into their territory. Bean (1978:578) has suggested that their "proto-agricultural techniques and a marginal agriculture" consisting of beans, squash and corn may have been adopted from the Colorado River groups to the east. Certainly by the time of the first Romero Expedition in 1823-24, they were observed growing corn, pumpkins, and beans in small gardens localized around springs in the Thermal area of the Coachella Valley (Bean and Mason 1962:104). The introduction of European plants such as barley and other grain crops suggest an interaction with the missions or local Mexican rancheros. Despite the increasing use and diversity of crops, no evidence indicates that this small-scale agriculture was anything more than a supplement to Cahuilla subsistence, and it apparently did not alter social organization.

By 1819, several Spanish mission outposts, known as *asistencias*, were established near Cahuilla territory at San Bernardino and San Jacinto, including the *asistencia* near Redlands approximately 7.5 miles from the current project site. Cahuilla interaction with Europeans at this time was not as intense as it was for native groups living along the coast. This was likely due to the local topography and lack of water, which made the area less attractive to colonists. By the 1820s, however, European interaction increased as mission ranchos were established in the region and local Cahuilla were employed to work on them.

The Bradshaw Trail was established in 1862 and was the first major east-west stage and freight route through the Coachella Valley. Traversing the San Gorgonio Pass, the trail connected gold mines on the Colorado River with the coast. Bradshaw based his trail on the Cocomaricopa Trail, with maps and guidance provided by local Native Americans. Journals by early travelers along the Bradshaw Trail told of encountering Cahuilla villages and walk-in wells during their journey through the Coachella Valley. The continued influx of immigrants into the region introduced the Cahuilla to European diseases. The single worst recorded event was a smallpox epidemic that swept through Southern California in 1862-63, significantly reducing the Cahuilla population. By 1891, only 1,160 Cahuilla remained within what was left of their territory, down from an aboriginal population of 6,000–10,000 (Bean 1978:583-584). By 1974, approximately 900 people claimed Cahuilla descent, most of whom resided on reservations.

Between 1875 and 1891, the United States established ten reservations for the Cahuilla within their traditional territory. These reservations include: Agua Caliente, Augustine, Cabazon, Cahuilla, Los Coyotes, Morongo, Ramona, Santa Rosa, Soboba, and Torres-Martinez (Bean 1978:585). Four of the reservations are shared with other groups, including the Chemehuevi, Cupeño, and Serrano.

2.2.2.1 Luiseño

The proposed project is also in the vicinity of the area traditionally occupied by the Luiseño, who inhabited the north half of San Diego County and western edge of Riverside County (Kroeber 1925; Bean and Shipek 1978; Heizer 1978). The term Luiseño was applied to the Native Americans managed by Mission San Luis Rey and later used for the Payomkawichum nation that lived in the area where the mission was founded (Mithun 2001: 539-540). Luiseño territory encompassed the drainages of the San Luis Rey River and the Santa Margarita River, covering numerous ecological zones (Bean and Shipek 1978).

Prior to European contact, the Luiseño lived in permanent, politically autonomous villages, ranging in size from 50-400 people, and associated seasonal camps. Each village controlled a larger resource territory and maintained ties to other villages through trade and social networks. Trespassing within another village's resource area was cause for war (Bean and Shipek 1978). Villages consisted of dome-shaped dwellings (*kish*), sweat lodges, and a ceremonial enclosure (*vamkech*). Leadership within the villages focused on the chief, or Nota, and a council of elders (*puuplem*). The chief controlled religious, economic, and war-related activities (Bean 1976: 109-111; Bean and Shipek 1978).

The Luiseño religion was focused on *Chinigchinich*, a mythological hero. Religious rituals took place in a brush enclosure that housed a representation of *Chinigchinich*. Ritual ceremonies included puberty initiation rites, burial and cremation ceremonies, hunting rituals, and peace rituals (Bean and Shipek 1978).

Luiseño subsistence was focused on the acorn and supplemented by the gathering of other plant resources and shellfish, fishing, and hunting. Plant foods typically included pine nuts, seeds from various grasses, manzanita, sunflower, sage, chia, lemonade berry, prickly pear, and lamb's-quarter. Acorns were leached and served in various ways. Seeds were ground. Prey included deer, antelope, rabbit, quail, ducks and other birds. Fish were caught in rivers and creeks. Fish and sea mammals were taken from the shore or dugout canoes. Shellfish were collected from the shore and included abalone, turbans, mussels, clams, scallops, and other species (Bean and Shipek 1978).

2.2.2.2 Serrano

The Serrano are another Native American group that occupied territory near the project site. The Serrano occupied an area in and around the San Bernardino Mountains between approximately 450 and 3,350 meters (1,500-11,000 feet) above mean sea level. Their territory extended west of the Cajon Pass, east past Twentynine Palms, north of Victorville, and south to Yucaipa Valley. The Serrano language is part of the Serran division of a branch of the Takic family of the Uto-Aztecan linguistic stock (Mithun 2006:539, 543). The two Serran languages, Kitanemuk and Serrano, are closely related. Kitanemuk lands were northwest of Serrano lands. Serrano was originally spoken by a relatively small group located within the San Bernardino and Sierra Madre mountains, and the term "Serrano" has come to be ethnically defined as the name of the people in the San Bernardino Mountains (Kroeber 1925:611). The Vanyume, who lived along the Mojave River and associated Mojave Desert areas and are also referred to as the Desert Serrano, spoke either a dialect of Serrano or a closely related language (Mithun 2006:543). Year-round habitation tended to be located on the desert floor, at the base of the mountains, and up into the foothills, with all habitation areas requiring year-round water sources (Bean and Smith 1978; Kroeber 1908).

Most Serrano lived in small villages located near water sources (Bean and Smith 1978:571). Houses measuring 3.7 – 4.3 m (12 to 14 feet) in diameter were domed and constructed of willow branches and tule thatching and occupied by a single extended family. Many of the villages had a ceremonial house, used both as a religious center and the residence of the lineage leaders. Additional structures within a village might include granaries and a large circular subterranean sweathouse. The sweathouses were

typically built along streams or pools. A village was usually composed of at least two lineages. The Serrano were loosely organized along patrilineal lines and associated themselves with one of two exogamous moieties or "clans"—the Wahiyam (coyote) or the Tukum (wildcat) moiety.

The subsistence economy of the Serrano was one of hunting and collecting plant goods, with occasional fishing (Bean and Smith 1978:571). They hunted large and small animals, including mountain sheep, deer, antelope, rabbits, small rodents, and various birds, particularly quail. Plant staples consisted of seeds; acorn nuts of the black oak; piñon nuts; bulbs and tubers; and shoots, blooms, and roots of various plants, including yucca, berries, barrel cacti, and mesquite. The Serrano used fire as a management tool to increase yields of specific plants, particularly chía.

Trade and exchange was an important aspect of the Serrano economy. Those living in the lower-elevation, desert floor villages traded foodstuffs with people living in the foothill villages who had access to a different variety of edible resources. In addition to inter-village trade, ritualized communal food procurement events, such as rabbit and deer hunts and piñon, acorn, and mesquite nut-gathering events, integrated the economy and helped distribute resources that were available in different ecozones.

Contact between Serrano and Europeans was relatively minimal prior to the early 1800s. As early as 1790, however, Serrano began to be drawn into mission life (Bean and Vane 2002). More Serrano were relocated to Mission San Gabriel in 1811 after a failed indigenous attack on that mission. Most of the remaining western Serrano were moved to an *asistencia* built approximately 7.5 miles from the current project site near Redlands in 1819 (Bean and Smith 1978:573).

A smallpox epidemic in the 1860s killed many indigenous southern Californians, including many Serrano (Bean and Vane 2002). Oral history accounts of a massacre in the 1860s at Twentynine Palms may have been part of a larger American military campaign that lasted 32 days (Bean and Vane 2002:10). Surviving Serrano sought shelter at Morongo with their Cahuilla neighbors; Morongo later became a reservation (Bean and Vane 2002). Other survivors followed the Serrano leader Santos Manuel down from the mountains and toward the valley floors and eventually settled what later became the San Manuel Band of Mission Indians Reservation, formally established in 1891.

In 2003, most Serrano lived either on the Morongo or San Manuel reservations (California Indian Assistance Program 2003). The Morongo Band of Mission Indians of the Morongo Reservation, established through presidential executive orders in 1877 and 1889, includes both Cahuilla and Serrano members. Established in 1891, the San Manuel Band of Mission Indians Reservation includes Serrano. Both Morongo and San Manuel are federally recognized tribes. People of both reservations participate in cultural programs to revitalize traditional languages, knowledge, and practices.

2.2.2.3 Gabrieleño

The project site is within an area historically occupied by the Gabrieleño. Archaeological evidence points to the Gabrieleño arriving in the Los Angeles Basin sometime around 500 B.C., however this has been a subject of debate. Many contemporary Gabrieleño identify themselves as descendents of the indigenous people living across the plains of the Los Angeles Basin and use the native term Tongva (King 1994). This term is used in the remainder of this section to refer to the pre-contact inhabitants of the Los Angeles Basin and their descendants. Surrounding native groups included the Chumash and Tataviam to the northwest, the Serrano and Cahuilla to the northeast, and the Juaneño and Luiseño to the southeast.

The name "Gabrieleño" denotes those people who were administered by the Spanish from the San Gabriel Mission, which included people from the Gabrieleño area proper as well as other social groups (Bean and Smith 1978:538; Kroeber 1925: Plate 57). Therefore, in the post-Contact period, the name does not necessarily identify a specific ethnic or tribal group. The names by which Native Americans in southern California identified themselves have, for the most part, been lost. Many modern Gabrieleño

identify themselves as descendants of the indigenous people living across the plains of the Los Angeles Basin and refer to themselves as the Tongva (King 1994:12). This term is used in the remainder of this section to refer to the pre-Contact inhabitants of the Los Angeles Basin and their descendants.

Tongva lands encompassed the greater Los Angeles Basin and three Channel Islands, San Clemente, San Nicolas, and Santa Catalina. The Tongva established large, permanent villages in the fertile lowlands along rivers and streams, and in sheltered areas along the coast, stretching from the foothills of the San Gabriel Mountains to the Pacific Ocean. A total tribal population has been estimated of at least 5,000 (Bean and Smith 1978:540), but recent ethnohistoric work suggests a number approaching 10,000 (O'Neil 2002). Houses constructed by the Tongva were large, circular, domed structures made of willow poles thatched with tule that could hold up to 50 people (Bean and Smith 1978). Other structures served as sweathouses, menstrual huts, ceremonial enclosures, and probably communal granaries. Cleared fields for races and games, such as lacrosse and pole throwing, were created adjacent to Tongva villages (McCawley 1996:27). Archaeological sites composed of villages with various sized structures have been identified.

The Tongva subsistence economy was centered on gathering and hunting. The surrounding environment was rich and varied, and the tribe exploited mountains, foothills, valleys, deserts, riparian, estuarine, and open and rocky coastal eco-niches. Like that of most native Californians, acorns were the staple food (an established industry by the time of the early Intermediate Period). Acorns were supplemented by the roots, leaves, seeds, and fruits of a wide variety of flora (e.g., islay, cactus, yucca, sages, and agave). Fresh water and saltwater fish, shellfish, birds, reptiles, and insects, as well as large and small mammals, were also consumed (Bean and Smith 1978:546; Kroeber 1925:631–632; McCawley 1996:119–123, 128–131).

A wide variety of tools and implements were used by the Tongva to gather and collect food resources. These included the bow and arrow, traps, nets, blinds, throwing sticks and slings, spears, harpoons, and hooks. Groups residing near the ocean used oceangoing plank canoes and tule balsa canoes for fishing, travel, and trade between the mainland and the Channel Islands (McCawley 1996:7). Tongva people processed food with a variety of tools, including hammerstones and anvils, mortars and pestles, manos and metates, strainers, leaching baskets and bowls, knives, bone saws, and wooden drying racks. Food was consumed from a variety of vessels. Catalina Island steatite was used to make ollas and cooking vessels (Blackburn 1963; Kroeber 1925:629; McCawley 1996:129–138).

At the time of Spanish contact, the basis of Tongva religious life was the Chinigchinich cult, centered on the last of a series of heroic mythological figures. Chinigchinich gave instruction on laws and institutions, and also taught the people how to dance, the primary religious act for this society. He later withdrew into heaven, where he rewarded the faithful and punished those who disobeyed his laws (Kroeber 1925:637–638). The Chinigchinich religion seems to have been relatively new when the Spanish arrived. It was spreading south into the Southern Takic groups even as Christian missions were being built and may represent a mixture of native and Christian belief and practices (McCawley 1996:143–144).

Deceased Tongva were either buried or cremated, with inhumation more common on the Channel Islands and the neighboring mainland coast and cremation predominating on the remainder of the coast and in the interior (Harrington 1942; McCawley 1996:157). Cremation ashes have been found in archaeological contexts buried within stone bowls and in shell dishes (Ashby and Winterbourne 1966:27), as well as scattered among broken ground stone implements (Cleland et al. 2007). Archaeological data such as these correspond with ethnographic descriptions of an elaborate mourning ceremony that included a wide variety of offerings, including seeds, stone grinding tools, otter skins, baskets, wood tools, shell beads, bone and shell ornaments, and projectile points and knives. Offerings varied with the sex and status of the deceased (Johnston 1962:52–54; McCawley 1996:155–165; Reid

1926:24–25). At the behest of the Spanish missionaries, cremation essentially ceased during the post-Contact period (McCawley 1996:157).

2.2.3 Historic Overview

Post-European contact history for the state of California is generally divided into three periods: the Spanish Period (1769–1822), the Mexican Period (1822–1848), and the American Period (1848–present).

2.2.3.1 Spanish Period (1769–1822)

Spanish exploration of what was then known as Alta (upper) California began when Juan Rodriguez Cabrillo led the first European expedition into the region in 1542. For more than 200 years after his initial expedition, Spanish, Portuguese, British, and Russian explorers sailed the Alta California coast and made limited inland expeditions, but they did not establish permanent settlements (Bean 1968; Rolle 2003). Spanish entry into what was to become Riverside County did not occur until 1774 when Juan Bautista de Anza led an expedition from Sonora, Mexico to Monterey in northern California (Lech 1998).

In 1769, Gaspar de Portolá and Franciscan Father Junipero Serra established the first Spanish settlement at Mission San Diego de Alcalá. This was the first of 21 missions erected by the Spanish between 1769 and 1823. The establishment of the missions marks the first sustained occupation of Alta California by the Spanish. In addition to the missions, four presidios and three pueblos (towns) were established throughout the state (State Lands Commission 1982). In 1819, an *asistencia* was established near present-day Redlands to serve as an outpost for cattle grazing activities carried out by Mission San Gabriel's Rancho San Bernardino (San Bernardino County 2017). Around the same time, Native Americans living at the *asistencia* were directed to dig a *zanja* (irrigation ditch) to serve the *asistencia* and surrounding area.

During this period, Spain also deeded ranchos to prominent citizens and soldiers, though very few in comparison to the subsequent Mexican Period. To manage and expand their herds of cattle on these large ranchos, colonists enlisted the labor of the surrounding Native American population (Engelhardt 1927a). The missions were responsible for administrating to the local Indians as well as converting the population to Christianity (Engelhardt 1927b). The influx of European settlers brought the local Native American population in contact with European diseases which they had no immunity against, resulting in catastrophic reduction in native populations throughout the state (McCawley 1996).

2.2.3.2 Mexican Period (1822–1848)

The Mexican Period commenced when news of the success of the Mexican War of Independence (1810-1821) reached California in 1822. This period saw the federalization of mission lands in California with the passage of the Secularization Act of 1833. This Act enabled Mexican governors in California to distribute former mission lands to individuals in the form land grants. Successive Mexican governors made more than 700 land grants between 1822 and 1846, putting most of the state's lands into private ownership for the first time (Shumway 2007). About 15 land grants (ranchos) were located in Riverside County. The nearest, Rancho Jurupa, included the western portion of the city of Riverside, approximately 1 mile west of the current project site (Shumway 2007).

2.2.3.3 American Period (1848–Present)

The American Period officially began with the signing of the Treaty of Guadalupe Hidalgo in 1848, in which the United States agreed to pay Mexico $15 million for ceded territory, including California, Nevada, Utah, and parts of Colorado, Arizona, New Mexico, and Wyoming, and pay an additional $3.25 million to settle American citizens claims against Mexico. Settlement of southern California increased dramatically in the early American Period. Many ranchos in the county were sold or otherwise acquired by Americans, and most were subdivided into agricultural parcels or towns.

The discovery of gold in northern California in 1848 led to the California Gold Rush, despite the first California gold being previously discovered in southern California at Placerita Canyon in 1842 (Guinn 1977; Workman 1935:26). Southern California remained dominated by cattle ranches in the early American period, though droughts and increasing population resulted in farming and more urban professions supplanting ranching through the late nineteenth century. In 1850, California was admitted into the United States and by 1853, the population of California exceeded 300,000. Thousands of settlers and immigrants continued to move into the state, particularly after completion of the transcontinental railroad in 1869.

Local

In 1870, investors from the Southern California Colony Association, solicited by John W. North, laid out a mile-square town site. The town was originally called Jurupa, but was changed to Riverside in 1871. Agriculturalists, investors, and immigrants emigrated into the area because of the success of citrus crops. The California Fruit Growers Exchange, later Sunkist, was founded in the late 1800s along with the Citrus Experimentation Station (located at the now University of California, Riverside), making Riverside a key center of citrus machinery production. Based on a review of historic aerials, the current project site was occupied by orchards as early as 1938 (HistoricAerials.com 2017). In the 1885, Matthew Gage began construction on the Gage Canal, located adjacent to the project site, and completed initial construction by 1888 (Scott 1977). The Gage Canal played a major role in the development of the Riverside area, first serving as a water source for productive agricultural facilities and later shifting to serve municipal and industrial needs.

Riverside became a charter city in 1907, with a Mayor-Council form of government. A new City Charter was established in 1950, incited by population growth and city operating problems. A City Board of Freeholders was elected and a new Charter employing a Council-Manager form of government was implemented in 1952. Since the city's founding, Riverside has grown immensely and its economy has grown more diverse and multifaceted. Today, the Riverside-San Bernardino Metropolitan Area (the Inland Empire) is one of the most populous metropolitan areas in the country (City of Riverside 2011).

3 Background Research

3.1 California Historical Resource Information System

Rincon archaeologist Breana Campbell conducted a search of cultural resource records housed at the California Historical Resources Information System (CHRIS), Eastern Information Center (EIC) located at the University of California, Riverside on May 3, 2017. The records search was updated and expanded by the EIC on September 18, 2017. The search was conducted to identify all previous cultural resources work and previously recorded cultural resources within a one-mile radius of the project site. The CHRIS search included a review of the National Register of Historic Places (NRHP), the California Register of Historical Resources (CRHR), the California Points of Historical Interest list, the California Historical Landmarks list, the Archaeological Determinations of Eligibility list, and the California State Historic Resources Inventory list. The records search also included a review of all available historic USGS 7.5-, 15-, and 30-minute quadrangle maps.

3.1.1 Previous Studies

The EIC records search identified a total of 42 previous studies within a one-mile radius of the project site (Table 2). Of these studies, one fell within the project boundary (RI-05748) and one was adjacent to the project boundary (RI-5389). Study RI-05748, within the project boundary, was a study of the Hunter Park Specific Plan Area and encompassed the majority of the project site but did not include a pedestrian survey of the project site.

Table 1. Previous Cultural Resource Studies within a One-Mile Radius of the Project Site

Report Number	Author	Year	Title	Relationship to Project Site
RI-01698	Drover, C.	1983	*An Archaeological Assessment of Tentative Tract 12649 in Highgrove California*	Outside
RI-02050	Perault, G.	1985	*Preliminary Historic Inventory- March Air Force Base, California*	Outside
RI-02875	Arkush, B. S.	1990	*An Archaeological Assessment of Tentative Parcel 25450, Located in the Mount Vernon Bowl Area of the City of Riverside, Riverside County, California*	Outside
RI-03508	Hayden, W. E.	1992	*A Cultural Resource Assessment Conducted for Sugarloaf Proposed Reservoir Site in the City of Riverside, California*	Outside
RI-03509	Hayden, W. E.	1992	*Revised: A Cultural Resource Assessment Conducted for Sugarloaf Proposed Reservoir Site in the City of Riverside, California*	Outside

Report Number	Author	Year	Title	Relationship to Project Site
RI-03633	Jackson, A. L.	2000	*Cultural Resources Phase I Inventory: An Archaeological Assessment of a Portion of Spring Mountain Ranch in Highgrove, Riverside County, California*	Outside
RI-03693	Foster, J. M., J. J. Schmidt, C. A. Weber, G. R. Romani, R. S. Greenwood	1991	*Cultural Resource Investigation: Inland Feeder Project, Metropolitan Water District of Southern California*	Outside
RI-03851	Keller, J. A.	1994	*A Phase I Cultural Resources Assessment of Tentative Parcel Map 28040*	Outside
RI-04225	Keller, J. A.	1998	*A Phase I Cultural Resources Assessment of MP-002-989 (Western Door)*	Outside
RI-04363	Duke, C.	1999	*Letter Report: Cultural Resource Assessment for Sprint PCS Facility RV03XC086-A (Canyon Crest Heights), County of Riverside*	Outside
RI-04391	Keller, J. A.	2000	*A Phase I Cultural Resources Assessment of Palmyrita 4 (MP-002-923) 6.13-Acres of Land Located in the City of Riverside, Riverside County, California*	Outside
RI-04393	Keller, J. A.	2000	*A Phase I Cultural Resources Assessment of Marlborough Tech Center, 5.6 Acres of Land Located in the City of Riverside, Riverside County, California*	Outside
RI-04411	Love, B. T., M. Duhdul, A. Sanchez Moreno	2000	*Historical/Archaeological Resources Survey Report: Robert Aust Industrial Office Park, City of Riverside, Riverside County, California*	Outside
RI-04652	Keller, J. A.	2002	*A Phase I Cultural Resources Assessment of DR-096-012, 19.6 Acres of Land in the City of Riverside, Riverside County, California*	Outside
RI-04653	Keller, J. A.	2002	*A Phase I Cultural Resources Assessment of the Columbia/Ridge Project, 13.75 Acres of Land in the City of Riverside, Riverside County, California*	Outside
RI-04798	Bonner, W. H.	2004	*An Archaeological Assessment of an 8.4 Acre Parcel Located at 2751 Mount Vernon Avenue, Riverside, Riverside County, California*	Outside

Report Number	Author	Year	Title	Relationship to Project Site
RI-04813	National Park Services HAER	1993	*California Citrus Heritage Recording Project: Photographs, Written Historical and Descriptive Data, Reduced Copies of Measured Drawings for: Arlington Height Citrus Landscape, Gage Irrigation Canal, National Orange Company Packing House, Victoria Bridge, and Union Pacific Railroad Bridge*	Outside
RI-05056	McKenna et al.	2003	*A Phase I Cultural Resources Investigation for the Proposed Corona Feeder Master Plan Project Area, Riverside County, California*	Outside
RI-05238	Dice, M.	2004	*Archaeological Resources Assessment of the Springbrook Estates Project: A 183.95 Acre Site Located in the Community of Highgrove, County of Riverside, CA*	Outside
RI-05270	Dice, M. and P. Messick	2004	*An Archaeological Resource Evaluation and Paleontological Records Search on John Laing Homes; Burns Ranch Project (APN #360-240-034 and 360-260-005), County of Riverside, CA*	Outside
RI-05389	Keller, J.	2003	*A Phase I Cultural Resources Assessment of DR 066-023 +/-7.77 Acres of Land in the City of Riverside, Riverside County, CA*	Adjacent
RI-05719	Billat, L.	2003	*Request for SHPO Review of FCC Undertaking Project Hunter Park/ CA-8574A*	Outside
RI-05744	Tang, B. and M. Hogan	2003	*Historical/Archaeological Resources Survey Report for Assessor's Parcel Numbers 249-110-050 and -051, Proposed Spruce Financial Center 2 Project, City of Riverside, Riverside County, California*	Outside
RI-05747	White, L. S., D. Van Horn, and R. S. White	2002	*Historical Investigations at the Vivienda and Eureka Ranches, Spring Mountain Ranch Project, Highgrove Area of Unincorporated Riverside County*	Outside
RI-05748	Doan, U. K., M. Hogan, and B. Tang	2003	*Archaeological Sensitivity Assessment: Hunter Park Redevelopment Plan Amendment, City of Riverside, Riverside County, California*	**Within**
RI-05785	Dahdul, M.	2002	*Historical/Archaeological Resources Survey Report, Tentative Parcel No. 29261, City of Riverside, Riverside County, California*	Outside

Report Number	Author	Year	Title	Relationship to Project Site
RI-06052	Miller, J. and A. Wesson	2004	*Cultural Resources Survey of the Proposed Pigeon Pass Ends Cellular Site, 731 Mount Vernon Avenue, Riverside, Riverside County, California*	Outside
RI-06088	Bricker, D.	1998	*First Supplemental Historic Property Survey Report for the Improvement of Interstate Route 215/State Route 91/State Route 60, Riverside County, CA*	Outside
RI-06424	Tang, B., M. Hogan, M. Wetherbee, and R. Porter	2005	*Identification and Evaluation of Historic Properties, Highland, Hunt, an Bryant Parks Improvement Project, City of Riverside, Riverside County, California*	Outside
RI-07291	Tang, B. and M. Hogan	2007	*Historical/Archaeological Resources Survey Report: Assessor's Parcel No. 251-120-010, 251-130-009, and 251-130-010 in the City of Riverside, Riverside County, California*	Outside
RI-07322	Bonner, W. and M. Aislin-Kay	2006	*Cultural Resources Records Search and Site Visit Results for T-Mobile Telecommunications Facility Candidate IE24032C (Essex Commercial Center), 1855 Iowa Avenue, Riverside, Riverside County, California*	Outside
RI-7352	Tibbet, C. A. Gini, B. Bell	2007	*Cultural Resources Assessment: Columbia Avenue, Iowa Avenue Roadway Improvements, City of Riverside, Riverside County, California*	Outside
RI-07355	Formica, T. H. and P. Beedle	2007	*Cultural Resources Report for the San Bernardino Transmission Main Replacement Project, San Bernardino and Riverside Counties, California*	Outside
RI-07503	McKenna, J. A.	2007	*Addendum Report: A Phase I Cultural Resources Investigation of the Proposed Columbia Business Center Near Highgrove, Riverside County, California*	Outside
RI-07924	Zepeda-Herman, C.	2008	*Letter Report: Results of Cultural Resources Survey for the Expanded Gage Exchange Project (RECON No. 4694A)*	Outside
RI-08022	Laguna Mountain Environmental, Inc.	2007	*Letter Report: Cultural Resource Record Search for P07-104SD-FF Spring Mountain Ranch (APN 255-200-035 and 255-200-036), Riverside County, California*	Outside
RI-08094	Sanka, J. M. and M. Aislin-Kay	2008	*Phase I Cultural Resources Assessment Springbrook Estates Detention Basin Project, Highgrove, Riverside, California*	Outside

Report Number	Author	Year	Title	Relationship to Project Site
RI-8771	Tang, B. T.	2010	*Preliminary Historical/Archaeological Resources Study, Southern California Regional Rail Authority (SCRRA) Perris Valley Line Positive Train Control (PTC) Project*	Outside
RI-08774	George, J.	2012	*Cultural Resources Records Search for the Riverside County Flood Control and Water Conservation District South Norco Channel Line S-1 Project*	Outside
RI-09414	Smith, B. F. and K. J. Coulter	2013	*Phase I Cultural Resources Survey for the Bixby Highgrove Project TTM 36668 County of Riverside*	Outside
RI-09795	Haas, H., B. Campbell, and C. Duran	2016	*Phase I Cultural Resources Study for the 797 Palmyrita Trailer Parking Lot Project, Riverside, Riverside County, California*	Outside
RI-09832	Wills, C. and S. A. Williams	2015	*Cultural Resources Records Search Results for T-Mobile West, LLC Candidate '824716 Essex,' 1855 Iowa Avenue, Riverside, Riverside County, California*	Outside

Source: Eastern Information Center, May, September 2017

3.1.2 Previously Recorded Resources

The EIC records search identified 24 previously recorded cultural resources within one-mile of the project site. None of these are located within the project area. Of the resources within the search area, four are prehistoric archaeological sites, each consisting of a bedrock milling feature. The results of the records search are summarized below in Table 2.

Table 2. Previously Recorded Resources within a One-Mile Radious of the Project Site

Primary Number	Trinomial	Resource Type	Description	Recorder(s) and Year(s)	NRHP/CRHR Status	Relationship to Project Site
P-33-003957	CA-RIV-3957	Prehistoric site	Single bedrock milling feature	B. S. Arkush 1990	Not evaluated	Outside
P-33-004196	CA-RIV-4196H	Historic site	Irrigation canal and refuse scatter	J. Schmidt et al. 1990	Not evaluated	Outside
P-33-004200	CA-RIV-4200H	Historic site	Water catchment system	J. Schmidt et al. 1990	Not evaluated	Outside
P-33-04637	CA-RIV-4637	Prehistoric site	Single bedrock milling feature	R. White 1991	Not evaluated	Outside

Primary Number	Trinomial	Resource Type	Description	Recorder(s) and Year(s)	NRHP/CRHR Status	Relationship to Project Site
P-33-04638	CA-RIV-4638	Prehistoric site	Six bedrock milling features on a single boulder	R. White 1991	Not evaluated	Outside
P-33-004768	CA-RIV-4768H	Historic structure	Gage canal	R. J. Wlodarski 1992	NRHP Status Code 6Y2: Determined ineligible for NR[HP] by consensus	Adjacent
P-33-005911	CA-RIV-5638	Historic site	Collapsed rock cairn	J. Moreno 1994	Not evaluated	Outside
P-33-006940	N/A	Historic building	California Ranch style home	J. Warner 1982	NRHP Status Code 6: Determined ineligible for NRHP listing	Outside
P-33-006941	N/A	Historic building	Vernacular home	J. Warner 1982	NRHP Status Code 5: Ineligible for NR[HP] but still of local interest	Outside
P-33-006957	N/A	Historic building	Hagerty House; Single-family residence	T. Newman 1982	NRHP Status Code 5: Ineligible for NR[HP] but still of local interest	Outside
P-33-006958	N/A	Historic building	Yoder House; Single-family residence	M. Gayk 1982	NRHP Status Code 5: Ineligible for NR[HP] but still of local interest	Outside
P-33-006959	N/A	Historic building	Johnson-Lunderman House; Single-family residence	J. Warner 1982	NRHP Status Code 3: Appears eligible for NR[HP] or CR[HR] through Survey Evaluation	Outside
P-33-006960	N/A	Historic building	Stevenson House; Single-family residence	J. Warner 1982	NRHP Status Code 4C: Appears eligible for NR[HP] or CR[HR} through other evaluation	Outside

Primary Number	Trinomial	Resource Type	Description	Recorder(s) and Year(s)	NRHP/CRHR Status	Relationship to Project Site
P-33-006963	N/A	Historic building	Single-family residence	T. Newman 1982	NRHP Status Code 5: Ineligible for NR[HP] but still of local interest	Outside
P-33-006964	N/A	Historic building	Single-family residence	T. Newman 1982	NRHP Status Code 5: Ineligible for NR[HP] but still of local interest	Outside
P-33-009744	CA-RIV-6492H	Historic site	Foundations and refuse scatters from homestead	D. Ballester and A. Sanchez Moreno 2000	Not evaluated	Outside
P-33-009774	N/A	Historic structure	Southern Pacific Railroad	S. Ashkar 1999	Not evaluated	Outside
P-33-011252	CA-RIV-6724	Prehistoric site	Single bedrock milling feature	D. Ballester 2005	Not evaluated	Outside
P-33-011475	N/A	Historic Building	Canyon Crest Family Student Housing	B. T. Tang 2002	NRHP Status Code 6Z: Found ineligible for NR[HP}, CR[HR], or local designation through survey evaluation	Outside
P-33-013218	N/A	Historic building	Single family residence	B. T. Tang 2003	NRHP Status Code 3S: Appears eligible for NR[HP] as an individual property through survey evaluation	Outside
P-33-015743	CA-RIV-8196	Historic structure	Railroad spur	C. Cotterman and E Denniston 2012; J. Trampier 201; S. Justus and A. Giacinto 2010; M. C. Hamilton 2009; D. Ballester 2008; A. Craft 2008; T. Cooley 2007; P. Beedle 2006; P. Easter and P. Beedle 2005	Recommended eligible	Outside
P-33-016644	CA-RIV-8722H	Historic landscape	Citrus grove and irrigation features	R. Lichtenstein and D. Largo 2007	Not evaluated	Outside

Primary Number	Trinomial	Resource Type	Description	Recorder(s) and Year(s)	NRHP/CRHR Status	Relationship to Project Site
P-33-016650	N/A	Historic structure	Burlington Northern Santa Fe Railroad	G. Austerman 2007	NRHP Status Code 6Z: Found ineligible for NR[HP}, CR[HR], or local designation through survey evaluation	Outside
P-33-022126	CA-RIV-11333	Historic site	Remnants of buried concrete pipeline and irrigation system	D. Ballester and D. Perez 2013	Recommended ineligible	Outside

Source: Eastern Information Center, May 2017

3.1.3 P-33-004768: Gage Canal

Resource P-33-004768, the Gage Canal, runs along the western boundary of the project site. Construction of the Gage Canal system began in October of 1885. The water originally ran through an unlined ditch with wooden flumes constructed to carry water across arroyos. The well was later lined with concrete over its entire length by 1903, and by 1974 the length of the canal from the headworks in San Bernardino to Linden Street in the City of Riverside was moved to an underground pipeline. The Gage Canal has been determined ineligible for listing in the NRHP by consensus through the Section 106 process. The Gage Canal is City of Riverside Cultural Heritage Landmark #24.

3.2 Native American Heritage Commission

Rincon Consultants initiated Native American coordination for this project on May 1, 2017. As part of the process of identifying cultural resources within or near the project site, Rincon contacted the NAHC to request a review of the Sacred Lands File (SLF). The NAHC emailed a response on May 2, 2017, stating that the results of the SLF search failed to indicate the presence of Native American cultural resources within the APE (Appendix A). The NAHC provided a list of 63 Native American contacts who may have additional information regarding the project site. Because of the large number of contacts listed by the NAHC, Rincon limited outreach to contacts known to be interested in projects in the City of Riverside based on the City's AB 52 notification list. Rincon prepared and mailed letters to these ten select contacts on May 5, 2017. Separately, the City of Riverside is conducting AB 52 consultation.

On May 26, 2017, the Agua Caliente Band of Cahuilla Indians (ACBCI) responded via email stating that the project is within their "traditional use area" and requested a copy of the records search and associated report. Rincon provided a draft copy of this report to the ACBCI on June 2, 2017. As of September 18, 2017, no additional responses have been received from the ACBCI.

On June 1, 2017, the San Manuel Band of Mission Indians (SMBMI) responded via email stating that the project is "within Serrano ancestral territory" and requesting copies of records searches and cultural resources studies prepared for the project. Rincon provided a draft copy of this report to the SMBMI on June 2, 2017. As of September 18, 2017, no additional responses have been received from the SMBMI.

On June 15, 2017, The Soboba Band of Luiseño Indians (Soboba) responded via email on June 15, 2017 stating that the project site is within the bounds of their "Tribal Traditional Use Areas," requesting

updates of information regarding the progress of the project, and requesting the presence of a Soboba Native American Monitor during ground disturbing activities. As of September 18, 2017, no additional responses from Soboba have been received.

3.3 Map and Aerial Review

Rincon reviewed historic topographic maps and aerial photographs from NETR Online to identify past land use of the project site. The project site was in use as an orchard from at least as early as 1938 until the orchard was removed sometime between 1994 and 2002 (NETR Online 2017).

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4 Fieldwork

4.1 Pedestrian Survey Methods

Rincon archaeologist Breana Campbell conducted a pedestrian survey of the project site on May 4, 2017. Ms. Campbell surveyed the project site using transects spaced no greater than 15 meters (45 feet) apart. The survey was generally oriented east-west.

The archaeologist examined all exposed ground surface for artifacts (e.g., flaked stone tools, tool-making debris, stone milling tools, ceramics, fire-affected rock [FAR]), ecofacts (marine shell and bone), soil discoloration that might indicate the presence of a cultural midden, soil depressions, and features indicative of the former presence of structures or buildings (e.g., standing exterior walls, postholes, foundations) or historic debris (e.g., metal, glass, ceramics). Ground disturbances such as burrows and drainages were visually inspected. Survey notes were prepared by the survey crew each day and are available upon request. Locational data was collected for each newly identified site and isolate using a Geo7X Trimble. Newly recorded sites and isolates, as well as previously recorded sites and isolates, were documented using Department of Parks and Recreation (DPR) Series 523 forms. Photographs of each site or isolate were taken using Canon Rebel digital cameras; photographs are maintained at the Rincon Carlsbad office.

4.2 Results

Ground visibility within the project site was poor, (approximately 5 percent visibility), due to very dense vegetation consisting primarily of dry grasses (Figures 2 and 3). Disturbances within the project site include grading for the citrus orchard that once occupied the area and excavation for the Gage Canal, which runs underground along the western boundary of the project site. The project site contains the remnants of an historic-period irrigation system that is likely associated with the orchard, and present as early as 1938 based on historic aerials (HistoricAerials.com 2017). The irrigation system has been recorded on Department of Parks and Recreation (DPR) Series 523 forms and is discussed in further detail below.

Figure 2. Example of the vegetation within the project site, facing north.

Figure 3. View of project site, facing west.

4.2.1 Site GP-1: Historic-Period Irrigation System

Site GP-1 consists of the remnants of an irrigation system associated with the citrus orchard that once occupied the property. Surviving features of the irrigation system include twenty-nine stand pipes and two weir boxes. The area is littered with several concrete fragments. The system is no longer in use and has been damaged and vandalized. It is most likely an extension of the irrigation system recorded as P-33-022126 (CA-RIV-11333), located approximately 420 meters (460 yards) northeast of the project site. CA-RIV-11333 included a concrete pipe alignment that may extend into GP-1, though no visible surface evidence of a pipeline was present at the time of the current survey so it is unclear whether the water source was the Gage Canal or another pipeline.

The weir boxes and stand pipes are constructed of concrete (Figures 4 and 5). The largest of the two (Figure 4), measuring 20 feet by 4 feet, is dug into the ground and flush with the ground surface along the alignment of the Gage Canal. This weir box is located just outside of the project boundary and will not be impacted by the project. The smaller weir measures 5 feet by 3 feet and reaches a height of 18 inches.

Figure 4. Weir box within GP-1, facing northwest.

Figure 5. View of standpipe within GP-1.

5 Management Recommendations

The cultural resource records search identified no previously recorded cultural resources within the project site. The pedestrian survey of the project site resulted in the identification of a previously unrecorded historic-period irrigation system (GP-1). The site consists of only fragmented remnants of an irrigation system built to serve an orchard that was removed between 1994 and 2002. The system does not possess integrity of design, setting, workmanship, feeling, or association. It further cannot be demonstrated that the irrigation system is associated with events or persons significant in our past (Criteria 1 and 2). Such irrigation features and systems are ubiquitous throughout the region. As such, the system further does not embody the distinctive characteristics of a type, period, or method of installation nor will it yield information important to history (Criteria 3 and 4). Thus, site GP-1 is recommended ineligible for listing in the CRHR, and impacts to this resource would not be considered significant. A weir box associated with GP-1 is located along the City-listed Gage Canal, however this weir box will not be removed or impacted by the proposed project.

The project will include the extension of Marlborough Avenue across the Gage Canal to provide access to the proposed project. However, the Gage Canal runs underground at this location and will not be impacted by project construction. The Gage Canal is crossed by paved roads numerous times throughout its alignment, including by Columbia Avenue approximately 400 meters (0.25 miles) north of Marlborough Avenue. Construction activities associated with the extension of Marlborough Avenue will not extend deep enough to impact the canal. Additionally, according to the project site plans, retaining walls would be installed along the perimeter of paved areas to preserve the Gage Canal and ensure proper buffering from existing contours. Thus, the project is not expected to impact the Gage Canal. While it does not appear that the project will impact the Gage Canal, any subsurface or excavations or activities taking place near the canal should consider potential effects.

The project site has been disturbed by the initial planting, replanting, and removal of the orchard that once occupied the property. The project site is located at the foot of the Box Springs Mountains, though only four prehistoric archaeological sites have been recorded within a 1-mile radius of the project site and no archaeological resources were identified during the pedestrian survey. The four sites area all the locations of bedrock milling features. While there is some archaeological sensitivity due to the location of the project site along the base of the mountains, the low density of archaeological sites in the area and the lack of any indications (such as exposed bedrock) of potential archaeological materials point to this sensitivity being very low. As a result of these considerations, Rincon recommends that the project site is not considered sensitive for historic or prehistoric archaeological resources.

Based on the results of the current study, Rincon recommends a finding of ***less than significant impact to historical resources with mitigation incorporated*** under CEQA. The following measures are recommended in the case of the unanticipated discovery of cultural resources during project construction.

MM-CUL-1 Prior to grading permit issuance, if there are any changes to project site design and/or proposed grades, the Applicant and the City shall contact interested tribes to provide an electronic copy of the revised plans for review. Additional consultation shall occur between the City and interested tribes to discuss any proposed changes and review any new impacts and/or potential avoidance/preservation of the cultural resources on the project site. The City and the Applicant shall make all attempts to avoid and/or preserve in place as many

cultural and paleontological resources as possible that are located on the project site if the site design and/or proposed grades should be revised.

MM-CUL-2 **Archaeological and Paleontological Monitoring:** At least 30-days prior to application for a grading permit and before any grading, excavation and/or ground disturbing activities on the site take place, the Project Applicant shall retain a Secretary of Interior Standards qualified archaeological monitor to monitor all ground-disturbing activities in an effort to identify any unknown archaeological resources.

1. The Project Archaeologist, in consultation with interested tribes, the Developer and the City, shall develop an Archaeological Monitoring Plan to address the details, timing and responsibility of all archaeological and cultural activities that will occur on the project site. Details in the Plan shall include:

    a. Project grading and development scheduling;
    b. The development of a rotating or simultaneous schedule in coordination with the applicant and the Project Archeologist for designated Native American Tribal Monitors from the consulting tribes during grading, excavation and ground disturbing activities on the site: including the scheduling, safety requirements, duties, scope of work, and Native American Tribal Monitors' authority to stop and redirect grading activities in coordination with all Project archaeologists;

    c. The protocols and stipulations that the Applicant, tribes and project archaeologist/paleontologist will follow in the event of inadvertent cultural resources discoveries, including any newly discovered cultural resource deposits, or nonrenewable paleontological resources that shall be subject to a cultural resources evaluation;

    d. Treatment and final disposition of any cultural and paleontological resources, sacred sites, and human remains if discovered on the project site; and

    e. The scheduling and timing of the Cultural Sensitivity Training noted in mitigation measure **MM-CUL-3**.

2. In the case of inadvertent discoveries, the consulting Native American tribes or bands will be contacted and provided information of the find, and permitted/invited to perform a site visit when the Project Archaeologist and Tribal monitor makes his/her assessment, so as to provide input. In the case of inadvertent discoveries, the consulting Native American tribes or bands have the right to elect to monitor the project moving forward, should the consulting Native American tribes or bands choose to do so after assessment of the find(s).

3. During the project duration, the consulting Native American tribes or bands will be provided copies of any daily/weekly/etc. logs completed by the archaeologist(s) and tribal monitor(s) for review. In addition, the consulting Native American tribes or bands will be provided a copy of the final monitoring report(s) for review.

MM-CUL-3 **Cultural Sensitivity Training:** The Project Archaeologist and Native American Monitors from consulting tribes shall attend the pre-grading meeting with the developer/permit holder's contractors to provide Cultural Sensitivity Training for all construction personnel. This shall include the procedures to be followed during ground disturbance in sensitive areas and protocols that apply in the event that unanticipated resources are discovered. Only construction personnel who have received this training can conduct construction and disturbance activities in sensitive areas. A sign in sheet for attendees of this training shall be included in the Phase IV Monitoring Report.

MM-CUL-4 **Treatment and Disposition of Cultural Resources:** In the event that Native American cultural resources are inadvertently discovered during the course of grading for this Project. The following procedures will be carried out for treatment and disposition of the discoveries:

1. **Temporary Curation and Storage:** During the course of construction, all discovered resources shall be temporarily curated in a secure location onsite or at the offices of the project archaeologist. The removal of any artifacts from the project site will need to be thoroughly inventoried with tribal monitor oversite of the process; and

2. **Treatment and Final Disposition:** The landowner(s) shall relinquish ownership of all cultural resources, including sacred items, burial goods, and all archaeological artifacts and non-human remains as part of the required mitigation for impacts to cultural resources. The applicant shall relinquish the artifacts through one or more of the following methods and provide the City of Riverside Community and Economic Development Department with evidence of same:

    a. Accommodate the process for onsite reburial of the discovered items with the consulting Native American tribes or bands. This shall include measures and provisions to protect the future reburial area from any future impacts. Reburial shall not occur until all cataloguing and basic recordation have been completed;

    b. A curation agreement with an appropriate qualified repository within Riverside County that meets federal standards per 36 CFR Part 79 and therefore would be professionally curated and made available to other archaeologists/researchers for further study. The collections and associated records shall be transferred, including title, to an appropriate curation facility within Riverside County, to be accompanied by payment of the fees necessary for permanent curation;

c. If more than one Native American tribe or band is involved with the project and cannot come to an agreement as to the disposition of cultural materials, they shall be curated at the Western Science Center or Riverside Metropolitan Museum by default; and

d. At the completion of grading, excavation and ground disturbing activities on the site a Phase IV Monitoring Report shall be submitted to the City documenting monitoring activities conducted by the project Archaeologist and Native Tribal Monitors within 60 days of completion of grading. This report shall document the impacts to the known resources on the property; describe how each mitigation measure was fulfilled; document the type of cultural resources recovered and the disposition of such resources; provide evidence of the required cultural sensitivity training for the construction staff held during the required pre-grade meeting; and, in a confidential appendix, include the daily/weekly monitoring notes from the archaeologist. All reports produced will be submitted to the City of Riverside, Eastern Information Center and interested tribes.

MM-CUL-5 Cease Ground-Disturbing Activities and Notify County Coroner If Human Remains Are Encountered. If human remains are unearthed during implementation of the Proposed Project, the City of Riverside and the Applicant shall comply with State Health and Safety Code Section 7050.5. The City of Riverside and the Applicant shall immediately notify the County Coroner and no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to PRC Section 5097.98. If the remains are determined to be of Native American descent, the coroner has 24 hours to notify the Native American Heritage Commission (NAHC). The NAHC shall then identify the person(s) thought to be the Most Likely Descendent (MLD). After the MLD has inspected the remains and the site, they have 48 hours to provide recommendations to the landowner. If the NAHC is unable to identify a MLD, or the MLD identified fails to make a recommendation, or the landowner rejects the recommendation of the MLD and the mediation provided for in Subdivision (k) of Section 5097.94, if invoked, fails to provide measures acceptable to the landowner, the landowner or his or her authorized representative shall inter the human remains and items associated with Native American human remains with appropriate dignity on the property in a location not subject to further and future subsurface disturbance.

MM-CUL-6 Prior to any grading, the Project Applicant will meet with the Project Archeologist, and the consulting Native American tribes or bands in order to assess the feature, identified during consultation, located on the southeast border of the project boundary to determine the suitability for relocation to a permanent open space area. The consulting Native American tribes or bands shall work with the Project Archaeologist, Project Applicant and the Grading Contractor or appropriate personnel to determine whether the features can be relocated safely and will discuss the most appropriate methods for relocation. Before construction activities may resume in the affected area, any visible artifacts shall be recovered

and the features recorded using professional archaeological methods. The current Department of Parks and Recreation (DPR) Forms shall be updated, detailing which features were relocated, the process taken and updated maps provided documentation of the features' new location. The site record should clearly indicate that the features are not in their original location and why they were relocated.

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6 References

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CR Appendix A

Records Search Summary

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
RI-03508	NADB-R - 1084193; Voided - MF-3771	1992	HAYDEN, WILLIAM E.	A CULTURAL RESOURCE ASSESSMENT CONDUCTED FOR SUGARLOAF PROPOSED RESERVOIR SITE IN THE CITY OF RIVERSIDE, CALIFORNIA	ARCHAEOLOGICAL RESOURCE MANAGEMENT CORP.	33-004768
RI-03509	NADB-R - 1084236; Voided - MF-3771	1992	HAYDEN, WILLIAM E.	REVISED: A CULTURAL RESOURCE ASSESSMENT CONDUCTED FOR SUGARLOAF PROPOSED RESERVOIR SITE IN THE CITY OF RIVERSIDE, CALIFORNIA	Archaeological Resource Management Corporation	33-004768
RI-03693	NADB-R - 1084465; Voided - MF-3996	1991	FOSTER, JOHN M., JAMES J. SCHMIDT, CARMEN A. WEBER, GWENDOLYN R. ROMANI, and ROBERTA S. GREENWOOD	CULTURAL RESOURCE INVESTIGATION: INLAND FEEDER PROJECT, METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA	GREENWOOD & ASSOCIATES	33-000021, 33-000024, 33-000399, 33-000608, 33-001017, 33-001697, 33-002504, 33-002505, 33-002951, 33-003098
RI-03851	NADB-R - 1084724; Other - PM 28040; Voided - MF-4195	1994	KELLER, JEAN A.	A PHASE I CULTURAL RESOURCES ASSESSMENT OF TENTATIVE PARCEL MAP 28040	AUTHOR	
RI-04225	NADB-R - 1085432; Voided - MF-4697	1998	KELLER, JEAN A.	A PHASE I CULTURAL RESOURCES ASSESSMENT OF MP-002-989 (WESTERN DOOR).	AUTHOR	
RI-04393	NADB-R - 1085720; Voided - MF-4895	2000	KELLER, JEAN A.	A PHASE I CULTURAL RESOURCES ASSESSMENT OF MALBOROUGH TECH CENTER 5.60 ACRES OF LAND LOCATED IN THE CITY OF RIVERSIDE, RIVERSIDE COUNTY, CALIFORNIA	JEAN A. KELLER	33-001759, 33-001987, 33-002638, 33-003957, 33-004168, 33-004196, 33-004197, 33-004198, 33-004200, 33-004495, 33-004637, 33-004768, 33-004787
RI-04411	NADB-R - 1085748; Submitter - 615; Voided - MF-4920	2000	LOVE, BRUCE, BAI "TOM" TANG, MARIAM DUHDUL, and ADRIAN SANCHEZ MORENO	HISTORICAL/ARCHAEOLOGICAL RESOURCES SURVEY REPORT: ROBERT AUST INDUSTRIAL OFFICE PARK, CITY OF RIVERSIDE, RIVERSIDE COUNTY, CALIFORNIA	CRM TECH	33-006940
RI-04652	NADB-R - 1086011	2002	KELLER, JEAN A.	A PHASE I CULTURAL RESOURCES ASSESSMENT OF DR-096-012, 19.6 ACRES OF LAND IN THE CITY OF RIVERSIDE, RIVERSIDE COUNTY, CALIFORNIA	AUTHOR	
RI-04653	NADB-R - 1086012	2002	KELLER, JEAN A.	A PHASE I CULTURAL RESOURCES ASSESSMENT OF THE COLUMBIA/RIDGE PROJECT, 13.75 ACRES OF LAND IN THE CITY OF RIVERSIDE, RIVERSIDE COUNTY, CALIFORNIA	AUTHOR	

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
RI-05056	NADB-R - 1086418; Submitter - 01-02-03-708	2003	MCKENNA ET AL.	A PHASE I CULTURAL RESOURCES INVESTIGATION FOR THE PROPOSED CORONA FEEDER MASTER PLAN PROJECT AREA, RIVERSIDE COUNTY, CALIFORNIA	MCKENNA ET AL	33-003832, 33-004768, 33-004791, 33-009774
RI-05270	NADB-R - 1086633	2004	DICE, MICHAEL and PETER MESSICK	AN ARCHAEOLOGICAL RESOURCE EVALUATION AND PALEONTOLOGICAL RECORDS SEARCH ON JOHN LAING HOMES; BURNS RANCH PROJECT (APN# 360-240-034 AND 360-260-005) COUNTY OF RIVERSIDE, CA	MICHAEL BRANDMAN ASSOCIATES	33-000332, 33-000634
RI-05389	NADB-R - 1086752	2003	KELLER, JEAN	A PHASE I CULTURAL RESOURCES ASSESSMENT OF DR 066-023, +/-7.77 ACRES OF LAND IN THE CITY OF RIVERSIDE, RIVERSIDE COUNTY, CA	JEAN KELLER	
RI-05748	NADB-R - 1087111; Submitter - 994	2003	DOAN, UYEN K., MICHAEL HOGAN, and BAI TANG	ARCHAEOLOGICAL SENSITIVITY ASSESSMENT: HUNTER PARK REDEVELOPMENT PLAN AMENDMENT, CITY OF RIVERSIDE, RIVERSIDE COUNTY, CALIFORNIA	CRM TECH	33-001984, 33-004495, 33-004791, 33-008752, 33-009006, 33-010902
RI-05785	NADB-R - 1087148; Submitter - 766	2002	DAHDUL, MARIAM	HISTORICAL/ARCHAEOLOGICAL RESOURCES SURVEY REPORT, TENTATIVE PARCEL NO. 29261, CITY OF RIVERSIDE, RIVERSIDE COUNTY, CALIFORNIA	CRM TECH	33-011252
RI-07503	Submitter - Job No.07-07-07-1292	2007	McKenna, Jeanette A.	Addendum Report: A Phase I Cultural Resources Investigation of the Proposed Columbia Business Center Near Highgrove, Riverside County, California	McKenna et. al.	
RI-07924	Other - RECON 4694A	2008	Zepeda-Herman, Carmen	Letter Report: Results of Cultural Resources Survey for the Expanded Gage Exchange Project (RECON No. 4694A)		33-009774

CR Appendix B

Native American Scoping

NATIVE AMERICAN HERITAGE COMMISSION
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
(916) 373-3710
(916) 373-5471 FAX

May 17, 2017

Hannah Haas
Rincon Consultants, Inc.

Sent by E-mail: hhaas@rinconconsultants.com

RE: Proposed 350000 Sq Ft Warehouse Project, City of Riverside; San Bernardino South and Riverside East USGS Quadrangles, Riverside County, California

Dear Ms. Haas:

Attached is a consultation list of tribes with traditional lands or cultural places located within the boundaries of the above referenced counties. Please note that the intent of the reference codes below is to avoid or mitigate impacts to tribal cultural resources, as defined, for California Environmental Quality Act (CEQA) projects under AB-52.

As of July 1, 2015, Public Resources Code Sections 21080.3.1 and 21080.3.2 **require public agencies** to consult with California Native American tribes identified by the Native American Heritage Commission (NAHC) for the purpose mitigating impacts to tribal cultural resources:

> **Within 14 days** of determining that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency shall provide formal notification to the designated contact of, or a tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, which shall be accomplished by means of at least one written notification that includes a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation pursuant to this section. (Public Resources Code Section 21080.3.1(d))

The law does not preclude agencies from initiating consultation with the tribes that are culturally and traditionally affiliated with their jurisdictions. The NAHC believes that in fact that this is the best practice to ensure that tribes are consulted commensurate with the intent of the law.

In accordance with Public Resources Code Section 21080.3.1(d), formal notification must include a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation. The NAHC believes that agencies should also include with their notification letters information regarding any cultural resources assessment that has been completed on the APE, such as:

1. The results of any record search that may have been conducted at an Information Center of the California Historical Resources Information System (CHRIS), including, but not limited to:

   - A listing of any and all known cultural resources have already been recorded on or adjacent to the APE;
   - Copies of any and all cultural resource records and study reports that may have been provided by the Information Center as part of the records search response;
   - If the probability is low, moderate, or high that cultural resources are located in the APE.
   - Whether the records search indicates a low, moderate or high probability that unrecorded cultural resources are located in the potential APE; and
   - If a survey is recommended by the Information Center to determine whether previously unrecorded cultural resources are present.

2. The results of any archaeological inventory survey that was conducted, including:

   - Any report that may contain site forms, site significance, and suggested mitigation measurers.

     All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for pubic disclosure in accordance with Government Code Section 6254.10.

3. The results of any Sacred Lands File (SFL) check conducted through Native American Heritage Commission. A search of the SFL was completed for the project with negative results however the area is sensitive for potential tribal cultural resources.

4. Any ethnographic studies conducted for any area including all or part of the potential APE; and

5. Any geotechnical reports regarding all or part of the potential APE.

Lead agencies should be aware that records maintained by the NAHC and CHRIS is not exhaustive, and a negative response to these searches does not preclude the existence of a cultural place. A tribe may be the only source of information regarding the existence of a tribal cultural resource.

This information will aid tribes in determining whether to request formal consultation. In the case that they do, having the information beforehand well help to facilitate the consultation process.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance we are able to assure that our consultation list contains current information.

If you have any questions, please contact me at my email address: gayle.totton@nahc.ca.gov.

Sincerely,

Gayle Totton, M.A., PhD.
Associate Governmental Program Analyst

Native American Contact List
May 2, 2017
Riverside County

Ewiiaapaayp Band of Kumeyaay Indians
Robert Pinto Sr., Chairperson
4054 Willows Road — Diegueno/Kumeyaay
Alpine , CA 91901
(619) 445-6315

(619) 445-9126 Fax

La Posta Band of Diegueño Mission Indians
Gwendolyn Parada, Chairperson
8 Crestwood Road — Diegueno/Kumeyaay
Boulevard , CA 91905
LP13boots@aol.com
(619) 478-2113
(619) 478-2125 Fax

Manzanita Band of Kumeyaay Nation
Angela Elliott-Santos, Chairperson
P.O. Box 1302 — Diegueno/Kumeyaay
Boulevard , CA 91905
(619) 766-4930

(619) 766-4957 Fax

San Pasqual Band of Diegueño Mission Indians
Allen E. Lawson, Chairperson
P.O. Box 365 — Diegueno
Valley Center , CA 92082
allenl@sanpasqualtribe.org
(760) 749-3200

(760) 749-3876 Fax

Sycuan Band of the Kumeyaay Nation
Cody J. Martinez, Chairperson
1 Kwaaypaay Court — Diegueno/Kumeyaay
El Cajon , CA 92019
ssilva@sycuan-nsn.gov
(619) 445-2613

(619) 445-1927 Fax

Viejas Band of Mission Indians of the Viejas Reservation
Robert J. Welch, Jr., Chairperson
1 Viejas Grade Road — Diegueno/Kumeyaay
Alpine , CA 91901
jhagen@viejas-nsn.gov
(619) 445-3810

(619) 445-5337 Fax

Cabazon Band of Mission Indians
Doug Welmas, Chairperson
84-245 Indio Springs Parkway — Cahuilla
Indio , CA 92203
(760) 342-2593

(760) 347-7880 Fax

Campo Band of Diegueño Mission Indians
Ralph Goff, Chairperson
36190 Church Road, Suite 1 — Diegueno/Kumeyaay
Campo , CA 91906
rgoff@campo-nsn.gov
(619) 478-9046

(619) 478-5818 Fax

Jamul Indian Village of California
Erica Pinto, Chairperson
P.O. Box 612 — Diegueno/Kumeyaay
Jamul , CA 91935
(619) 669-4785

(619) 669-4817

Los Coyotes Band of Cahuilla and Cupeno Indians
Shane Chapparosa, Chairman
P.O. Box 189 — Cahuilla
Warner Springs , CA 92086
Chapparosa@msn.com
(760) 782-0711

(760) 782-0712 Fax

This list is current only as of the date of this document and is based on the information available to the Commission on the date it was produced.

Distribution of this list does not relieve any person or agency of statutory responsibility as defined in Public Resources Code Sections 21080.3.1 Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed 350000 Sq Ft Warehouse Project, City of Riverside, Riverside County

Native American Contact List
May 2, 2017
Riverside County

Mesa Grande Band of Diegueño Mission Indians
Virgil Oyos, Chairperson
P.O Box 270 Diegueno
Santa Ysabel , CA 92070
mesagrandeband@msn.com
(760) 782-3818

(760) 782-9092 Fax

Pala Band of Mission Indians
Shasta Gaughen, PhD, THPO
PMB 50, 35008 Pala Temecula Rd. Luiseno
Pala , CA 92059 Cupeno
sgaughen@palatribe.com
(760) 891-3515

(760) 742-3189 Fax

Pauma Band of Luiseno Indians
Temet Aguilar, Chairperson
P.O. Box 369, Ext. 303 Luiseno
Pauma Valley , CA 92061
(760) 742-1289

(760) 742-3422 Fax

Pechanga Band of Luiseño Indians
Paul Macarro, Cultural Resources Coordinator
P.O. Box 1477 Luiseno
Temecula , CA 92593
pmacarro@pechanga-nsn.gov
(951) 770-8102

(951) 506-9491 Fax

Ramona Band of Cahuilla
Daniel Salgado, Chairman
P.O. Box 391670 Cahuilla
Anza , CA 92539
admin@ramonatribe.com
(951) 763-4105

(951) 763-4325 Fax

Rincon Band of Luiseño Indians
Jim McPherson, Tribal Historic Pres. Officer
1 West Tribal Road Luiseno
Valley Center , CA 92082
vwhipple@rincontribe.org
(760) 749-1051

(760) 749-5144

San Manuel Band of Mission Indians
Lynn Valbuena, Chairwoman
26569 Community Center Serrano
Highland , CA 92346
(909) 864-8933

(909) 864-3370 Fax

Soboba Band of Luiseno Indians
Carrie Garcia, Cultural Resources Manager
P.O. Box 487 Luiseno
San Jacinto , CA 92581 Cahuilla
carrieg@soboba-nsn.gov
(951) 654-2765

(951) 654-4198 Fax

Torres-Martinez Desert Cahuilla Indians
Mary Resvaloso, Chairperson
P.O. Box 1160 Cahuilla
Thermal , CA 92274
tmchair@torresmartinez.org
(760) 397-0300

(760) 397-8146 Fax

San Fernando Band of Mission Indians
John Valenzuela, Chairperson
P.O. Box 221838 Tataviam
Newhall , CA 91322 Serrano
tsen2u@hotmail.com Kitanemuk
(760) 885-0955 Cell

This list is current only as of the date of this document and is based on the information available to the Commission on the date it was produced.

Distribution of this list does not relieve any person or agency of statutory responsibility as defined in Public Resources Code Sections 21080.3.1 Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed 350000 Sq Ft Warehouse Project, City of Riverside, Riverskie County

Native American Contact List
May 2, 2017
Riverside County

Gabrieleno/Tongva San Gabriel Band of Mission Indians
Anthony Morales, Chairperson
P.O. Box 693 Gabrielino Tongva
San Gabriel , CA 91778
GTTribalcouncil@aol.com
(626) 483-3564 Cell

(626) 286-1262 Fax

Santa Rosa Band of Cahuilla Indians
Steven Estrada, Chairman
P.O. Box 391820 Cahuilla
Anza , CA 92539
(951) 659-2700

(951) 659-2228 Fax

Augustine Band of Cahuilla Indians
Amanda Vance, Chairperson
P.O. Box 846 Cahuilla
Coachella , CA 92236
(760) 398-4722
(760) 369-7161Fax

La Posta Band of Diegueño Mission Indians
Janaughn Miller, Tribal Administrator
8 Crestwood Road Diegueno
Boulevard , CA 91905
jmiller@Lptribe.net
(619) 478-2113

(619) 478-2125- Fax

Gabrielino /Tongva Nation
Sandonne Goad, Chairperson
106 1/2 Judge John Also St., #231 Gabrielino Tongva
Los Angeles , CA 90012
sgoad@gabrielino-tongva.com
(951) 807-0479

Morongo Band of Mission Indians
Denisa Torres, Cultural Resources Manager
12700 Pumarra Road Cahuilla
Banning , CA 92220 Serrano
dtorres@morongo-nsn.gov
(951) 849-8807
(951) 572-6004 Fax
(951) 572-6004 Fax

San Manuel Band of Mission Indians
Lee Clauss, Director-CRM Dept.
26569 Community Center Drive Serrano
Highland , CA 92346
lclauss@sanmanuel-nsn.gov
(909) 864-8933

(909) 862-5152 Fax

Pauma Band of Luiseno Indians
Bennae Calac
P.O. Box 369 Luiseno
Pauma Valley , CA 92061
bennaecalac@aol.com
(760) 617-2872

(760) 742-3422 Fax

Gabrielino Tongva Indians of California Tribal Council
Robert F. Dorame, Tribal Chair/Cultural Resources
P.O. Box 490 Gabrielino Tongva
Bellflower , CA 90707
gtongva@gmail.com
(562) 761-6417 Voice/Fax

Viejas Band of Mission Indians of the Viejas Reservation
Julie Hagen, Cultural Resources
1 Viejas Grade Road Diegueno/Kumeyaay
Alpine , CA 91901
jhagen@viejas-nsn.gov
(619) 445-3810

(619) 445-5337

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This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed 350000 Sq Ft Warehouse Project, City of Riverside, Riverside County

Native American Contact List
May 2, 2017
Riverside County

Rincon Band of Luiseño Indians
Bo Mazzetti, Chairperson
1 West Tribal Road Luiseno
Valley Center , CA 92082
bomazzetti@aol.com
(760) 749-1051

(760) 749-5144

San Pasqual Band of Diegueño MissionIndians
John Flores, Environmental Coordinator
P.O. Box 365 Diegueno
Valley Center , CA 92082
johnf@sanpasqualtribe.org
(760) 749-3200

(760) 749-3876 Fax

Cabazon Band of Mission Indians
Judy Stapp, Director of Cultural Affairs
84-245 Indio Springs Parkway Cahuilla
Indio , CA 92203
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(760) 342-2593

(760) 347-7880 Fax

Ewiiaapaayp Band of Kumeyaay Indians
Will Micklin, Executive Director
4054 Willows Road Diegueno/Kumeyaay
Alpine , CA 91901
wmicklin@leaningrock.net
(619) 445-6315

(619) 445-9126 Fax

Los Coyotes Band of Cahuilla and Cupeno Indians
Janice Elzendnga, Tribal Administrator
P.O. Box 189 Cahuilla
Warner Springs , CA 92086
(760) 782-0711

(760) 782-2701 Fax

Los Coyotes Band of Cahuilla and Cupeno Indians
John, Perada, Environmental Director
P.O. Box 189 Cahuilla
Warner Springs , CA 92086
(760) 782-0712

(760) 782-2730 Fax

Manzanita Band of Mission Nation
ATTN: David Thompson, EPA
P.O. Box 1302 Kumeyaay
Boulevard , CA 91905
(619) 766-4851

(619) 766-4957 Fax

Ramona Band of Cahuilla
Manuel Hamilton, Vice Chairperson
P.O. Box 391670 Cahuilla
Anza , CA 92539
admin@ramonatribe.com
(951) 763-4105

(951) 763-4325 Fax

Ramona Band of Cahuilla
John Gomez, Environmental Coordinator
P.O. Box 391670 Cahuilla
Anza , CA 92539
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(951) 763-4325 Fax

Santa Rosa Band of Cahuilla Indians
Terry Hughes, Tribal Administrator
P.O. Box 391820 Cahuilla
Anza , CA 92539
thughes@santarosacahuilla-nsn.gov
(951) 659-2700

(951) 659-2228 Fax

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Native American Contact List
May 2, 2017
Riverside County

Agua Caliente Band of Cahuilla Indians
Jeff Grubbe, Chairperson
5401 Dinah Shore Drive — Cahuilla
Palm Springs , CA 92264
(760) 699-6800

(760) 699-6919 Fax

Agua Caliente Band of Cahuilla Indians
Patricia Garcia-Plotkin, Director, THPO
5401 Dinah Shore Drive — Cahuilla
Palm Springs , CA 92264
ACBCI-THPO@aguacaliente.net
(760) 699-6907
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(760) 699-6924 Fax

Morongo Band of Mission Indians
Robert Martin, Chairperson
12700 Pumarra Rroad — Cahuilla
Banning , CA 92220 — Serrano
(951) 849-8807
(951) 755-5200
(951) 922-8146 Fax

Augustine Band of Cahuilla Indians
Karen Kupcha
P.O. Box 849 — Cahuilla
Coachella , CA 92236
(760) 398-4722

Pechanga Band of Luiseño Indians
Mark Macarro, Chairman
P.O. Box 1477 — Luiseno
Temecula , CA 92593
epreston@pechanga-nsn.gov
(951) 770-6000

(951) 695-1778 Fax

Sycuan Band of the Kumeyaay Nation
Lisa Haws, Cultural Resource Manager
1 Kwaaypaay Court — Diegueno/Kumeyaay
El Cajon , CA 92019
(619) 312-1935

La Jolla Band of Luiseno Indians
Thomas Rodriguez, Chairperson
22000 Highway 76 — Luiseno
Pauma Valley , CA 92061
(760) 742-3771

(760) 742-3779 Fax

Pauma Band of Luiseno Indians
Charles Devers, Cultural Committee
P.O. Box 369, Ext. 317 — Luiseno
Pauma Valley , CA 92061
(760) 742-1289

(760) 742-3422 Fax

Serrano Nation of Mission Indians
Goldie Walker, Chairperson
P.O. Box 343 — Serrano
Patton , CA 92369

(909) 528-9027
(909) 528-9032

Manzanita Band of the Kumeyaay Nation
Nick Elliott, Cultural Resources Coordinator
P.O. Box 1302 — Kumeyaay
Boulevard , CA 91905
nickmepa@yahoo.com
(619) 766-4930
(619) 925-0952 Cell
(919) 766-4957 Fax

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Native American Contact List
May 2, 2017
Riverside County

Cahuilla Band of Mission Indians
Daniel Salgado, Chairperson
52701 U. S. Highway 371 Cahuilla
Anza , CA 92539
Chairman@cahuilla.net
(951) 763-5549
(951) 763-2808

Pala Band of Mission Indians
Robert H. Smith, Chairperson
12196 Pala Mission Road Luiseno
Pala , CA 92059 Cupeno
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(760) 742-3189 Fax

Pechanga Band of Luiseño Indians
Gary DuBois, Director of Cultural Resources
P.O. Box 1477 Luiseño
Temecula , CA 92593
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951-770-6302

Torres-Martinez Desert Cahuilla Indians
Michael Mirelez, Cultural Resource Coordinator
P.O. Box 1160 Cahuilla
Thermal , CA 92274
mmirelez@tmdci.org
(760) 399-0022, Ext. 1213

(760) 397-8146 Fax

Gabrielino-Tongva Tribe
Linda Candelaria, Co-Chairperson
1999 Avenue of the Stars, Suite 1100 Gabrielino
Los Angeles , CA 90067
(626) 676-1184 Cell

Ewiiaapaayp Band of Kumeyaay Indians
Michael Garcia, Vice Chairperson
4054 Willows Road Diegueno/Kumeyaay
Alpine , CA 91901
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(619) 445-6315

(619) 445-9126 Fax

Soboba Band of Luiseno Indians
Joseph Ontiveros, Cultural Resource Department
P.O. BOX 487 Luiseno
San Jacinto , CA 92581 Cahuilla
jontiveros@soboba-nsn.gov
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(951) 654-5544, ext 4137
(951) 654-4198 Fax

Soboba Band of Luiseno Indians
Rosemary Morillo, Chairperson
P. O. Box 487 Luiseno
San Jacinto , CA 92583 Cahuilla
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(951) 654-2765
(951) 654-4198

Gabrieleno Band of Mission Indians - Kizh Nation
Andrew Salas, Chairperson
P.O. Box 393 Gabrielino
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gabrielenoindians@yahoo.com
(626) 926-4131

Pechanga Band of Luiseño Indians
Tuba Ebru Ozdil, Cultural Resources Planning
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Temecula , CA 92593
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951-770-6313

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Native American Contact List
May 2, 2017
Riverside County

Viejas Band of Mission Indians of the Viejas Reservation
Randy Sandoval Jr.: Environmental Specialist,
1 Viejas Grade Road Diegueno/Kumeyaay
Alpine , CA 91901
rsandoval@viejas-nsn.gov
619-659-2343
619-504-4394

Viejas Band of Mission Indians of the Viejas Reservation
Ernest "Chuka" Pingleton, Tribal Historic Office,
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epingleton@viejas-nsn.gov
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619-655-0410

Pechanga Band of Luiseño Indians
Anna M. Hoover
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Temecula , CA 92593
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951-770-8104 (O)
951-694-0446 (F)
951-757-6139 (C)

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Rincon Consultants, Inc.
2215 Faraday Avenue, Suite A
Carlsbad, California 92008

760 918 9444 OFFICE AND FAX

info@rinconconsultants.com
www.rinconconsultants.com

May 3, 2017

Gabrielino Band of Mission Indians – Kizh Nation
Andrew Salas, Chairman
P.O. Box 393
Covina, VA 91723

RE: Cultural Study for the Riverside Warehouse Project in Riverside, CA

Dear Chairman Salas:

Rincon Consultants, Inc. (Rincon) was retained by Guthrie Pericles, LLC to conduct a cultural resources study for the Riverside Warehouse Project (project) located in the City of Riverside, in Riverside County, California, depicted in the enclosed figure. The project site is a 17.65-acre lot at the east end of Marlborough Avenue. The proposed project would construct a 350,000-square foot warehouse.

As part of the process of identifying cultural resources issues for this project, Rincon contacted the Native American Heritage Commission and requested a Sacred Lands File (SLF) search and a list of Native American tribal organizations and individuals who may have knowledge of sensitive cultural resources in or near the project area. Rincon received a response from the NAHC on May 2, 2017, which stated that the SLF search had been completed with "negative results". The NAHC suggested we contact you to discuss this project further.

If you have knowledge of cultural resources that may exist within or near the project site, please contact me in writing at the above address or at hhaas@rinconconsultants.com, or by telephone at (760) 918-9444, extension 230. Thank you for your assistance.

Sincerely,

Hannah Haas

Hannah Haas
Archaeologist

Enclosure: Project Location Map

Rincon Consultants, Inc.
2215 Faraday Avenue, Suite A
Carlsbad, California 92008

760 918 9444 OFFICE AND FAX

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www.rinconconsultants.com

May 3, 2017

Pechanga Cultural Resources Department
Anna Hoover, Cultural Analyst
P.O. Box 2183
Temecula, CA 92593

RE: Cultural Study for the Riverside Warehouse Project in Riverside, CA

Dear Ms. Hoover:

Rincon Consultants, Inc. (Rincon) was retained by Guthrie Pericles, LLC to conduct a cultural resources study for the Riverside Warehouse Project (project) located in the City of Riverside, in Riverside County, California, depicted in the enclosed figure. The project site is a 17.65-acre lot at the east end of Marlborough Avenue. The proposed project would construct a 350,000-square foot warehouse.

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Sincerely,

Hannah Haas

Hannah Haas
Archaeologist

Enclosure: Project Location Map

Rincon Consultants, Inc.
2215 Faraday Avenue, Suite A
Carlsbad, California 92008

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www.rinconconsultants.com

May 3, 2017

Morongo Band of Mission Indians
Raymond Huaute, Cultural Resources Specialist
12700 Pumarra Road
Banning, CA 92220

RE: Cultural Study for the Riverside Warehouse Project in Riverside, CA

Dear Mr. Huaute:

Rincon Consultants, Inc. (Rincon) was retained by Guthrie Pericles, LLC to conduct a cultural resources study for the Riverside Warehouse Project (project) located in the City of Riverside, in Riverside County, California, depicted in the enclosed figure. The project site is a 17.65-acre lot at the east end of Marlborough Avenue. The proposed project would construct a 350,000-square foot warehouse.

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Sincerely,

Hannah Haas

Hannah Haas
Archaeologist

Enclosure: Project Location Map

Rincon Consultants, Inc.
2215 Faraday Avenue, Suite A
Carlsbad, California 92008

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www.rinconconsultants.com

May 3, 2017

San Gabriel Band of Mission Indians
Anthony Morales, Chief
P.O. Box 693
San Gabriel, CA 91778

RE: Cultural Study for the Riverside Warehouse Project in Riverside, CA

Dear Chief Morales:

Rincon Consultants, Inc. (Rincon) was retained by Guthrie Pericles, LLC to conduct a cultural resources study for the Riverside Warehouse Project (project) located in the City of Riverside, in Riverside County, California, depicted in the enclosed figure. The project site is a 17.65-acre lot at the east end of Marlborough Avenue. The proposed project would construct a 350,000-square foot warehouse.

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Sincerely,

Hannah Haas

Hannah Haas
Archaeologist

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Carlsbad, California 92008

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www.rinconconsultants.com

May 3, 2017

Soboba Band of Luiseno Indians
Jose Ontiveros, Cultural Resources
P.O. Box 487
San Jacinto, CA 92581

RE: Cultural Study for the Riverside Warehouse Project in Riverside, CA

Dear Mr. Ontiveros:

Rincon Consultants, Inc. (Rincon) was retained by Guthrie Pericles, LLC to conduct a cultural resources study for the Riverside Warehouse Project (project) located in the City of Riverside, in Riverside County, California, depicted in the enclosed figure. The project site is a 17.65-acre lot at the east end of Marlborough Avenue. The proposed project would construct a 350,000-square foot warehouse.

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Sincerely,

Hannah Haas

Hannah Haas
Archaeologist

Enclosure: Project Location Map

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2215 Faraday Avenue, Suite A
Carlsbad, California 92008

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info@rinconconsultants.com
www.rinconconsultants.com

May 3, 2017

Rincon Band of Luiseno Indians
Jim McPherson
1 West Tribal Road
Valley Center, CA 92082

RE: Cultural Study for the Riverside Warehouse Project in Riverside, CA

Dear Mr. McPherson:

Rincon Consultants, Inc. (Rincon) was retained by Guthrie Pericles, LLC to conduct a cultural resources study for the Riverside Warehouse Project (project) located in the City of Riverside, in Riverside County, California, depicted in the enclosed figure. The project site is a 17.65-acre lot at the east end of Marlborough Avenue. The proposed project would construct a 350,000-square foot warehouse.

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If you have knowledge of cultural resources that may exist within or near the project site, please contact me in writing at the above address or at hhaas@rinconconsultants.com, or by telephone at (760) 918-9444, extension 230. Thank you for your assistance.

Sincerely,

Hannah Haas

Hannah Haas
Archaeologist

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2215 Faraday Avenue, Suite A
Carlsbad, California 92008

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www.rinconconsultants.com

May 3, 2017

Morongo Band of Mission Indians
Robert Martin, Tribal Chairman
12700 Pumarra Road
Banning, CA 92220

RE: Cultural Study for the Riverside Warehouse Project in Riverside, CA

Dear Mr. Martin:

Rincon Consultants, Inc. (Rincon) was retained by Guthrie Pericles, LLC to conduct a cultural resources study for the Riverside Warehouse Project (project) located in the City of Riverside, in Riverside County, California, depicted in the enclosed figure. The project site is a 17.65-acre lot at the east end of Marlborough Avenue. The proposed project would construct a 350,000-square foot warehouse.

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Sincerely,

Hannah Haas
Archaeologist

Enclosure: Project Location Map

Rincon Consultants, Inc.
2215 Faraday Avenue, Suite A
Carlsbad, California 92008

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www.rinconconsultants.com

May 3, 2017

Cahuilla Band of Indians
Andreas Heredia
52701 Highway 371
Anza, CA 92539

RE: Cultural Study for the Riverside Warehouse Project in Riverside, CA

Dear Mr. Heredia:

Rincon Consultants, Inc. (Rincon) was retained by Guthrie Pericles, LLC to conduct a cultural resources study for the Riverside Warehouse Project (project) located in the City of Riverside, in Riverside County, California, depicted in the enclosed figure. The project site is a 17.65-acre lot at the east end of Marlborough Avenue. The proposed project would construct a 350,000-square foot warehouse.

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Sincerely,

Hannah Haas

Hannah Haas
Archaeologist

Enclosure: Project Location Map

Rincon Consultants, Inc.
2215 Faraday Avenue, Suite A
Carlsbad, California 92008

760 918 9444 OFFICE AND FAX

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www.rinconconsultants.com

May 3, 2017

San Manuel Band of Mission Indians
Lee Clauss, CRM Department
26569 Community Center Dr.
Highland, CA 9236

RE: Cultural Study for the Riverside Warehouse Project in Riverside, CA

Dear Mr. Clauss:

Rincon Consultants, Inc. (Rincon) was retained by Guthrie Pericles, LLC to conduct a cultural resources study for the Riverside Warehouse Project (project) located in the City of Riverside, in Riverside County, California, depicted in the enclosed figure. The project site is a 17.65-acre lot at the east end of Marlborough Avenue. The proposed project would construct a 350,000-square foot warehouse.

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Sincerely,

Hannah Haas

Hannah Haas
Archaeologist

Enclosure: Project Location Map

Rincon Consultants, Inc.
2215 Faraday Avenue, Suite A
Carlsbad, California 92008

760 918 9444 OFFICE AND FAX

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May 3, 2017

Agua Caliente Band of Cahuilla Indians
Patricia Garcia, THPO Director
5401 Dinah Shore Dr.
Palm Springs, CA 92264

RE: Cultural Study for the Riverside Warehouse Project in Riverside, CA

Dear Ms. Garcia:

Rincon Consultants, Inc. (Rincon) was retained by Guthrie Pericles, LLC to conduct a cultural resources study for the Riverside Warehouse Project (project) located in the City of Riverside, in Riverside County, California, depicted in the enclosed figure. The project site is a 17.65-acre lot at the east end of Marlborough Avenue. The proposed project would construct a 350,000-square foot warehouse.

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Sincerely,

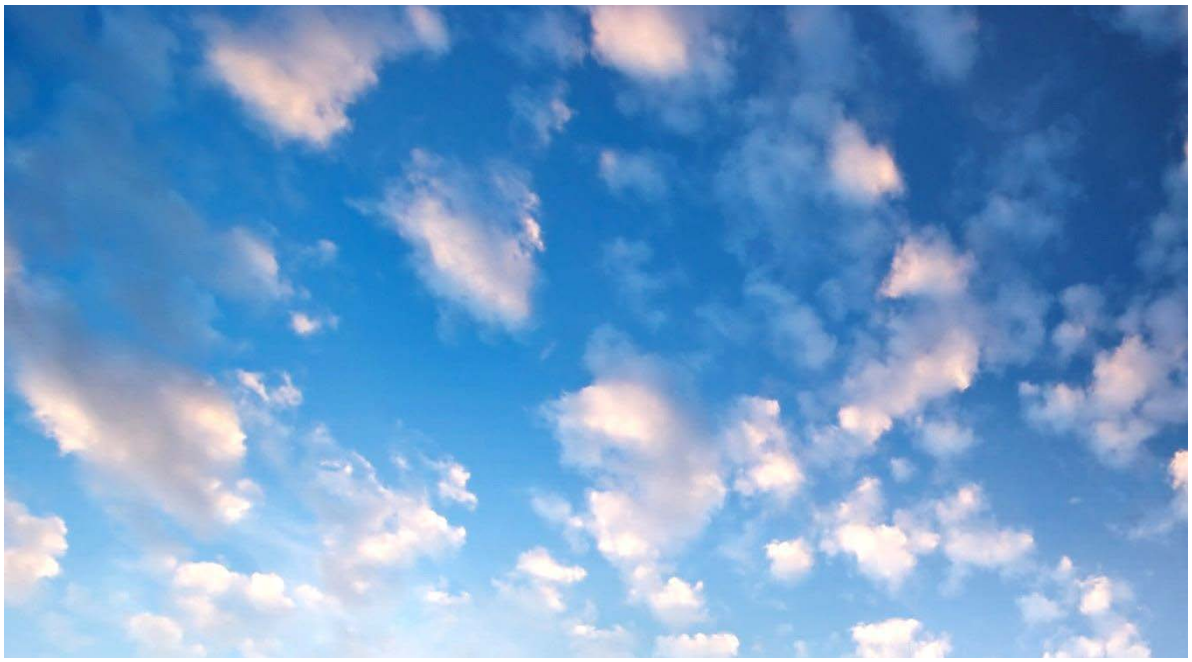
Hannah Haas

Hannah Haas
Archaeologist

Enclosure: Project Location Map

CR Confidential Appendix C

Department of Parks and Recreation Series 523 Forms



Air Quality and Greenhouse Gas Study

750 Marlborough Drive Warehouse Project

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1 Project Description

1.1 Introduction

This report details the analysis of potential air quality and greenhouse gas (GHG) impacts of the proposed warehouse development project (proposed project) located at the east side of Marlborough Avenue, south of the Research Park Drive cul-de-sac in Riverside, California. The report has been prepared by Rincon Consultants, Inc. under contract to Guthrie Pericles, LLC for use by the City of Riverside in support of environmental documentation being prepared for the project pursuant to the California Environmental Quality Act (CEQA). The purpose of this study is to analyze the project's air quality and GHG emissions and associated impacts. This analysis considers both temporary impacts that would result from project construction and potential long-term impacts associated with operation of the proposed project.

1.2 Project Summary

The project involves construction of approximately 339,510 square feet of unrefrigerated warehouse space, 6,820 square feet of office space, and 86,698 square feet of vehicular parking, including 372 standard vehicular parking spaces and 12 trailer parking spaces on an approximately 22.1-acre site. Adjacent land uses include light industrial buildings to the north and west, a vacant lot to the northeast, and Box Springs Mountain Reserve Park to the south and east. Primary warehouse distribution, delivery, and trash truck access to the project site would be provided by an entrance located at the eastern end of Marlborough Avenue, on the western border of the site. An additional entrance for visitor and employee ingress and egress would be located at the northern border of the site at the Research Park Drive cul-de-sac.

The project also includes the development of a 10-foot-wide multi-use trail along the southern and eastern sides of the project. The trail will be made of decomposed granite, as specified by City of Riverside Parks and Recreation Department, and will be sloped to a drainage ditch/channel that generally runs along the southern and eastern side of the trail for storm water protection. As the trail is needed for fire protection, the trail will provide 12 feet clear for fire service vehicles and designed to keep the maximum slope no greater than 15 percent where feasible. The trail will also be used for maintenance purposes to help maintain the proposed graded slopes and the storm water protection system, which consists of the drainage ditch/channel adjacent to the trail and the proposed storm drain that is proposed under the trail. Lastly the trail will be used as a public recreational trail as part of the City of Riverside trail network.

Figure 1 Existing Site Conditions

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Fig 1 Existing Site Conditions

2 Air Quality

2.1 Background

2.1.1 Local Climate and Meteorology

The project area is within the South Coast Air Basin (SCAB), which is bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east, and includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties, in addition to the San Gorgonio Pass area in Riverside County. The regional climate within the SCAB is considered semi-arid and is characterized by warm summers, mild winters, infrequent seasonal rainfall, moderate daytime onshore breezes, and moderate humidity. The air quality within the SCAB is primarily influenced by meteorology and a wide range of emissions sources, such as dense population centers, substantial vehicular traffic, and industry.

Air pollutant emissions within the SCAB are generated primarily by stationary and mobile sources. Stationary sources can be divided into two major subcategories: point and area sources. Point sources occur at a specific location and are often identified by an exhaust vent or stack. Examples include boilers or combustion equipment that produce electricity or generate heat. Area sources are widely distributed and include residential and commercial water heaters, painting operations, lawn mowers, agricultural fields, landfills, and some consumer products. Mobile sources refer to emissions from motor vehicles, including tailpipe and evaporative emissions, and are classified as either on-road or off-road. On-road sources may be legally operated on roadways and highways. Off-road sources include aircraft, ships, trains, and self-propelled construction equipment. Air pollutants can also be generated by the natural environment, such as when high winds suspend fine dust particles.

2.1.2 Air Quality Regulation

The federal and state governments have established ambient air quality standards for the protection of public health. The United State Environmental Protection Agency (U.S. EPA) is the federal agency designated to administer air quality regulation, while the Air Resources Board (ARB) is the state equivalent in the California EPA (CalEPA). County-level Air Pollution Control Districts (APCD) provide local management of air quality. The ARB has established air quality standards and is responsible for the control of mobile emission sources, while the local APCDs are responsible for enforcing standards and regulating stationary sources. The ARB has established 14 air basins statewide, including the SCAB.

The U.S. EPA has set primary national ambient air quality standards (NAAQS) for ozone, carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter with a diameter of up to ten microns (PM_{10}) and up to 2.5 microns ($PM_{2.5}$), and lead (Pb). Primary standards are those levels of air quality deemed necessary, with an adequate margin of safety, to protect public health. In addition, California has established health-based ambient air quality standards for these and other pollutants, some of which are more stringent than the federal standards. Table 1 lists the current federal and state standards for regulated pollutants.

The South Coast Air Quality Management District (SCAQMD) is the designated air quality control agency for the SCAB. The SCAB is designated a nonattainment area for the federal and state one-hour and eight-hour ozone standards, the state PM_{10} standard, the federal 24-hour $PM_{2.5}$ standard, and the state and federal annual $PM_{2.5}$ standard (SCAQMD 2016). The SCAB is designated unclassifiable or in attainment for all other federal and state standards.

Characteristics of ozone, CO, NO_2, and suspended particulates are described below.

Table 1 Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	Federal Primary Standards	California Standard
Ozone	1-Hour	–	0.09 ppm
	8-Hour	0.070 ppm	0.070 ppm
Carbon Monoxide	8-Hour	9.00 ppm	9.00 ppm
	1-Hour	35.00 ppm	20.00 ppm
Nitrogen Dioxide	Annual	0.053 ppm	0.030 ppm
	1-Hour	0.100 ppm	0.180 ppm
Sulfur Dioxide	Annual	–	–
	24-Hour	–	0.04 ppm
	1-Hour	0.075 ppm	0.25 ppm
PM_{10}	Annual	–	20 $\mu g/m^3$
	24-Hour	150 $\mu g/m^3$	50 $\mu g/m^3$
PM_{25}	Annual	12 $\mu g/m^3$	12 $\mu g/m^3$
	24-Hour	35 $\mu g/m^3$	–
Lead	30-Day Average	–	1.5 $\mu g/m^3$
	3-Month Average	0.15 $\mu g/m^3$	–

ppm = parts per million;
$\mu g/m^3$ = micrograms per cubic meter
Source: ARB, May 2016, Ambient Air Quality Standards
http://www.arb.ca.gov/research/aaqs/aaqs2.pdf

Ozone

Ozone (O_3) is produced by a photochemical reaction (triggered by sunlight) between nitrogen oxides (NO_X) and reactive organic gases (ROG[1]). NO_X is formed during the combustion of fuels, while reactive organic gases are formed during combustion and evaporation of organic solvents. Because O_3 requires sunlight to form, it mostly occurs in substantial concentrations between the months of

[1] Organic compound precursors of ozone are routinely described by a number of variations of three terms: hydrocarbons (HC), organic gases (OG), and organic compounds (OC). These terms are often modified by adjectives such as total, reactive, or volatile, and result in a rather confusing array of acronyms: HC, THC (total hydrocarbons), RHC (reactive hydrocarbons), TOG (total organic gases), ROG (reactive organic gases), TOC (total organic compounds), ROC (reactive organic compounds), and VOC (volatile organic compounds). While most of these differ in some significant way from a chemical perspective, from an air quality perspective two groups are important: non-photochemically reactive in the lower atmosphere, or photochemically reactive in the lower atmosphere (HC, RHC, ROG, ROC, and VOC). SCAQMD uses the term VOC to denote organic precursors.

April and October. Ozone is a pungent, colorless, toxic gas with direct health effects on humans including respiratory and eye irritation and possible changes in lung functions. Groups most sensitive to O_3 include children, the elderly, people with respiratory disorders, and people who exercise strenuously outdoors.

Carbon Monoxide

CO is a local pollutant that is found in high concentrations only near fuel combustion equipment and other sources of CO. The primary source of CO, a colorless, odorless, poisonous gas, is automobile traffic. Elevated concentrations, therefore, are usually only found near areas of high traffic volumes. CO's health effects are related to its affinity for hemoglobin in the blood. At high concentrations, CO reduces the amount of oxygen in the blood, causing heart difficulty in people with chronic diseases, reduced lung capacity, and impaired mental abilities.

Nitrogen Dioxide

NO_2 is a by-product of fuel combustion, with the primary source being motor vehicles and industrial boilers and furnaces. The principal form of nitrogen oxide produced by combustion is nitric oxide (NO), but NO reacts rapidly to form NO_2, creating the mixture of NO and NO_2 commonly called NO_X. Nitrogen dioxide is an acute irritant. A relationship between NO_2 and chronic pulmonary fibrosis may exist, and an increase in bronchitis in young children at concentrations below 0.3 parts per million (ppm) may occur. NO_2 absorbs blue light and causes a reddish brown cast to the atmosphere and reduced visibility. It can also contribute to the formation of ozone/smog and acid rain.

Suspended Particulates

Atmospheric particulate matter is comprised of finely divided solids and liquids such as dust, soot, aerosols, fumes, and mists. The particulates that are of particular concern are PM_{10} (which measures no more than 10 microns in diameter) and $PM_{2.5}$, (a fine particulate measuring no more than 2.5 microns in diameter). The characteristics, sources, and potential health effects associated with the small particulates (PM_{10} and $PM_{2.5}$) and $PM_{2.5}$ can be different. Major man-made sources of PM_{10} are agricultural operations, industrial processes, combustion of fossil fuels, construction, demolition operations, and entrainment of road dust into the atmosphere. Natural sources include windblown dust, wildfire smoke, and sea spray salt. The finer $PM_{2.5}$ particulates are generally associated with combustion processes as well as being formed in the atmosphere as a secondary pollutant through chemical reactions. $PM_{2.5}$ is more likely to penetrate deeply into the lungs and poses a serious health threat to all groups, but particularly to the elderly, children, and those with respiratory problems. More than half of the small and fine particulate matter that is inhaled into the lungs remains there, which can cause permanent lung damage. These materials can damage health by interfering with the body's mechanisms for clearing the respiratory tract or by acting as carriers of an absorbed toxic substance.

2.1.3 Current Air Quality

The SCAQMD operates a network of air quality monitoring stations throughout the SCAB. The purpose of the monitoring stations is to measure ambient concentrations of pollutants and determine whether ambient air quality meets the California and federal standards. The monitoring station located closest to the project site is the Riverside-Rubidoux station, located approximately

five miles west of the project site. Table 2 indicates the number of days that each standard has been exceeded at the Riverside-Rubidoux station.

Table 2 Ambient Air Quality at the Monitoring Station

Pollutant	2014	2015	2016
8 Hour Ozone (ppm), 8-Hr Average[1]	0.104	0.105	0.104
Number of days of Federal exceedances (>0.070)	66	55	69
Ozone (ppm), Worst Hour[1]	0.141	0.132	0.142
Number of days of State exceedances (>0.09 ppm)	29	31	33
Number of days of Federal exceedances (>0.112 ppm)	1	1	1
Nitrogen Dioxide (ppb) - Worst Hour (Federal Measurements) [1]	59.9	57.4	73.1
Number of days of State exceedances	0	0	0
Number of days of Federal exceedances	0	0	0
Particulate Matter 10 microns, μg/m^3, Worst 24 Hours[1]	100.0	69.0	60.0
Number of days above Federal standard (>150 μg/m^3)	0	0	0
Particulate Matter <2.5 microns, μg/m^3, Worst 24 Hours[1]	48.9	54.7	39.1
Number of days above Federal standard (>35 μg/m^3)	5	9	2

Source: California Air Resources Board, 2014, 2015, and 2016 Annual Air Quality Data Summaries available at http://www.arb.ca.gov/adam/topfour/topfour1.php. Riverside-Rubidoux Monitoring Station
[1]National data

2.1.4 Air Quality Management Plan

Under state law, the SCAQMD is required to prepare a plan for air quality improvement for pollutants for which the District is in non-compliance. The SCAQMD updates the plan every three years. Each version of the SCAQMD's Air Quality Management Plan (AQMP) updates the previous plan and has a 20-year horizon. The 2016 AQMP was recently adopted on March 3, 2017.

The 2016 AQMP addresses several state and federal planning requirements and incorporates new scientific information, primarily in the form of updated emissions inventories, ambient measurements, and updated meteorological air quality models. This Plan builds upon the approaches taken in the 2012 AQMP for the attainment of federal PM and ozone standards and highlights the significant amount of reductions to be achieved. It emphasizes the need for interagency planning to identify additional strategies to achieve reductions within the timeframes allowed under the federal Clean Air Act, especially in the area of mobile sources. The 2016 AQMP also includes a discussion of emerging issues and opportunities, such as fugitive toxic particulate emissions, zero-emission mobile source control strategies, and the interacting dynamics among climate, energy, and air pollution. The Plan also includes attainment demonstrations of the new federal 8-hour ozone standard of 0.070 ppm and vehicle miles travelled (VMT) emissions offsets, as per recent U.S. EPA requirements.

2.1.5 Sensitive Receptors

Ambient air quality standards have been established to represent the levels of air quality considered sufficient, with a margin of safety, to protect public health and welfare. They are designed to protect that segment of the public most susceptible to respiratory distress, such as children under 14, the elderly over 65, persons engaged in strenuous work or exercise, and people with cardiovascular and chronic respiratory diseases. The majority of sensitive receptor locations are schools and hospitals. Sensitive receptors most likely to be affected by air quality impacts associated with project construction include Box Springs Mountain Reserve Park located adjacent to the project site along the southern and eastern property boundaries, Highland Elementary School (700 Highlander Drive, Riverside, CA 92507) located approximately three quarters of a mile south of the site, University Heights Middle School (1155 Massachusetts Avenue, Riverside, CA 92507) located approximately three quarters of a mile southwest, single-family residences located approximately a third of a mile south, and Stahovich Mary-US Health Works Medical Group Urgent Care Center (1760 Chicago Avenue, Riverside, CA 92507) located approximately one mile west of the project site.

Air pollutant emissions associated with long-term use of the site would not be location specific, but rather contribute to the airshed as a whole as they would primarily derive from vehicle trips associated with the site. The Air Quality Element of the City's General Plan includes policies to guide decision makers on the placement polluting facilities away from sensitive receptors and vice versa (Objective AQ-1). Policy AQ-1.3 instructs the City to separate, buffer and protect sensitive receptors from significant sources of pollution to the greatest extent possible. Policy AQ-2.11 instructs the City to develop ways to incorporate the "Good Neighbor Guidelines for Siting New and/or Modified Warehouse/Distribution Facilities" into the Development Review process and Citywide air quality education programs.

2.2 Impact Analysis

2.2.1 Methodology and Significance Thresholds

This air quality analysis conforms to the methodologies recommended in the SCAQMD's CEQA Air Quality Handbook (1993). The handbook includes significance thresholds for emissions associated with both construction and operation of proposed project.

The project's construction and operational emissions were estimated using the California Emissions Estimator Model (CalEEMod), version 2016.3.1. CalEEMod uses project-specific information, including the project's land uses, square footages for different uses (e.g., residential, parking), and location, as well as model defaults that can be tailored for a specific project to estimate a project's construction and operational emissions. Construction emissions modeled include emissions generated by construction equipment used on-site, such as backhoes and bulldozers, as well as emissions generated by vehicle trips associated with construction, such as hauling trips and employee travel. Operational emissions modeled include mobile source emissions (i.e., vehicle emissions), energy emissions, and area source emissions. Mobile source emissions include emissions generated by delivery truck trips and employee trips to and from the project site associated with operation of the proposed project. Emissions attributed to energy use include natural gas consumption for space and water heating, in addition to the emissions associated with electricity. Area source emissions are generated by landscape maintenance equipment, consumer products, and architectural coating.

The proposed project was modeled assuming construction of a 339,510 square foot unrefrigerated warehouse space, 6,820 square feet of office space, and 86,698 square feet of vehicular parking (inclusive of 372 standard vehicle parking spaces and 12 trailer parking spaces). In addition to project details, a construction schedule was provided by the applicant and used for construction phase lengths. The CalEEMod defaults were used for the number and type of equipment used during each phase of construction. Trip generation rates for the warehouse land use were adjusted to match rates used by Rick Engineering Company in their pending Traffic Impact Analysis (Jesus Cruz, personal communication, May 4, 2017). In addition, it was assumed the project would comply with all applicable regulatory standards, such as SCAQMD Rule 1113, which limits ROG content in flat and non-flat coatings to 50 grams per liter and Rule 403, which requires watering of disturbed ground surfaces to maintain soils in a damp condition during earth-moving activities; it was assumed watering would occur three times a day.

Regional Thresholds

Pursuant to Appendix G of the CEQA Guidelines, impacts related to air quality would be significant if the project would:

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

The SCAQMD provides distinct numerical thresholds to analyze the significance of a project's construction and operational emissions. These thresholds are designed such that a project consistent with the thresholds would not have an individually or cumulatively significant impact to the Basin's air quality. Thus, a project that does not exceed these SCAQMD thresholds would have a less than significant impact in regards to items b and c above. Construction thresholds describe thresholds for temporary construction activities, and operational thresholds describe thresholds for long-term project operation emissions. These thresholds are detailed below.

Construction Thresholds	Operational Thresholds
75 pounds per day of ROG	55 pounds per day of ROG
100 pounds per day of NO_X	55 pounds per day of NO_X
550 pounds per day of CO	550 pounds per day of CO
150 pounds per day of PM_{10}	150 pounds per day of SO_X
55 pounds per day of $PM_{2.5}$	150 pounds per day of PM_{10}
	55 pounds per day of $PM_{2.5}$

Source: SCAQMD. March 2015. Accessed May 2017 at: http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf

Localized Significance Thresholds

In addition to the above thresholds, the SCAQMD has developed Localized Significance Thresholds (LSTs) in response to the Governing Board's Environmental Justice Enhancement Initiative (1-4), which was prepared to update the CEQA Air Quality Handbook. LSTs were devised in response to concern regarding exposure of individuals to criteria pollutants in local communities and have been developed for NO_X, CO, PM_{10} and $PM_{2.5}$. LSTs represent the maximum emissions from a project that will not cause or contribute to an air quality exceedance of the most stringent applicable federal or state ambient air quality standard at the nearest sensitive receptor, taking into consideration ambient concentrations in each source receptor area (SRA), distance to the sensitive receptor, and project size; LSTs have been developed for emissions within construction areas up to five acres in size. However, LSTs only apply to emissions within a fixed stationary location and are not applicable to mobile sources, such as cars on a roadway (SCAQMD 2008). As such, LSTs are typically applied only to construction emissions as the majority of operational emissions are associated with project-generated vehicle trips.

The project site is located in Source Receptor Area 23 (SRA 23), Metropolitan Riverside County (SCAQMD 2008). The SCAQMD provides lookup tables for project sites that measure one, two, three, four, or five acres. The project site is approximately 22.5 acres and grading would occur across approximately 17 acres of the site. However, this analysis assumes that there would be no more than five acres under active construction at one time, and relies on the five-acre LSTs for significance determinations. The five-acre LSTs provide a more stringent threshold for construction emissions compared to the analysis of emissions over a larger area. LSTs are provided for receptors at a distance of 82 to 1,640 feet (25 to 500 meters) from the project site boundary. The closest sensitive receptor is Box Mountain Springs Reserve Park located adjacent to the project site along the southern border. Because the shortest distance for which LSTs are provided is 82 feet (25 meters), this is the distance that will be used for this analysis.

Table 3 SCAQMD LSTs for Construction (SRA-23)

Pollutant	Allowable operational emissions from a 5-acre site in SRA-23 for a receptor 82 feet away (lbs/day)	Allowable construction emissions from a 5-acre site in SRA-23 for a receptor 82 feet away (lbs/day)
Gradual conversion of NO_X to NO_2	270	270
CO	1,577	1,577
PM_{10}	4	13
$PM_{2.5}$	2	8

Source: SCAQMD, October 2009, http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/appendix-c-mass-rate-lst-look-up-tables.pdf?sfvrsn=2 accessed online May 2017.

Regulatory Requirements

The grading phase involves the greatest amount of heavy equipment and the greatest generation of fugitive dust. For the purposes of construction emissions modeling, it was assumed that the project would comply with the SCAQMD Rule 403, which identifies measures to reduce fugitive dust and is

required to be implemented at all construction sites located within the SCAB. Therefore, the following conditions were included in CalEEMod for the site preparation and grading phases of construction.

1. Minimization of Disturbance. Construction contractors should minimize the area disturbed by clearing, grading, earth moving, or excavation operations to prevent excessive amounts of dust.
2. Soil Treatment. Construction contractors should treat all graded and excavated material, exposed soil areas, and active portions of the construction site, including unpaved onsite roadways to minimize fugitive dust. Treatment shall include, but not necessarily be limited to, periodic watering, application of environmentally safe soil stabilization materials, and/or roll compaction as appropriate. Watering shall be done as often as necessary, and at least twice daily, preferably in the late morning and after work is done for the day. The modeling for this project assumed watering would occur three times a day.
3. Soil Stabilization. Construction contractors should monitor all graded and/or excavated inactive areas of the construction site at least weekly for dust stabilization. Soil stabilization methods, such as water and roll compaction, and environmentally safe dust control materials, shall be applied to portions of the construction site that are inactive for over four days. In addition, a wheel shaker/wheel spreading device consisting of raised dividers (rails, pipe, or grates) at least 24 feet long and 10 feet wide, shall be utilized to remove bulk material from tires and vehicle undercarriages before vehicles exit the site. If no further grading or excavation operations are planned for the area, the area shall be seeded and watered until landscape growth is evident, or periodically treated with environmentally safe dust suppressants, to prevent excessive fugitive dust.
4. No Grading During High Winds. Construction contractors should stop all clearing, grading, earth moving, and excavation operations during periods of high winds (20 miles per hour or greater, as measured continuously over a one-hour period).
5. Street Sweeping. Construction contractors should sweep all onsite driveways and adjacent streets and roads at least once per day, preferably at the end of the day, if visible soil material is carried over to adjacent streets and roads.

The architectural coating phase involves the greatest release of ROG. The emissions modeling also includes the use of low-VOC paint (50 g/L for non-flat coatings) as required by SCAQMD Rule 1113.

2.2.2 Construction Impacts

Construction would consist of grading, site preparation, construction of the proposed building, paving, and architectural coating. These activities would generate temporary air pollutant emissions, including fugitive dust (PM_{10} and $PM_{2.5}$) and exhaust emissions from heavy construction vehicles and soil hauling trucks and ROGs from architectural coatings.

Table 4 summarizes the maximum daily emissions of pollutants during the entire construction period as estimated in CalEEMod. As shown in the table, emissions of ROG, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$ would not exceed SCAQMD regional or local significance thresholds during project construction.

Table 4 Estimated Construction Maximum Daily (lbs/day) without Mitigation

	Maximum Emissions[1]				
Construction Phase	**ROG**	**NO_x**	**CO**	**PM_{10}**	**$PM_{2.5}$**
2017 Maximum lbs/day	5.1	52.4	30.2	11.2	7.2
2018 Maximum lbs/day	34.0	52.5	47.4	5.7	3.3
Maximum lbs/day	34.0	52.5	47.4	11.2	7.2
SCAQMD Thresholds	*75*	*100*	*550*	*150*	*55*
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**
2017 Maximum on-site lbs/day	5.0	52.3	24.3	11.0	7.1
2018 Maximum on-site lbs/day	27.6	23.4	17.6	1.5	1.4
Localized Significance Thresholds (LSTs) (On-site only)	*N/A*	*780*	*22,530*	*207*	*105*
Threshold Exceeded?	**N/A**	**No**	**No**	**No**	**No**

Notes: All calculations were made using CalEEMod. See Appendix A for calculations. Demolition, Grading, Paving, Building Construction and Architectural Coating totals include worker trips, soil export hauling trips, construction vehicle emissions and fugitive dust. Totals may not add up due to rounding. Emission data is pulled from "mitigated" results that include compliance with regulations and project design features that will be included in the project.

[1] Grading phases incorporate anticipated emissions reductions from the conditions listed above, which are required by SCAQMD Rule 403 to reduce fugitive dust. The architectural coating phases incorporate anticipated emissions reductions from the conditions listed above, which are required by Rule 1113.

As shown in Table 4, emissions of CO, PM_{10}, $PM_{2.5}$, NO_X, and ROG would not exceed SCAQMD regional or LSTs, assuming adherence to the conditions listed above required by SCAQMD Rule 403.

2.2.3 Long-Term Regional Impacts

AQMP Consistency

A project may be inconsistent with the AQMP if it would generate population, housing, or employment growth exceeding the forecasts used in the development of the AQMP. The 2016 AQMP relies on local city general plans' and the Southern California Association of Government's (SCAG) Regional Transportation Plans' (RTP) forecasts of regional population, housing and employment growth in its own projections for managing Basin air quality.

The proposed project involves the construction of an unrefrigerated warehouse with office space. The project would not provide residential units that would cause a direct increase in the City's population. While the project may provide new employment opportunities in the City of Riverside that could contribute to population growth, this contribution would be nominal. According to an employee density study prepared for SCAG in 2001, warehouse uses in Riverside County employ on average 16.32 employees per acre. Thus, the proposed project is expected to employ approximately 273 persons (16.32 employees/acre x 16.7 acres) (SCAG 2001). According to data provided by the California Department of Finance (DOF), the estimated number employed in the County of Riverside in 2015 was 745,000. In its 2016 Regional Transportation Plan/Sustainable Community Strategy

(RTP/SCS), SCAG projects that Riverside's number of employees will increase to 1,175,000 by 2040; an increase of 430,000 persons relative to 2015 (SCAG 2015). Based on these estimates, the project would constitute 0.06 percent of projected employment growth. Thus, the level of employment growth associated with the project was anticipated in SCAG's long-term population forecasts and would not exceed official regional employment projections. Therefore, the project would be consistent with the AQMP.

Carbon Monoxide Hotspot Analysis

A CO hotspot is a localized concentration of CO that is above the state one-hour or eight-hour CO ambient air standards. Localized CO hotspots can occur at intersections with heavy peak hour traffic. Specifically, hotspots can be created at intersections where traffic levels are sufficiently high such that the local CO concentration exceeds the federal one-hour standard of 35.0 ppm or the state one-hour standard of 20.0 ppm (ARB 2016). The four highest daily maximum 8-hour carbon monoxide averages were measured at the nearest SCAQMD monitoring station (Riverside-Rubidoux) in 2012. The highest 8-hour average was 1.59 ppm, substantially lower than the 9 ppm standard.

While the SCAQMD has not established a formal screening threshold for CO hotspot analysis, the Bay Area Air Quality Management District (BAAQMD) has established the following threshold: under existing and future vehicle emission rates, a project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal air does not mix—in order to generate a significant CO impact (BAAQMD 2011). The project is expected to generate approximately 1,322 daily trips, which is well below the 100,000 BAAQMD screening threshold.

Vehicle trips associated with the project would be distributed over multiple routes to reach the project site, primarily to and from Interstate 215. A majority of vehicles would travel east along Columbia Avenue, south along Iowa Avenue, and east on Marlborough Avenue to access the site from the eastern side on Marlborough Avenue. Some vehicles would access the site on the northern side at Research Park Drive (Jesus Cruz, personal communication, May 4, 2017). Thus, project-generated local mobile-source CO emissions would not result in or substantially contribute to CO concentrations sand exceedance of state or federal CO standards are not anticipated.

Operational Air Pollutant Emissions

Table 5 summarizes estimated emissions associated with operation of the proposed project. The majority of project-related operational emissions would be due to area emissions and vehicle trips to and from the site. As shown below, project-generated emissions would not exceed SCAQMD regional thresholds for ROG, NO_X, CO, SO_X, PM_{10}, or $PM_{2.5}$.

Table 5 Project Operational Emissions (lbs/day)

	Estimated Emissions (lbs/day)					
Emissions Source	**ROG**	**NO_x**	**CO**	**SO_x**	**PM_{10}**	**$PM_{2.5}$**
Area	7.3	<0.1	<0.1	<0.1	<0.1	<0.1
Energy	<0.1	0.2	0.2	<0.1	<0.1	<0.1
Mobile	3.4	25.4	46.1	<0.1	12.2	3.4
Project Total	**10.8**	**25.6**	**46.4**	**0.2**	**12.2**	**3.4**
SCAQMD Thresholds	*55*	*55*	*550*	*150*	*150*	*55*
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

See Appendix A for CalEEMod computer model output. Note: Numbers may not add up due to rounding.

Odors

The 1993 SCAQMD CEQA Air Quality Handbook identifies land uses associated with odor complaints to be agriculture uses, wastewater treatment plants, chemical and food processing plants, composting, refineries, landfills, dairies, and fiberglass molding. Warehouses are not identified on this list. In addition, the project would have to comply with SCAQMD Rule 402, which prohibits the discharge of air contaminants that would cause injury, detriment, nuisance, or annoyance to the public. Therefore, the proposed project would not generate objectionable odors affecting a substantial number of people.

Toxic Air Contaminants (TACs)

ARB's Air Quality and Land Use Handbook: *A Community Health Perspective* (April 2005) provides recommendations for siting sensitive new land uses near distribution centers. These recommendations are intended to reduce the risk of potential health effects associated with diesel exhaust emitted from trucks and transport refrigeration units (TRUs). Diesel exhaust contains diesel particulate matter (DPM), a toxic air contaminant (TAC) is associated with short-term health effects, such as eye-watering, exacerbation of asthma, respiratory irritation, and more serious long-term effects, such as cancer and lung disease (ARB 2005).

ARB recommends against siting new sensitive land uses within 1,000 feet of a distribution center that accommodates more than 100 trucks per day, more than 40 trucks with operating TRUs per day, or where TRU unit operations exceed 300 hours per week. The nearest sensitive land use is Box Mountain Springs Reserve Park located along the southern border of the project site. It should be noted that the portion of the Box Springs Mountain Reserve Park that is adjacent to the subject project does not provide picnicking or camping facilities. The use of the Reserve by people would be limited to the hiking trail that traverses the southern and eastern property line. Exposure to diesel exhaust would be infrequent and limited in duration. Furthermore, the nearest stationary sensitive receptors are over 1,500 feet from where the heavy duty trucks would operate on the project site. Therefore, diesel emissions resulting from the project's operation would not pose long-term, significant a health risk to people and would be less than significant.

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3 Greenhouse Gases

3.1 Background

This section analyzes greenhouse gas (GHG) emissions associated with the project and potential impacts related to climate change.

3.1.1 Climate Change and Greenhouse Gases

Climate change is the observed increase in the average temperature of Earth's atmosphere and oceans along with other substantial changes in climate (such as wind patterns, precipitation, and storms) over an extended period of time. The term "climate change" is often used interchangeably with the term "global warming," but "climate change" is preferred to "global warming" because it helps convey that there are other changes in addition to rising temperatures. The baseline against which these changes are measured originates in historical records identifying temperature changes that have occurred in the past, such as during previous ice ages. The global climate is continuously changing, as evidenced by repeated episodes of substantial warming and cooling documented in the geologic record. The rate of change has typically been incremental, with warming or cooling trends occurring over the course of thousands of years. The past 10,000 years have been marked by a period of incremental warming, as glaciers have steadily retreated across the globe. However, scientists have observed acceleration in the rate of warming during the past 150 years. Per the United Nations Intergovernmental Panel on Climate Change (IPCC 2014), the understanding of anthropogenic warming and cooling influences on climate has led to a high confidence (95 percent or greater chance) that the global average net effect of human activities has been the dominant cause of warming since the mid-20th century (IPCC 2014).

Gases that absorb and re-emit infrared radiation in the atmosphere are called greenhouse gases (GHG). The gases that are widely seen as the principal contributors to human-induced climate change include carbon dioxide (CO_2), methane (CH_4), nitrous oxides (N_2O), fluorinated gases such as hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). Water vapor is excluded from the list of GHG because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation.

GHGs are emitted by both natural processes and human activities. Of these gases, CO_2 and CH_4 are emitted in the greatest quantities from human activities. Emissions of CO_2 are largely by-products of fossil fuel combustion, whereas CH_4 results from off-gassing associated with agricultural practices and landfills. Observations of CO_2 concentrations, globally-averaged temperature, and sea level rise are generally well within the range of the extent of the earlier IPCC projections. The recently observed increases in CH_4 and N_2O concentrations are smaller than those assumed in the scenarios in the previous assessments. Each IPCC assessment has used new projections of future climate change that have become more detailed as the models have become more advanced.

Man-made GHGs, many of which have greater heat-absorption potential than CO_2, include fluorinated gases and SF_6 (California Environmental Protection Agency [CalEPA] 2006). Different types of GHGs have varying global warming potentials (GWP). The GWP of a GHG is the potential of a gas or aerosol to trap heat in the atmosphere over a specified timescale (generally, 100 years).

Because GHG absorb different amounts of heat, a common reference gas (CO_2) is used to relate the amount of heat absorbed to the amount of the gas emissions, referred to as "carbon dioxide equivalent" (CO_2e), and is the amount of a GHG emitted multiplied by its GWP. CO_2 has a 100-year GWP of one. By contrast, CH_4 has a GWP of 25, meaning its global warming effect is 25 times greater than CO_2 on a molecule per molecule basis (IPCC 2007).

The accumulation of GHGs in the atmosphere regulates the earth's temperature. Without the natural heat trapping effect of GHGs, Earth's surface would be about 34° C cooler (CalEPA 2006). However, it is believed that emissions from human activities, particularly the consumption of fossil fuels for electricity production and transportation, have elevated the concentration of these gases in the atmosphere beyond the level of naturally occurring concentrations.

3.1.2 Greenhouse Gas Emissions Inventory

Worldwide anthropogenic emissions of GHG were approximately 46,000 million metric tons (MMT, or gigatonne) of CO_2e in 2010 (IPCC 2014). CO_2 emissions from fossil fuel combustion and industrial processes contributed about 65 percent of total emissions in 2010. Of anthropogenic GHGs, CO_2 was the most abundant accounting for 76 percent of total 2010 emissions. CH_4 emissions accounted for 16 percent of the 2010 total, while N_2O and fluorinated gases account for 6 and 2 percent respectively (IPCC 2014).

Total U.S. GHG emissions were 6,586.7 million metric tons (MMT or gigatonne) CO_2e in 2015 (U.S. EPA 2017). Total U.S. emissions have increased by 3.5 percent since 1990; emissions decreased by 2.3 percent from 2014 to 2015 (U.S. EPA 2017). The decrease from 2014 to 2015 was due to was a result of multiple factors, including: (1) substitution from coal to natural gas consumption in the electric power sector; (2) warmer winter conditions in 2015 resulting in a decreased demand for heating fuel in the residential and commercial sectors; and (3) a slight decrease in electricity demand (U.S. EPA 2017). Since 1990, U.S. emissions have increased at an average annual rate of 0.2 percent. In 2015, the industrial and transportation end-use sectors accounted for 29 percent and 27 percent of CO_2 emissions (with electricity-related emissions distributed), respectively. Meanwhile, the residential and commercial end-use sectors accounted for 16 percent and 17 percent of CO_2 emissions, respectively (U.S. EPA 2017).

Based upon the ARB California Greenhouse Gas Inventory for 2000-2014, California produced 441.5 MMT of CO_2e in 2014 (ARB 2016). The major source of GHG in California is transportation, contributing 37 percent of the state's total GHG emissions. Industrial sources are the second largest source of the state's GHG emissions, contributing 24 percent of the state's GHG emissions (ARB 2016) (ARB 2016). California emissions are due in part to its large size and large population compared to other states. However, a factor that reduces California's per capita fuel use and GHG emissions, as compared to other states, is its relatively mild climate. The ARB has projected statewide unregulated GHG emissions for the year 2020 will be 509.4 MMT CO_2e (ARB 2016). These projections represent the emissions that would be expected to occur in the absence of any GHG reduction actions.

3.1.3 Potential Effects of Climate Change

Globally, climate change has the potential to affect numerous environmental resources through potential impacts related to future air, land, and water temperatures and precipitation patterns. Scientific modeling predicts that continued GHG emissions at or above current rates would induce more extreme climate changes during the 21st century than were observed during the 20th century.

Long-term trends have found that each of the past three decades has been warmer than all the previous decades in the instrumental record, and the decade from 2000 through 2010 has been the warmest. The global combined land and ocean temperature data show an increase of about 0.89°C (0.69°C–1.08°C) over the period 1901–2012 and about 0.72°C (0.49°C–0.89°C) over the period 1951–2012 when described by a linear trend. Several independently analyzed data records of global and regional Land-Surface Air Temperature (LSAT) obtained from station observations are in agreement that LSAT, as well as sea surface temperatures, has increased. In addition to these findings, there are identifiable signs that global warming is currently taking place, including substantial ice loss in the Arctic over the past two decades (IPCC 2014).

According to the CalEPA's 2010 Climate Action Team Biennial Report, potential impacts of climate change in California may include decreased snow pack, sea level rise, and increase in extreme heat days per year, high ground-level O_3days, large forest fires, and drought (CalEPA 2010). Below is a summary of some of the potential impacts that could be experienced in California as a result of climate change.

Air Quality

Higher temperatures, which are conducive to air pollution formation, could worsen air quality in many areas of California. Climate change may increase the concentration of ground-level O_3, but the magnitude of the effect, and therefore its indirect effects, are uncertain. If higher temperatures are accompanied by drier conditions, the potential for large wildfires could increase, which, in turn, would further worsen air quality. However, if higher temperatures are accompanied by wetter, rather than drier conditions, the rains would tend to temporarily clear the air of particulate pollution and reduce the incidence of large wildfires, thereby ameliorating the pollution associated with wildfires. Additionally, severe heat accompanied by drier conditions and poor air quality could increase the number of heat-related deaths, illnesses, and asthma attacks throughout the state (California Energy Commission 2009).

Water Supply

Analysis of paleoclimatic data (such as tree-ring reconstructions of stream flow and precipitation) indicates a history of naturally and widely varying hydrologic conditions in California and the west, including a pattern of recurring and extended droughts. Uncertainty remains with respect to the overall impact of climate change on future water supplies in California. However, the average early spring snowpack in the Sierra Nevada decreased by about 10 percent during the last century, a loss of 1.5 million acre-feet of snowpack storage. During the same period, sea level rose eight inches along California's coast. California's temperature has risen 1°F, mostly at night and during the winter, with higher elevations experiencing the highest increase. Many Southern California cities have experienced their lowest recorded annual precipitation twice within the past decade. In a span of only two years, Los Angeles experienced both its driest and wettest years on record (California Department of Water Resources [DWR] 2008; California Climate Change Center [CCCC] 2009).

This uncertainty complicates the analysis of future water demand, especially where the relationship between climate change and its potential effect on water demand is not well understood. The Sierra snowpack provides the majority of California's water supply by accumulating snow during the state's wet winters and releasing it slowly during the state's dry springs and summers. Based upon historical data and modeling DWR projects that the Sierra snowpack will experience a 25 to 40 percent reduction from its historic average by 2050. Climate change is also anticipated to bring

warmer storms that result in less snowfall at lower elevations, reducing the total snowpack (DWR 2008).

Hydrology and Sea Level Rise

As discussed above, climate change could potentially affect: the amount of snowfall, rainfall, and snow pack; the intensity and frequency of storms; flood hydrographs (flash floods, rain or snow events, coincidental high tide and high runoff events); sea level rise and coastal flooding; coastal erosion; and the potential for salt water intrusion. According to The Impacts of Sea-Level Rise on the California Coast, prepared by the CCCC, climate change has the potential to induce substantial sea level rise in the coming century (CCCC 2009). The rising sea level increases the likelihood and risk of flooding. The rate of increase of global mean sea levels over the 2001-2010 decade, as observed by satellites, ocean buoys and land gauges, was approximately 3.2 mm per year, which is double the observed 20th century trend of 1.6 mm per year (World Meteorological Organization [WMO] 2013). As a result, sea levels averaged over the last decade were about 8 inches higher than those of 1880 (WMO, 2013). Sea levels are rising faster now than in the previous two millennia, and the rise is expected to accelerate, even with robust GHG emission control measures. The most recent IPCC report (2013) predicts a mean sea–level rise of 11-38 inches by 2100. This prediction is more than 50 percent higher than earlier projections of 7-23 inches, when comparing the same emissions scenarios and time periods. A rise in sea levels could result in coastal flooding and erosion and could jeopardize California's water supply due to salt water intrusion. In addition, increased CO_2 emissions can cause oceans to acidify due to the carbonic acid it forms. Increased storm intensity and frequency could affect the ability of flood-control facilities, including levees, to handle storm events.

Agriculture

California has a $30 billion annual agricultural industry that produces half of the country's fruits and vegetables. Higher CO_2 levels can stimulate plant production and increase plant water-use efficiency. However, if temperatures rise and drier conditions prevail, water demand could increase; crop-yield could be threatened by a less reliable water supply; and greater air pollution could render plants more susceptible to pest and disease outbreaks. In addition, temperature increases could change the time of year certain crops, such as wine grapes, bloom or ripen, and thereby affect their quality (CCCC 2006).

Ecosystems and Wildlife

Climate change and the potential resulting changes in weather patterns could have ecological effects on the local and global levels. Increasing concentrations of GHGs are likely to accelerate the rate and severity of climate change impacts. Scientists project that the average global surface temperature could rise by 1.0-4.5°F (0.6-2.5°C) in the next 50 years, and 2.2-10°F (1.4-5.8°C) during the next century, with substantial regional variation. Soil moisture is likely to decline in many regions, and intense rainstorms are likely to become more frequent. Rising temperatures could have four major impacts on plants and animals: (1) timing of ecological events; (2) geographic range; (3) species' composition within communities; and (4) ecosystem processes, such as carbon cycling and storage (Parmesan 2006).

3.1.4 Regulatory Setting

The following regulations address both climate change and GHG emissions.

Federal Regulations

The United States Supreme Court in *Massachusetts et al. v. Environmental Protection Agency et al.* ([2007] 549 U.S. 05-1120) held that the U.S. EPA has the authority to regulate tail pipe emissions from motor-vehicles under the federal Clean Air Act.

The U.S. EPA issued a Final Rule for mandatory reporting of GHG emissions in October 2009. This Final Rule applies to fossil fuel suppliers, industrial gas suppliers, direct GHG emitters, and manufacturers of heavy-duty and off-road vehicles and vehicle engines, and requires annual reporting of emissions. The first annual reports for these sources were due in March 2011.

On May 13, 2010, the U.S. EPA issued a Final Rule that took effect on January 2, 2011, setting a threshold of 75,000 tons of CO_2e/year for GHG emissions. New and existing industrial facilities that meet or exceed that threshold will require a permit after that date. On November 10, 2010, the U.S. EPA published the "PSD and Title V Permitting Guidance for Greenhouse Gases." The U.S. EPA's guidance document is directed at state agencies responsible for air pollution permits under the Federal Clean Air Act to help them understand how to implement GHG reduction requirements while mitigating costs for industry. It is expected that most states will use the U.S. EPA's new guidelines when processing new air pollution permits for power plants, oil refineries, cement manufacturing, and other large pollution point sources.

On January 2, 2011, the U.S. EPA implemented the first phase of the Tailoring Rule for GHG emissions Title V Permitting. Under the first phase of the Tailoring Rule, all new sources of emissions are subject to GHG Title V permitting if they are otherwise subject to Title V for another air pollutant and they emit at least 75,000 tons of CO_2e/year. Under Phase 1, no sources were required to obtain a Title V permit solely due to GHG emissions. Phase 2 of the Tailoring Rule went into effect July 1, 2011. At that time new sources were subject to GHG Title V permitting if the source emits 100,000 tons of CO_2e/year, or they are otherwise subject to Title V permitting for another pollutant and emit at least 75,000 tons of CO_2e/year.

On July 3, 2012 the U.S. EPA issued the final rule that retains the GHG permitting thresholds that were established in Phases 1 and 2 of the GHG Tailoring Rule. These emission thresholds determine when Clean Air Act permits under the New Source Review Prevention of Significant Deterioration (PSD) and Title V Operating Permit programs are required for new and existing industrial facilities.

California Regulations

California ARB is responsible for the coordination and oversight of State and local air pollution control programs in California. California has a numerous regulations aimed at reducing the state's GHG emissions. These initiatives are summarized below.

Assembly Bill (AB) 1493 (2002), California's Advanced Clean Cars program (referred to as "Pavley"), requires ARB to develop and adopt regulations to achieve "the maximum feasible and cost-effective reduction of GHG emissions from motor vehicles." On June 30, 2009, U.S. EPA granted the waiver of Clean Air Act preemption to California for its greenhouse gas emission standards for motor vehicles beginning with the 2009 model year. Pavley I took effect for model years starting in 2009 to 2016 and Pavley II, which is now referred to as "LEV (Low Emission Vehicle) III GHG" will cover 2017 to

2025. Fleet average emission standards would reach 22 percent reduction from 2009 levels by 2012 and 30 percent by 2016. The Advanced Clean Cars program coordinates the goals of the Low Emissions Vehicles (LEV), Zero Emissions Vehicles (ZEV), and Clean Fuels Outlet programs and would provide major reductions in GHG emissions. By 2025, when the rules will be fully implemented, new automobiles will emit 34 percent fewer GHGs and 75 percent fewer smog-forming emissions from their model year 2016 levels (ARB 2011).

In 2005, the governor issued Executive Order (EO) S-3-05, establishing statewide GHG emissions reduction targets. EO S-3-05 provides that by 2010, emissions shall be reduced to 2000 levels; by 2020, emissions shall be reduced to 1990 levels; and by 2050, emissions shall be reduced to 80 percent below 1990 levels (CalEPA 2006). In response to EO S-3-05, CalEPA created the Climate Action Team (CAT), which in March 2006 published the Climate Action Team Report (the "2006 CAT Report") (CalEPA 2006). The 2006 CAT Report identified a recommended list of strategies that the state could pursue to reduce GHG emissions. These are strategies that could be implemented by various state agencies to ensure that the emission reduction targets in EO S-3-05 are met and can be met with existing authority of the state agencies. The strategies include the reduction of passenger and light duty truck emissions, the reduction of idling times for diesel trucks, an overhaul of shipping technology/infrastructure, increased use of alternative fuels, increased recycling, and landfill methane capture, etc. In April 2015, the governor issued EO B-30-15, calling for a new target of 40percent below 1990 levels by 2030.

California's major initiative for reducing GHG emissions is outlined in Assembly Bill 32 (AB 32), the "California Global Warming Solutions Act of 2006," signed into law in 2006. AB 32 codifies the statewide goal of reducing GHG emissions to 1990 levels by 2020 (essentially a 15 percent reduction below 2005 emission levels; the same requirement as under S-3-05), and requires ARB to prepare a Scoping Plan that outlines the main State strategies for reducing GHGs to meet the 2020 deadline. In addition, AB 32 requires ARB to adopt regulations to require reporting and verification of statewide GHG emissions.

After completing a comprehensive review and update process, ARB approved a 1990 statewide GHG level and 2020 limit of 427 MMT CO_2e. The Scoping Plan was approved by ARB on December 11, 2008, and included measures to address GHG emission reduction strategies related to energy efficiency, water use, and recycling and solid waste, among other measures. Many of the GHG reduction measures included in the Scoping Plan (e.g., Low Carbon Fuel Standard, Advanced Clean Car standards, and Cap-and-Trade) have been adopted since approval of the Scoping Plan. Implementation activities are ongoing and ARB is currently the process of updating the Scoping Plan.

In May 2014, ARB approved the first update to the AB 32 Scoping Plan. The 2013 Scoping Plan update defines ARB's climate change priorities for the next five years and sets the groundwork to reach post-2020 goals set forth in EO S-3-05. The update highlights California's progress toward meeting the "near-term" 2020 GHG emission reduction goals defined in the original Scoping Plan. It also evaluates how to align the State's longer-term GHG reduction strategies with other State policy priorities, such as for water, waste, natural resources, clean energy and transportation, and land use (ARB 2014).

Senate Bill (SB) 97, signed in August 2007, acknowledges that climate change is an environmental issue that requires analysis in California Environmental Quality Act (CEQA) documents. In March 2010, the California Resources Agency (Resources Agency) adopted amendments to the State CEQA Guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions. The

adopted guidelines give lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHGs and climate change impacts.

ARB Resolution 07-54 establishes 25,000 MT of GHG emissions as the threshold for identifying the largest stationary emission sources in California for purposes of requiring the annual reporting of emissions. This threshold is just over 0.005 percent of California's total inventory of GHG emissions for 2004.

Senate Bill (SB) 375, signed in August 2008, enhances the state's ability to reach AB 32 goals by directing ARB to develop regional GHG emission reduction targets to be achieved from passenger vehicles for 2020 and 2035. In addition, SB 375 directs each of the state's 18 major Metropolitan Planning Organizations (MPO) to prepare a "sustainable communities strategy" (SCS) that contains a growth strategy to meet these emission targets for inclusion in the RTP. On September 23, 2010, ARB adopted final regional targets for reducing GHG emissions from 2005 levels by 2020 and 2035.

The Southern California Association of Governments (SCAG) was assigned targets of an 8 percent reduction in GHGs from transportation sources by 2020 and a 13 percent reduction in GHGs from transportation sources by 2035. In the SCAG region, SB 375 also provides the option for the coordinated development of subregional plans by the subregional councils of governments and the county transportation commissions to meet SB 375 requirements.

In April 2011, the governor signed SB 2X, requiring California to generate 33 percent of its electricity from renewable energy by 2020.

On September 8, 2016, the governor signed Senate Bill 32 (SB 32) into law, extending AB 32 by requiring the State to further reduce GHGs to 40 percent below 1990 levels by 2030 (the other provisions of AB 32 remain unchanged). On December 14, 2017, ARB adopted the 2017 Scoping Plan, which provides a framework for achieving the 2030 target. The 2017 Scoping Plan relies on the continuation and expansion of existing policies and regulations, such as the Cap-and-Trade Program, as well as implementation of recently adopted policies and policies, such as SB 350 and SB 1383 (see below). The 2017 Scoping Plan also puts an increased emphasis on innovation, adoption of existing technology, and strategic investment to support its strategies. As with the 2013 Scoping Plan Update, the 2017 Scoping Plan does not provide project-level thresholds for land use development. Instead, it recommends that local governments adopt qualified GHG reduction plans that include policies and locally-appropriate quantitative thresholds consistent with a statewide per capita goal of six metric tons (MT) CO2e by 2030 and two MT CO2e by 2050 (ARB 2017). As stated in the 2017 Scoping Plan, these goals may be appropriate for plan-level analyses (city, county, subregional, or regional level), but not for specific individual projects because they include all emissions sectors in the State. However, adopted plans and policies designed to achieve locally-set GHG goals can serve as a performance metric for later projects. Adequately supported GHG reduction plans can also provide local agencies with a valuable tool for streamlining project-level environmental review. Under CEQA, individual projects that comply with the strategies and actions within an adequate local CAP can streamline the project-specific GHG analysis[2].

Adopted on October 7, 2015, SB 350 supports the reduction of GHG emissions from the electricity sector through a number of measures, including requiring electricity providers to achieve a 50 percent renewables portfolio standard by 2030, a cumulative doubling of statewide energy efficiency savings in electricity and natural gas by retail customers by 2030.

[2] CEQA Guidelines, § 15183.5,

Adopted in September 2016, SB 1383 requires the ARB to approve and begin implementing a comprehensive strategy to reduce emissions of short-lived climate pollutants. The bill requires the strategy to achieve the following reduction targets by 2030:

- Methane – 40 percent below 2013 levels
- Hydrofluorocarbons – 40 percent below 2013 levels
- Anthropogenic black carbon – 50 percent below 2013 levels

The bill also requires CalRecycle, in consultation with the State board, to adopt regulations that achieve specified targets for reducing organic waste in landfills.

For more information on the Senate and Assembly Bills, Executive Orders, and reports discussed above, and to view reports and research referenced above, please refer to the following websites: www.climatechange.ca.gov and www.arb.ca.gov/cc/cc.htm.

California Environmental Quality Act

Pursuant to the requirements of SB 97, the Resources Agency has adopted amendments to the State CEQA Guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions. The adopted CEQA Guidelines provide general regulatory guidance on the analysis and mitigation of GHG emissions in CEQA documents, while giving lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHGs and climate change impacts. To date, a variety of air districts have adopted quantitative significance thresholds for GHGs. The SCAQMD threshold, which was adopted in December 2008 and is designed to achieve emission reductions in the Basin consistent with statewide GHG reductions codified under AB 32 , considers emissions of over 10,000 MT CO_2e/year to be significant. However, the SCAQMD's threshold applies only to stationary sources and is expressly intended to apply only when the SCAQMD is the CEQA lead agency. Although not yet adopted, the SCAQMD recommends a quantitative threshold for all land use types of 3,000 MT CO_2e /year (SCAQMD, "Proposed Tier 3 Quantitative Thresholds – Option 1", September 2010). Note that no air district has the power to establish definitive thresholds that will completely relieve a lead agency of the obligation to determine significance on a case-by-case basis for a specific project.

Local Regulations

The Riverside City Council approved the Sustainable Riverside Policy Statement (SRPS) in 2005 and is committed to becoming a greener, more sustainable community. The SRPS emphasizes the implementation of cleaner, greener, and more sustainable programs. Riverside's 38 point Green Action Plan focuses on energy, greenhouse gas emissions, waste reduction, urban design, urban nature, transportation, and water.

The City of Riverside's 2025 General Plan includes policies that ensures that GHG emissions will be reduced in future City of Riverside development and operations. The relevant policies are listed below:

- Policy AQ-8.2: Support appropriate initiatives, legislation, and actions for reducing and responding to climate change.
- Policy AQ-8.3: Encourage community involvement and public-private partnerships to reduce and respond to global warming.

- Policy AQ-2.4: Monitor and strive to achieve performance goals and/or VMT reduction, which are consistent with SCAG's goals.

Additionally, the Western Riverside Council of Governments (WRCOG) completed a subregional climate action plan (CAP) in 2014 that encompasses twelve cities in the subregion, including Riverside, that have joined efforts to develop the CAP (WRCOG 2014). The CAP sets forth a subregional emissions reduction target, emissions reduction measures, and action steps to reduce GHG emissions and demonstrate consistency with the California's Global Warming Solutions Act of 2006 (Assembly Bill [AB] 32). The CAP contains GHG reduction measures organized into four primary sectors, as follows: energy, transportation and land use, solid waste, and water. If fully implemented, the CAP would exceed WRCOG's 2020 goal by 2.1 percent, achieving an overall 17.1 percent reduction in GHG emissions by 2020.

Then, in January 2016, Riverside adopted the Riverside Restorative Growthprint (RRG), which combines two plans: the Economic Prosperity Action Plan (RRG-EPAP) and the Climate Action Plan (RRG-CAP) (Resolution No. 22942, City of Riverside 2016a). The RRG-CAP expands upon the subregional CAP and provides a path for the City to achieve reductions in GHG emissions through 2035, while the RRG-EPAP provides a framework for smart growth and low-carbon economic development. The City's baseline GHG emissions inventory (2007) is a benchmark for tracking the City's progress in achieving future reductions. The community-wide inventory identifies the quantity of GHG emissions produced by residents, businesses, and municipal government operations. The inventory reflects the emissions generated within the City that result from the operation of motor vehicles, use of electricity and natural gas, and disposal of solid waste. In 2007, the City's total community-wide emissions were estimated at 3,024,066 MT of CO_2e; while emissions resulting from municipal operations were responsible for approximately 122,525 MT of CO_2e. In 2010, the City conducted a second inventory that indicated the City's emissions had decreased by approximately 13.4 percent over the three year time period. That reduction is largely attributed to the City's actions to reduce the carbon intensity of its electricity portfolio, as supplied by municipally-owned Riverside Public Utilities (RPU). In addition, the City's energy efficiency and renewable energy incentive programs have helped reduce energy use by residential, commercial, and industrial customers; while solid waste diversion efforts have helped decrease emissions that result from landfill disposal (City of Riverside 2016b).

Through the WRCOG subregional CAP process, the City has committed to a 2020 emissions target of 2,224,908 MT of CO_2e, which is 26.4 percent below the City's 2007 baseline and 15 percent below 2010 emissions. This represents a reduction of 779,304 MT CO_2e from the City's 2020 business-as-usual (BAU) forecast. The City is aiming for a 2035 emissions target of 1,542,274 MT of CO_2e, which is 49 percent below the 2007 baseline and represents a reduction of 2,120,931 MT of CO_2e from the 2035 BAU forecast. This 2035 emissions target is derived from a straight-line interpolation of the state-wide AB 32 goal and Executive Order (EO) S-3-05, which aims for 80 percent below 1990 levels by 2050, and is equivalent to 40 percent below 1990 levels. Through state and regional measures implemented at the subregional level, the City of Riverside anticipates significant reductions from the City's 2020 and 2035 BAU emissions forecasts (949,572 MT of CO_2e and 1,398,918 MT of CO_2e, respectively). The RRG-CAP is a qualified GHG reduction strategy that can be used to streamline the analysis of GHG emissions under the streamlining provisions of California Environmental Quality Act (CEQA) Guidelines Section §15183.5.

3.2 Impact Analysis

3.2.1 Significance Thresholds

Pursuant to Appendix G of the State CEQA Guidelines, impacts related to GHG emissions from the project would be significant if the project would:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; and/or
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

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

CONSTRUCTION EMISSIONS

The AEP Climate Change Committee white paper stated that construction emissions can be evaluated in one of two methods.

(1) Using best management practices (BMPs). Construction-related emissions would be less than significant if a project implements all feasible BMPs, including alternatively fueled vehicles, reduction of worker trips, and sourcing construction materials from local sources when possible (without substantial cost implications).

(2) Amortizing construction emissions over the operational lifetime. Construction-related emissions are quantified and amortized over the lifetime of a project. The amortized construction emissions are added to the operational emissions to calculate the total annualized emissions. If the annualized emissions are below quantitative thresholds, GHG emissions would be less than significant.

OPERATIONAL EMISSIONS

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

Tier 1. If the project is exempt from further environmental analysis under existing statutory or categorical exemptions, there is a presumption of less than significant impacts with respect to climate change. If not, then the Tier 2 threshold should be considered.

Tier 2. Consists of determining whether or not the project is consistent with a GHG reduction plan. The concept embodied in this tier is equivalent to the existing concept of consistency in CEQA Guidelines section 15064(h)(3), 15125(d) or 15152(a). Under this Tier, if the proposed

project is consistent with the qualifying local GHG reduction plan, it is not significant for GHG emissions. If there is not an adopted plan, then a Tier 3 approach would be appropriate.

Tier 3. Establishes a screening significance threshold level to determine significance. The Working Group has provided a recommendation of 3,000 metric tons (MT) of CO_2e per year for residential/commercial projects.

Tier 4. Establishes a service population efficiency threshold to determine significance. The Working Group has provided a recommendation of 3.0 MT of CO_2e per year for land use projects and 4.1 MT of CO_2e per year for plans based on statewide service population to achieve statewide 2035 targets.

Tier 2 is the most appropriate threshold for the proposed project as the City of Riverside has adopted a local qualified GHG reduction plan. Project emissions were still calculated and provided for informational purposes, but significance is determined based on the project's consistency with all applicable RRG-CAP strategies.

3.2.2 Study Methodology

Calculations of CO_2, CH_4, and N_2O emissions are provided to identify the magnitude and nature of the proposed project's potential GHG emissions and environmental effects. The analysis focuses on CO_2, CH_4, and N_2O because these make up 98.9 percent of all GHG emissions by volume (IPCC 2007) and are the GHG emissions that the project would emit in the largest quantities. Fluorinated gases, such as HFCs, PFCs, and SF_6, were also considered for the analysis. However, since fluorinated gases are primarily associated with industrial processes, and the proposed project involves an unrefrigerated warehouse, the quantity of fluorinated gases would not be substantial. Emissions of all GHGs are converted into their equivalent GWP in MT CO_2e. Small amounts of other GHGs (such as chlorofluorocarbons [CFCs]) would also be emitted; however, these other GHG emissions would not substantially add to the total GHG emissions. Calculations are based on the methodologies discussed in the California Air Pollution Control Officers Association (CAPCOA) CEQA and Climate Change white paper (CAPCOA 2008) and included the use of the California Climate Action Registry (CCAR) General Reporting Protocol (CCAR 2009).

GHG emissions associated with the proposed project were calculated using the California Emissions Estimator Model (CalEEMod) version 2016.3.1 (see Appendices for calculations).

3.2.3 Operational Emissions

CalEEMod calculates operational emissions from the proposed project, which include CO_2, N_2O, and CH_4. Energy-related emissions include emissions from electricity and natural gas use. The emissions factors for natural gas combustion are based on EPA's AP-42, (Compilation of Air Pollutant Emissions Factors) and CCAR. Electricity emissions are calculated by multiplying the energy use times the carbon intensity of the utility district per kilowatt hour (CalEEMod User Guide 2016).

Emissions associated with area sources, including consumer products, landscape maintenance, and architectural coating were calculated in CalEEMod and utilize standard emission rates from ARB, U.S. EPA, and district supplied emission factor values (CalEEMod User Guide 2016).

Emissions from waste generation were also calculated in CalEEMod and are based on the IPCC's methods for quantifying GHG emissions from solid waste using the degradable organic content of waste (CalEEMod User Guide 2016). Waste disposal rates by land use and overall composition of

municipal solid waste in California was primarily based on data provided by the California Department of Resources Recycling and Recovery (CalRecycle).

Emissions from water and wastewater use calculated in CalEEMod were based on the default electricity intensity from the California Energy Commission's 2006 Refining Estimates of Water-Related Energy Use in California using the average values for Southern California.

For mobile sources, CO_2 and CH_4 emissions from vehicle trips to and from the project site were quantified using CalEEMod. Defaults for the vehicle fleet mix were used were based on the Institute for Transportation Engineers (ITE) trip rate for warehousing uses (ITE land use no. 150).

Because CalEEMod does not calculate N_2O emissions from mobile sources, N_2O emissions were quantified using the California Climate Action Registry General Reporting Protocol (January 2009) direct emissions factors for mobile combustion, vehicle miles traveled (VMT) for each trip-generating land use (calculated by CalEEMod based on trip generation rates), and the vehicle fleet for each land use. N_2O calculations and conversion into MT of CO_2e are provided in Appendix A for the two trip-generating land uses modeled in CalEEMod for the project: office building and unrefrigerated warehouse.

A limitation of the quantitative analysis of emissions from mobile combustion is that emission models, such as CalEEMod, evaluate aggregate emissions, meaning that all vehicle trips and related emissions assigned to a project are assumed to be new trips and emissions generated by the project itself. Such models do not demonstrate, with respect to a regional air quality impact, what proportion of these emissions are actually "new" emissions, specifically attributable to the project in question. For most projects, the main contributor to regional air quality emissions is from motor vehicles; however, the quantity of vehicle trips appropriately characterized as "new" is usually uncertain as traffic associated with a project may be relocated trips from other locales. In other words, vehicle trips associated with the project may include trips relocated from other existing locations, as people begin to use the proposed project instead of similar existing uses. Because the proportion of "new" versus relocated trips is unknown, the VMT estimate generated by CalEEMod is used as a conservative, "worst-case" estimate.

Construction Emissions

Although construction activity is addressed in this analysis, CAPCOA does not discuss whether any of the suggested threshold approaches adequately address impacts from temporary construction activity. As stated in the CEQA and Climate Change white paper, "more study is needed to make this assessment or to develop separate thresholds for construction activity" (CAPCOA 2008). In accordance with SCAQMD's recommendation, GHG emissions from construction of the proposed project are amortized over a 30 year period and added to annual operating emissions to determine total annual GHG emissions from the proposed project for informational purposes.

Construction of the proposed project would generate temporary GHG emissions primarily due to the operation of construction equipment and truck trips. Site preparation and grading typically generate the greatest amount of emissions due to the use of grading equipment and soil hauling. CalEEMod was used to estimate emissions associated with the construction period, based on the construction schedule supplied by the project applicant. Complete results from CalEEMod and assumptions can be viewed Appendix A.

3.2.4 Project Impacts

The following sections analyze project emissions using the threshold and methodology described above. Project emissions are provided for informational purposes, but significance is determined based on the project's consistency with all applicable RRG-CAP strategies.

Construction Emissions

For the purpose of this analysis, it is assumed that construction activity would occur over a period of approximately ten months. As shown in Table 6, construction activity for the project would generate an estimated 552.6 MT of CO_2e. When amortized over a 30-year period, construction of the project would generate about 18.4 MT of CO_2e per year.

Table 6 Estimated Construction Emissions of Greenhouse Gases

Annual Emissions MT CO_2e	
Total	552.6
Amortized over 30 years	**18.4**

See Appendix A for CalEEMod results

Combined Construction, Stationary, and Mobile Source Emissions

Table 7 combines the construction, operational, and mobile GHG emissions associated with development of the project. The annual emissions would total approximately 4,326 MT of CO_2e.

Table 7 Combined Annual Emissions MT CO_2e/year

Emission Source	Project Emissions (MT of CO_2e)
Construction	18.4
Operational	
Area	<0.1
Energy	593.7
Solid Waste	163.7
Water	739.6
Mobile	
CO_2 and CH_4	2,689.9
N_2O	120.2
Total	**4,325.5**

Source: Calculations were made in CalEEMod, see Appendix A for full model output. Values have been rounded.

Consistency with GHG Reduction Plans and Policies

As discussed under Local Regulations, Riverside adopted the Riverside Restorative Growthprint (RRG), which combines two plans: the Economic Prosperity Action Plan (RRG-EPAP) and the Climate Action Plan (RRG-CAP). The RRG-CAP expands upon the subregional CAP and provides a path for the

City to achieve reductions in GHG emissions through 2035, while the RRG-EPAP provides a framework for smart growth and low-carbon economic development. The RRG-CAP serves as a Qualified GHG Reduction Strategy consistent with State CEQA Guidelines. The CAP outlines a programmatic approach to review the potential GHG-related impacts associated with new development. Additionally, the City of Riverside's General Plan includes policies to achieve GHG emission reductions, which are also summarized under Local Regulations above.

The project would be consistent with all relevant state and regional regulations, General Plan policies discussed above, and the RRG-CAP. Table 8 illustrates the project's consistency with all applicable GHG reduction plans and policies.

Table 8 Consistency with Applicable GHG Reduction Plans and Policies

Measure/Regulation	Project Consistency
State and Regional Regulations	
Energy	
California Building Energy Efficiency Standards (Title 24, Part 6). Maximize energy efficiency building and appliance standards, and pursue additional efficiency efforts including new technologies, and new policy and implementation mechanisms. Pursue comparable investment in energy efficiency from all retail providers of electricity in California (including both investor-owned and publicly owned utilities).	**Consistent.** The proposed project will comply with the requirements of the 2016 California Building Energy Efficiency Standards (Title 24, Part 6) including measures to incorporate energy-efficient building design features.
Water	
Water Use Efficiency. Reduce per capita water use by 20% by 2020. SB X7-7 is part of a California legislative package passed in 2009 that requires urban retail water suppliers to reduce per-capita water use by 10% from a baseline level by 2015, and to reduce per capita water use by 20% by 2020. Green accountability performance (GAP) Goal 16 directly aligns with SB X7-7. In Southern California, energy costs and GHG emissions associated with the transport, treatment, and delivery of water from outlying regions are high. Therefore, the region has extra incentive to reduce water consumption. While this is considered a state measure, it is up to the local water retailers, jurisdictions, and water users to meet these targets.	**Consistent**. The proposed project will comply with the requirements of Title 19 – Article VIII – Chapter 19.570 – Water Efficient Landscaping and Irrigation, including measures to increase water use efficiency. Water efficient irrigation systems and devices and drought tolerant landscaping will be installed on the project site.
Solid Waste	
Construction and Demolition Waste Diversion. Meet mandatory requirement to divert 50% of C&D waste from landfills by 2020 and exceed requirement by diverting 90% of C&D	**Consistent.** In compliance with CalGreen requirements, at least 65% of all nonhazardous construction waste generated by the proposed project would be recycled and/or salvaged (including, but not limited to, soil, vegetation, concrete, lumber, metal, and cardboard). Furthermore, 100% of excavated soil shall be

Measure/Regulation	Project Consistency
waste from landfills by 2035.	reused or recycled.
Transportation	
Pavley and Low Carbon Fuel Standard (LCFS). ARB identified this measure as a Discrete Early Action Measure. This measure would reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020.	**Consistent.** The project does not involve the manufacture, sale, or purchase of vehicles. However, vehicles that operate within and access the project site would comply with Pavley and Low Carbon Fuel Standard. Medium duty and heavy duty trucks and trailers working from the proposed warehouse will be subject to aerodynamic and hybridization requirements as established by ARB; no feature of the project will interfere with implementation of these requirements and programs.
RRG-CAP Measures	
Energy Measures	
E-1: Traffic and Street Lights Replace traffic and street lights with high-efficiency bulbs.	**Not Applicable.** This objective is aimed at government agencies, not private developers. Nonetheless, the project would comply with applicable energy efficiency requirements related to lighting detailed in the Green Building Standards Code (Title 24, California Code of Regulations).
E-2: Shade Trees Strategically plant trees at new residential developments to reduce the urban heat island effect.	**Not Applicable.** This objective is aimed at government agencies and private developers of residential projects.
E-3: Local Utility Programs – Electricity Financing and incentives for business and home owners to make energy efficient, renewable energy, and water conservation improvements	**Not Applicable.** This objective is aimed at government agencies, not private developers. Nonetheless, the project would comply with applicable energy efficiency requirements detailed in the Green Building Standards Code (Title 24, California Code of Regulations).
E-4: Renewable Energy Production on Public Property Large scale renewable energy installation on publicly owned property and in public rights of way.	**Not Applicable.** This objective is aimed at government agencies, not private developers.
E-5: UCR Carbon Neutrality Collaborate with UCR to achieve a carbon neutral campus.	**Not Applicable.** This objective is aimed at government agencies and the University of California, Riverside, not private developers.
E-6: RPU Technology Grants RPU grant programs to foster research, development and demonstration of innovative solutions to energy problems.	**Not Applicable.** This objective is aimed at government agencies, not private developers.
Transportation Measures	
T-1: Bicycle Infrastructure Improvements Expand on-street and off-street bicycle infrastructure, including bicycle lanes and bicycle trails.	**Consistent.** All collector and arterial streets in Hunter Business Park provide bike lanes. Class 2 bike lanes are provided on Columbia and Iowa Avenues and Spruce Street. These bike lanes are consistent with the bicycle routes shown on the Circulation/Transportation element of the City's General Plan and connect with city wide routes. A bikeway is also designated along the Gage Canal. The project would extend Marlborough across the Gage Canal, but would not block public access to the bikeway. The proposed project would not obstruct the improvement or use of proposed bikeways, include the existing bike lanes adjacent to the site on Marlborough Drive.
T-2: Bicycle Parking Provide additional options for bicycle parking.	**Consistent.** The project would comply with Riverside Municipal Code Chapter 10.64

Measure/Regulation	Project Consistency
T-3: End of Trip Facilities Encourage use of non-motorized transportation modes by providing appropriate facilities and amenities for commuters	regarding bicycle accommodations.
T-4: Promotional Transportation Demand Management Encourage Transportation Demand Management strategies.	**Consistent.** Pursuant to Chapter 19.88 of the Riverside Municipal Code, businesses generating one hundred or more employees are required to prepare and submit a trip reduction plan to reduce work-related vehicle trips by 6.5 percent from the number of trips related to the project as indicated in the most current edition of the Trip Generation Handbook, published by the Institute of Traffic Engineers (ITE). Methods to achieve the vehicle reduction targets may include, but are not limited to: ▪ Alternative work schedules/ flex-time ▪ Carpool parking ▪ Bicycle parking and shower facilities ▪ Information center for transportation alternatives ▪ Rideshare vehicle loading areas ▪ Vanpool vehicle accessibility ▪ Bus stop improvements ▪ On-site child care facilities ▪ Onsite amenities such as cafeterias ▪ Transit incentives for employees, such as subsidy of bus passes ▪ Use of low and/or ultra-low fleet vehicles The proposed project would be required to implement feasible methods, including but not limited to those listed, to reduce work-related vehicle trips by 6.5 percent.
T-5: Traffic Signal Coordination Incorporate technology to synchronize and coordinate traffic signals along local arterials.	**Not Applicable.** This objective is aimed at government agencies, not private developers.
T-6: Density Improve jobs-housing balance and reduce vehicle miles traveled by increasing household and employment densities.	**Consistent.** The project would increase employment opportunities in the City of Riverside by approximately 270 jobs. It is assumed that many of these jobs would be filled by local residents. By providing local jobs, the project would improve the jobs-housing balance and help reduce vehicle miles traveled by local residents.
T-7: Mixed-Use Development Provide for a variety of development types and uses.	**Not Applicable.** This objective is aimed at government agencies, not private developers. Furthermore, the project site is not designated mixed-use.
T-8: Pedestrian-Only Areas Encourage walking by providing pedestrian-only community areas.	**Consistent.** Hunter Business Park provides a pedestrian network along streets and onsite internal pedestrian walkways. Sidewalks are required on all arterial and collector streets. Inclusion of plans for pedestrian access and circulation for this project would be submitted for review and approval as a condition of the City's Design Review Process. The project would also be required to comply with Riverside Municipal Code Chapter 19.580.080 G regarding pedestrian access and circulation. In addition, the Hunter Business Park Specific Plan encourages development projects exceeding 250 employees or 15 acres to include employee open space. The project includes the development of a ten-foot-wide multi-use trail, made of decomposed granite material as specified by City of Riverside Parks and Recreation Department, which would run along the southern and eastern sides of the project. The trail would be sloped to a drainage ditch/channel that

Measure/Regulation	Project Consistency
	generally runs along the southern and eastern side of the trail for storm water protection. As the trail is needed for fire protection, the trail would provide 12 foot clearance for fire service vehicles and would be designed to keep the maximum slope no greater than 15%, where feasible. The trail would also be used for maintenance purposes to help maintain the proposed graded slopes and the storm water protection system, which consists of the drainage ditch/channel adjacent to the trail and the proposed storm drain that is proposed under the trail. Lastly the trail would be used as a public recreational trail as part of the City of Riverside trail network. The project would improve access by pedestrians, hikers, mountain bikers, or equestrian to the 15 miles of trails throughout Box Springs Mountain Reserve Park located along the southern border of the project site.
T-9: Limit Parking Requirements for New Development Reduce requirements for vehicle parking in new development projects.	**Not Applicable.** This objective is aimed at government agencies, not private developers. The project would comply with applicable City parking requirements.
T-10: High Frequency Transit Service Implement bus rapid transit service in the subregion to provide alternative transportation options.	**Not Applicable.** This objective is aimed at government agencies, not private developers. However, the proposed project would be located a half-mile from the Riverside-Hunter Park bus stop, which would encourage employees to use transit.
T-11: Voluntary Transportation Demand Management Encourage employers to create TDM programs for their employees	**Consistent.** Pursuant to Chapter 19.88 of the Riverside Municipal Code, businesses generating one hundred or more employees are required to prepare and submit a trip reduction plan to reduce work-related vehicle trips by 6.5 percent from the number of trips related to the project as indicated in the most current edition of the Trip Generation Handbook, published by the Institute of Traffic Engineers (ITE). Methods to achieve the vehicle reduction targets may include, but are not limited to: ▪ Alternative work schedules/ flex-time ▪ Carpool parking ▪ Bicycle parking and shower facilities ▪ Information center for transportation alternatives ▪ Rideshare vehicle loading areas ▪ Vanpool vehicle accessibility ▪ Bus stop improvements ▪ On-site child care facilities ▪ Onsite amenities such as cafeterias ▪ Transit incentives for employees, such as subsidy of bus passes ▪ Use of low and/or ultra-low fleet vehicles The proposed project would be required to implement feasible methods, including but not limited to those listed, to reduce work-related vehicle trips by 6.5 percent.
T-12: Accelerated Bike Plan Implementation Accelerate the implementation of all or specified components of a jurisdiction's adopted bike plan.	**Not Applicable.** This objective is aimed at government agencies, not private developers. However, the proposed project would not obstruct the implementation of the adopted bike plan.
T-13: Fixed Guideway Transit By 2020, complete feasibility study and by 2025 Introduce a fixed route transit service in the jurisdiction.	**Not Applicable.** This objective is aimed at government agencies, not private developers.
T-14: Neighborhood Electric Vehicle Programs	**Not Applicable.**

Measure/Regulation	Project Consistency
Implement development requirements to accommodate Neighborhood Electric Vehicles and supporting infrastructure.	This objective is aimed at government agencies, not private developers.
T-15: Subsidized Transit Increase access to transit by providing free or reduced passes	**Consistent.** Pursuant to Chapter 19.88 of the Riverside Municipal Code, businesses generating one hundred or more employees are required to prepare and submit a trip reduction plan to reduce work-related vehicle trips by 6.5 percent from the number of trips related to the project as indicated in the most current edition of the Trip Generation Handbook, published by the Institute of Traffic Engineers (ITE). Methods to achieve the vehicle reduction targets may include, but are not limited to: ▪ Alternative work schedules/ flex-time ▪ Carpool parking ▪ Bicycle parking and shower facilities ▪ Information center for transportation alternatives ▪ Rideshare vehicle loading areas ▪ Vanpool vehicle accessibility ▪ Bus stop improvements ▪ On-site child care facilities ▪ Onsite amenities such as cafeterias ▪ Transit incentives for employees, such as subsidy of bus passes ▪ Use of low and/or ultra-low fleet vehicles The proposed project would be required to implement feasible methods, including but not limited to those listed, to reduce work-related vehicle trips by 6.5 percent.
T-16: Bike Share Program Create nodes offering bike sharing at key locations throughout the City.	**Not Applicable.** This objective is aimed at government agencies, not private developers.
T-17: Car Share Program Offer Riverside residents the opportunity to use car sharing to satisfy short-term mobility needs.	**Consistent.** Pursuant to Chapter 19.88 of the Riverside Municipal Code, businesses generating one hundred or more employees are required to prepare and submit a trip reduction plan to reduce work-related vehicle trips by 6.5 percent from the number of trips related to the project as indicated in the most current edition of the Trip Generation Handbook, published by the Institute of Traffic Engineers (ITE). Methods to achieve the vehicle reduction targets may include, but are not limited to: ▪ Alternative work schedules/ flex-time ▪ Carpool parking ▪ Bicycle parking and shower facilities ▪ Information center for transportation alternatives ▪ Rideshare vehicle loading areas ▪ Vanpool vehicle accessibility ▪ Bus stop improvements ▪ On-site child care facilities ▪ Onsite amenities such as cafeterias ▪ Transit incentives for employees, such as subsidy of bus passes ▪ Use of low and/or ultra-low fleet vehicles The proposed project would be required to implement feasible methods, including but not limited to those listed, to reduce work-related vehicle trips by 6.5 percent.
T-18: SB 743- Alternative to LOS Use SB 743 to incentivize development	**Not Applicable.** This objective is aimed at government agencies, not private developers.

Measure/Regulation	Project Consistency
in the downtown and other areas served by transit.	Furthermore, the project is not located in a transit priority area.
T-19: Alternative Fuel & Vehicle Technology and Infrastructure Promote the use of alternative fueled vehicles such as those powered by electric, natural gas, biodiesel, and fuel cells by Riverside residents and workers.	**Consistent.** Pursuant to Chapter 19.88 of the Riverside Municipal Code, businesses generating one hundred or more employees are required to prepare and submit a trip reduction plan to reduce work-related vehicle trips by 6.5 percent from the number of trips related to the project as indicated in the most current edition of the Trip Generation Handbook, published by the Institute of Traffic Engineers (ITE). Methods to achieve the vehicle reduction targets may include, but are not limited to: ▪ Alternative work schedules/ flex-time ▪ Carpool parking ▪ Bicycle parking and shower facilities ▪ Information center for transportation alternatives ▪ Rideshare vehicle loading areas ▪ Vanpool vehicle accessibility ▪ Bus stop improvements ▪ On-site child care facilities ▪ Onsite amenities such as cafeterias ▪ Transit incentives for employees, such as subsidy of bus passes ▪ Use of low and/or ultra-low fleet vehicles The proposed project would be required to implement feasible methods, including but not limited to those listed, to reduce work-related vehicle trips by 6.5 percent.
T-20: Eco- Corridor/Green Enterprise Zone Create a geographically defined area(s) featuring best practices in sustainable urban design and green building focused on supporting both clean-tech and green businesses.	**Not Applicable.** This objective is aimed at government agencies, not private developers.
Water Measure	
W-1: Water Conservation and Efficiency Reduce per capita water use by 20% by 2020.	**Consistent.** The proposed project would be required to be consistent with applicable water efficiency requirements detailed in the Green Building Standards Code (Title 24, California Code of Regulations. As such, the project would be equipped with low-flow plumbing fixtures, reducing water use.
Solid Waste Measures	
SW-1: Yard Waste Collection Provide green waste collection bins community-wide.	**Consistent.** This objective is aimed at government agencies, not private developers. Nonetheless, the project would comply with applicable solid waste requirements.
SW-2: Food Scrap and Compostable Paper Diversion Divert food and paper waste from landfills by implementing commercial and residential collection program.	**Consistent.** The project would be required to participate in applicable waste diversion programs. The project would also be subject to all applicable State and City requirements for solid waste reduction.
Food, Agriculture, and Urban Forest Measures	
A-1: Local Food and Agriculture Promote local food and agricultural programs.	**Not Applicable.** This objective is aimed at government agencies, not private developers.
A-2: Urban Forest	**Consistent.**

Measure/Regulation	Project Consistency
Augment City's Urban and Community Forest Program to include an Urban Forest Management Plan	The project would be required to comply with the Hunter Business Park Specific Plan Landscape requirements, the City of Riverside Landscape Design Guidelines, and Chapter 19.62 of the Riverside Municipal Code. The proposed landscape plan includes the planting of approximately 150 new trees around the building.

Conclusion

As shown in Table 8, the project would be consistent with all applicable GHG reduction strategies of the RRG-CAP, a qualified GHG reduction plan. Furthermore, the project would be consistent with applicable land use and zoning designations, would not conflict with any State regulations intended to reduce GHG emissions statewide, and would be consistent with applicable plans and programs designed to reduce GHG emissions. Therefore, the project would not conflict with any plan, policy, or legislation related to GHG emissions and no mitigation measures are recommended.

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Persons Contacted

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AQ/GHG Appendix A

CalEEMod Air Quality and Greenhouse Gas Model Worksheets and Math Equations

Riverside Warehouse

Riverside-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	10.00	1000sqft	0.23	10,000.00	0
Unrefrigerated Warehouse-No Rail	336.33	1000sqft	7.72	336,330.00	0
Parking Lot	86.70	1000sqft	1.99	86,698.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2019
Utility Company	Riverside Public Utilities				
CO2 Intensity (lb/MWhr)	1325.65	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Source: client provided site plan

Construction Phase - Client provided construction schedule

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Grading -

Architectural Coating - SCAQMD Rule 1113

Vehicle Trips - Trip gen provided by traffic engineer

Area Coating - SCAQMD Rule 1113

Construction Off-road Equipment Mitigation -

Area Mitigation - SCAQMD Rule 1113

Energy Mitigation -

Fleet Mix -

Riverside Warehouse - Riverside-South Coast County, Annual

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstructionPhase	NumDays	20.00	74.00
tblConstructionPhase	NumDays	230.00	130.00
tblConstructionPhase	NumDays	20.00	44.00
tblConstructionPhase	NumDays	20.00	11.00
tblConstructionPhase	NumDays	10.00	21.00
tblFleetMix	FleetMixLandUseSubType	Unrefrigerated Warehouse-No Rail	Parking Lot
tblFleetMix	FleetMixLandUseSubType	Parking Lot	Unrefrigerated Warehouse-No Rail
tblLandUse	BuildingSpaceSquareFeet	86,700.00	86,698.00
tblLandUse	LandUseSquareFeet	86,700.00	86,698.00
tblProjectCharacteristics	OperationalYear	2018	2019
tblVehicleTrips	ST_TR	2.46	215.20
tblVehicleTrips	ST_TR	1.68	3.80
tblVehicleTrips	SU_TR	1.05	215.20
tblVehicleTrips	SU_TR	1.68	3.80
tblVehicleTrips	WD_TR	11.03	215.20
tblVehicleTrips	WD_TR	1.68	3.80

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					
2017	0.2471	2.3106	1.4746	2.8400e-003	0.4103	0.1261	0.5365	0.1987	0.1169	0.3156	0.0000	260.9627	260.9627	0.0542	0.0000	262.3175
2018	1.2086	1.5907	1.3724	3.1900e-003	0.1204	0.0791	0.1995	0.0324	0.0746	0.1070	0.0000	289.3259	289.3259	0.0389	0.0000	290.2981
Maximum	**1.2086**	**2.3106**	**1.4746**	**3.1900e-003**	**0.4103**	**0.1261**	**0.5365**	**0.1987**	**0.1169**	**0.3156**	**0.0000**	**289.3259**	**289.3259**	**0.0542**	**0.0000**	**290.2981**

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					
2017	0.2471	2.3106	1.4746	2.8400e-003	0.2267	0.1261	0.3529	0.1006	0.1169	0.2175	0.0000	260.9625	260.9625	0.0542	0.0000	262.3173
2018	1.2086	1.5907	1.3724	3.1900e-003	0.1204	0.0791	0.1995	0.0324	0.0746	0.1070	0.0000	289.3258	289.3258	0.0389	0.0000	290.2979
Maximum	**1.2086**	**2.3106**	**1.4746**	**3.1900e-003**	**0.2267**	**0.1261**	**0.3529**	**0.1006**	**0.1169**	**0.2175**	**0.0000**	**289.3258**	**289.3258**	**0.0542**	**0.0000**	**290.2979**

	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**	**34.60**	**0.00**	**24.95**	**42.45**	**0.00**	**23.21**	**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	8-1-2017	10-31-2017	1.6625	1.6625
2	11-1-2017	1-31-2018	1.3051	1.3051
3	2-1-2018	4-30-2018	1.1679	1.1679
4	5-1-2018	7-31-2018	0.9293	0.9293
5	8-1-2018	9-30-2018	0.2887	0.2887
		Highest	1.6625	1.6625

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	1.3391	5.0000e-005	5.5800e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0108	0.0108	3.0000e-005	0.0000	0.0115
Energy	3.9100e-003	0.0355	0.0298	2.1000e-004		2.7000e-003	2.7000e-003		2.7000e-003	2.7000e-003	0.0000	630.6097	630.6097	0.0137	3.3900e-003	631.9615
Mobile	1.3062	11.1396	16.8776	0.0652	4.7391	0.0723	4.8114	1.2700	0.0683	1.3383	0.0000	6,022.9508	6,022.9508	0.3223	0.0000	6,031.0070
Waste						0.0000	0.0000		0.0000	0.0000	66.0634	0.0000	66.0634	3.9042	0.0000	163.6693
Water						0.0000	0.0000		0.0000	0.0000	25.2387	630.1497	655.3884	2.6060	0.0641	739.6296
Total	**2.6492**	**11.1752**	**16.9130**	**0.0654**	**4.7391**	**0.0750**	**4.8141**	**1.2700**	**0.0710**	**1.3411**	**91.3021**	**7,283.7209**	**7,375.0230**	**6.8463**	**0.0675**	**7,566.2789**

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	1.3391	5.0000e-005	5.5800e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0108	0.0108	3.0000e-005	0.0000	0.0115
Energy	2.8300e-003	0.0257	0.0216	1.5000e-004		1.9500e-003	1.9500e-003		1.9500e-003	1.9500e-003	0.0000	592.4313	592.4313	0.0129	3.0700e-003	593.6676
Mobile	1.3062	11.1396	16.8776	0.0652	4.7391	0.0723	4.8114	1.2700	0.0683	1.3383	0.0000	6,022.9508	6,022.9508	0.3223	0.0000	6,031.0070
Waste						0.0000	0.0000		0.0000	0.0000	66.0634	0.0000	66.0634	3.9042	0.0000	163.6693
Water						0.0000	0.0000		0.0000	0.0000	25.2387	630.1497	655.3884	2.6060	0.0641	739.6296
Total	**2.6481**	**11.1654**	**16.9047**	**0.0653**	**4.7391**	**0.0743**	**4.8133**	**1.2700**	**0.0703**	**1.3403**	**91.3021**	**7,245.5425**	**7,336.8446**	**6.8454**	**0.0671**	**7,527.9849**

	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	**0.04**	**0.09**	**0.05**	**0.09**	**0.00**	**1.00**	**0.02**	**0.00**	**1.06**	**0.06**	**0.00**	**0.52**	**0.52**	**0.01**	**0.47**	**0.51**

3.0 Construction Detail

Construction Phase

Riverside Warehouse - Riverside-South Coast County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation/Utilities	Site Preparation	8/1/2017	8/29/2017	5	21	
2	Grading	Grading	8/30/2017	10/30/2017	5	44	
3	Building Construction	Building Construction	10/31/2017	4/30/2018	5	130	
4	Paving	Paving	5/1/2018	5/15/2018	5	11	
5	Architectural Coating	Architectural Coating	5/16/2018	8/27/2018	5	74	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 22

Acres of Paving: 1.99

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 519,495; Non-Residential Outdoor: 173,165; Striped Parking Area: 5,202 (Architectural Coating – sqft)

OffRoad Equipment

Riverside Warehouse - Riverside-South Coast County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation/Utilities	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation/Utilities	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38

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
Grading	9	23.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	9	23.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation/Utilities	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	181.00	71.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	36.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	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 Site Preparation/Utilities - 2017

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					
Fugitive Dust					0.1897	0.0000	0.1897	0.1043	0.0000	0.1043	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0521	0.5489	0.2463	4.0000e-004		0.0302	0.0302		0.0278	0.0278	0.0000	37.1011	37.1011	0.0114	0.0000	37.3853
Total	**0.0521**	**0.5489**	**0.2463**	**4.0000e-004**	**0.1897**	**0.0302**	**0.2199**	**0.1043**	**0.0278**	**0.1321**	**0.0000**	**37.1011**	**37.1011**	**0.0114**	**0.0000**	**37.3853**

3.2 Site Preparation/Utilities - 2017

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	1.1400e-003	8.9000e-004	9.1100e-003	2.0000e-005	2.0800e-003	1.0000e-005	2.0900e-003	5.5000e-004	1.0000e-005	5.6000e-004	0.0000	1.9056	1.9056	6.0000e-005	0.0000	1.9072
Total	**1.1400e-003**	**8.9000e-004**	**9.1100e-003**	**2.0000e-005**	**2.0800e-003**	**1.0000e-005**	**2.0900e-003**	**5.5000e-004**	**1.0000e-005**	**5.6000e-004**	**0.0000**	**1.9056**	**1.9056**	**6.0000e-005**	**0.0000**	**1.9072**

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					
Fugitive Dust					0.0854	0.0000	0.0854	0.0469	0.0000	0.0469	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0521	0.5489	0.2463	4.0000e-004		0.0302	0.0302		0.0278	0.0278	0.0000	37.1011	37.1011	0.0114	0.0000	37.3853
Total	**0.0521**	**0.5489**	**0.2463**	**4.0000e-004**	**0.0854**	**0.0302**	**0.1156**	**0.0469**	**0.0278**	**0.0747**	**0.0000**	**37.1011**	**37.1011**	**0.0114**	**0.0000**	**37.3853**

3.2 Site Preparation/Utilities - 2017

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	1.1400e-003	8.9000e-004	9.1100e-003	2.0000e-005	2.0800e-003	1.0000e-005	2.0900e-003	5.5000e-004	1.0000e-005	5.6000e-004	0.0000	1.9056	1.9056	6.0000e-005	0.0000	1.9072
Total	**1.1400e-003**	**8.9000e-004**	**9.1100e-003**	**2.0000e-005**	**2.0800e-003**	**1.0000e-005**	**2.0900e-003**	**5.5000e-004**	**1.0000e-005**	**5.6000e-004**	**0.0000**	**1.9056**	**1.9056**	**6.0000e-005**	**0.0000**	**1.9072**

3.3 Grading - 2017

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					
Fugitive Dust					0.1442	0.0000	0.1442	0.0741	0.0000	0.0741	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0885	0.9464	0.5343	8.6000e-004		0.0542	0.0542		0.0499	0.0499	0.0000	79.6867	79.6867	0.0244	0.0000	80.2971
Total	**0.0885**	**0.9464**	**0.5343**	**8.6000e-004**	**0.1442**	**0.0542**	**0.1984**	**0.0741**	**0.0499**	**0.1240**	**0.0000**	**79.6867**	**79.6867**	**0.0244**	**0.0000**	**80.2971**

3.3 Grading - 2017

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	6.1100e-003	4.7600e-003	0.0488	1.1000e-004	0.0208	7.0000e-005	0.0208	5.3200e-003	7.0000e-005	5.3900e-003	0.0000	10.2034	10.2034	3.4000e-004	0.0000	10.2119
Total	**6.1100e-003**	**4.7600e-003**	**0.0488**	**1.1000e-004**	**0.0208**	**7.0000e-005**	**0.0208**	**5.3200e-003**	**7.0000e-005**	**5.3900e-003**	**0.0000**	**10.2034**	**10.2034**	**3.4000e-004**	**0.0000**	**10.2119**

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					
Fugitive Dust					0.0649	0.0000	0.0649	0.0333	0.0000	0.0333	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0885	0.9464	0.5343	8.6000e-004		0.0542	0.0542		0.0499	0.0499	0.0000	79.6866	79.6866	0.0244	0.0000	80.2970
Total	**0.0885**	**0.9464**	**0.5343**	**8.6000e-004**	**0.0649**	**0.0542**	**0.1191**	**0.0333**	**0.0499**	**0.0832**	**0.0000**	**79.6866**	**79.6866**	**0.0244**	**0.0000**	**80.2970**

3.3 Grading - 2017

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	6.1100e-003	4.7600e-003	0.0488	1.1000e-004	0.0208	7.0000e-005	0.0208	5.3200e-003	7.0000e-005	5.3900e-003	0.0000	10.2034	10.2034	3.4000e-004	0.0000	10.2119
Total	**6.1100e-003**	**4.7600e-003**	**0.0488**	**1.1000e-004**	**0.0208**	**7.0000e-005**	**0.0208**	**5.3200e-003**	**7.0000e-005**	**5.3900e-003**	**0.0000**	**10.2034**	**10.2034**	**3.4000e-004**	**0.0000**	**10.2119**

3.4 Building Construction - 2017

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	0.0685	0.5842	0.4000	5.9000e-004		0.0393	0.0393		0.0369	0.0369	0.0000	52.9084	52.9084	0.0130	0.0000	53.2343
Total	**0.0685**	**0.5842**	**0.4000**	**5.9000e-004**		**0.0393**	**0.0393**		**0.0369**	**0.0369**	**0.0000**	**52.9084**	**52.9084**	**0.0130**	**0.0000**	**53.2343**

3.4 Building Construction - 2017

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	6.6800e-003	0.2067	0.0442	4.1000e-004	9.8700e-003	1.9900e-003	0.0119	2.8500e-003	1.9100e-003	4.7500e-003	0.0000	39.0091	39.0091	3.6500e-003	0.0000	39.1004
Worker	0.0240	0.0187	0.1920	4.4000e-004	0.0438	2.9000e-004	0.0441	0.0116	2.6000e-004	0.0119	0.0000	40.1483	40.1483	1.3200e-003	0.0000	40.1814
Total	**0.0307**	**0.2255**	**0.2361**	**8.5000e-004**	**0.0536**	**2.2800e-003**	**0.0559**	**0.0145**	**2.1700e-003**	**0.0166**	**0.0000**	**79.1575**	**79.1575**	**4.9700e-003**	**0.0000**	**79.2818**

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	0.0685	0.5842	0.4000	5.9000e-004		0.0393	0.0393		0.0369	0.0369	0.0000	52.9084	52.9084	0.0130	0.0000	53.2342
Total	**0.0685**	**0.5842**	**0.4000**	**5.9000e-004**		**0.0393**	**0.0393**		**0.0369**	**0.0369**	**0.0000**	**52.9084**	**52.9084**	**0.0130**	**0.0000**	**53.2342**

3.4 Building Construction - 2017

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	6.6800e-003	0.2067	0.0442	4.1000e-004	9.8700e-003	1.9900e-003	0.0119	2.8500e-003	1.9100e-003	4.7500e-003	0.0000	39.0091	39.0091	3.6500e-003	0.0000	39.1004
Worker	0.0240	0.0187	0.1920	4.4000e-004	0.0438	2.9000e-004	0.0441	0.0116	2.6000e-004	0.0119	0.0000	40.1483	40.1483	1.3200e-003	0.0000	40.1814
Total	**0.0307**	**0.2255**	**0.2361**	**8.5000e-004**	**0.0536**	**2.2800e-003**	**0.0559**	**0.0145**	**2.1700e-003**	**0.0166**	**0.0000**	**79.1575**	**79.1575**	**4.9700e-003**	**0.0000**	**79.2818**

3.4 Building Construction - 2018

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	0.1152	1.0058	0.7560	1.1600e-003		0.0645	0.0645		0.0606	0.0606	0.0000	102.2399	102.2399	0.0251	0.0000	102.8661
Total	**0.1152**	**1.0058**	**0.7560**	**1.1600e-003**		**0.0645**	**0.0645**		**0.0606**	**0.0606**	**0.0000**	**102.2399**	**102.2399**	**0.0251**	**0.0000**	**102.8661**

3.4 Building Construction - 2018

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	0.0114	0.3766	0.0770	8.0000e-004	0.0193	3.1300e-003	0.0224	5.5600e-003	2.9900e-003	8.5500e-003	0.0000	76.0998	76.0998	6.6900e-003	0.0000	76.2670
Worker	0.0423	0.0319	0.3296	8.4000e-004	0.0856	5.4000e-004	0.0861	0.0227	5.0000e-004	0.0232	0.0000	76.2372	76.2372	2.2700e-003	0.0000	76.2941
Total	**0.0537**	**0.4085**	**0.4065**	**1.6400e-003**	**0.1048**	**3.6700e-003**	**0.1085**	**0.0283**	**3.4900e-003**	**0.0318**	**0.0000**	**152.3371**	**152.3371**	**8.9600e-003**	**0.0000**	**152.5611**

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	0.1152	1.0058	0.7560	1.1600e-003		0.0645	0.0645		0.0606	0.0606	0.0000	102.2398	102.2398	0.0251	0.0000	102.8660
Total	**0.1152**	**1.0058**	**0.7560**	**1.1600e-003**		**0.0645**	**0.0645**		**0.0606**	**0.0606**	**0.0000**	**102.2398**	**102.2398**	**0.0251**	**0.0000**	**102.8660**

3.4 Building Construction - 2018

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	0.0114	0.3766	0.0770	8.0000e-004	0.0193	3.1300e-003	0.0224	5.5600e-003	2.9900e-003	8.5500e-003	0.0000	76.0998	76.0998	6.6900e-003	0.0000	76.2670
Worker	0.0423	0.0319	0.3296	8.4000e-004	0.0856	5.4000e-004	0.0861	0.0227	5.0000e-004	0.0232	0.0000	76.2372	76.2372	2.2700e-003	0.0000	76.2941
Total	**0.0537**	**0.4085**	**0.4065**	**1.6400e-003**	**0.1048**	**3.6700e-003**	**0.1085**	**0.0283**	**3.4900e-003**	**0.0318**	**0.0000**	**152.3371**	**152.3371**	**8.9600e-003**	**0.0000**	**152.5611**

3.5 Paving - 2018

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	9.0400e-003	0.0964	0.0814	1.3000e-004		5.2600e-003	5.2600e-003		4.8400e-003	4.8400e-003	0.0000	11.4464	11.4464	3.5600e-003	0.0000	11.5355
Paving	2.6100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0117**	**0.0964**	**0.0814**	**1.3000e-004**		**5.2600e-003**	**5.2600e-003**		**4.8400e-003**	**4.8400e-003**	**0.0000**	**11.4464**	**11.4464**	**3.5600e-003**	**0.0000**	**11.5355**

3.5 Paving - 2018

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	4.5000e-004	3.4000e-004	3.4900e-003	1.0000e-005	9.1000e-004	1.0000e-005	9.1000e-004	2.4000e-004	1.0000e-005	2.5000e-004	0.0000	0.8081	0.8081	2.0000e-005	0.0000	0.8087
Total	**4.5000e-004**	**3.4000e-004**	**3.4900e-003**	**1.0000e-005**	**9.1000e-004**	**1.0000e-005**	**9.1000e-004**	**2.4000e-004**	**1.0000e-005**	**2.5000e-004**	**0.0000**	**0.8081**	**0.8081**	**2.0000e-005**	**0.0000**	**0.8087**

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	9.0400e-003	0.0964	0.0814	1.3000e-004		5.2600e-003	5.2600e-003		4.8400e-003	4.8400e-003	0.0000	11.4464	11.4464	3.5600e-003	0.0000	11.5355
Paving	2.6100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0117**	**0.0964**	**0.0814**	**1.3000e-004**		**5.2600e-003**	**5.2600e-003**		**4.8400e-003**	**4.8400e-003**	**0.0000**	**11.4464**	**11.4464**	**3.5600e-003**	**0.0000**	**11.5355**

3.5 Paving - 2018

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	4.5000e-004	3.4000e-004	3.4900e-003	1.0000e-005	9.1000e-004	1.0000e-005	9.1000e-004	2.4000e-004	1.0000e-005	2.5000e-004	0.0000	0.8081	0.8081	2.0000e-005	0.0000	0.8087
Total	**4.5000e-004**	**3.4000e-004**	**3.4900e-003**	**1.0000e-005**	**9.1000e-004**	**1.0000e-005**	**9.1000e-004**	**2.4000e-004**	**1.0000e-005**	**2.5000e-004**	**0.0000**	**0.8081**	**0.8081**	**2.0000e-005**	**0.0000**	**0.8087**

3.6 Architectural Coating - 2018

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					
Archit. Coating	1.0093					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0111	0.0742	0.0686	1.1000e-004		5.5700e-003	5.5700e-003		5.5700e-003	5.5700e-003	0.0000	9.4471	9.4471	9.0000e-004	0.0000	9.4695
Total	**1.0204**	**0.0742**	**0.0686**	**1.1000e-004**		**5.5700e-003**	**5.5700e-003**		**5.5700e-003**	**5.5700e-003**	**0.0000**	**9.4471**	**9.4471**	**9.0000e-004**	**0.0000**	**9.4695**

3.6 Architectural Coating - 2018

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	7.2300e-003	5.4600e-003	0.0564	1.4000e-004	0.0146	9.0000e-005	0.0147	3.8900e-003	9.0000e-005	3.9700e-003	0.0000	13.0474	13.0474	3.9000e-004	0.0000	13.0571
Total	**7.2300e-003**	**5.4600e-003**	**0.0564**	**1.4000e-004**	**0.0146**	**9.0000e-005**	**0.0147**	**3.8900e-003**	**9.0000e-005**	**3.9700e-003**	**0.0000**	**13.0474**	**13.0474**	**3.9000e-004**	**0.0000**	**13.0571**

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					
Archit. Coating	1.0093					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0111	0.0742	0.0686	1.1000e-004		5.5700e-003	5.5700e-003		5.5700e-003	5.5700e-003	0.0000	9.4470	9.4470	9.0000e-004	0.0000	9.4695
Total	**1.0204**	**0.0742**	**0.0686**	**1.1000e-004**		**5.5700e-003**	**5.5700e-003**		**5.5700e-003**	**5.5700e-003**	**0.0000**	**9.4470**	**9.4470**	**9.0000e-004**	**0.0000**	**9.4695**

3.6 Architectural Coating - 2018

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	7.2300e-003	5.4600e-003	0.0564	1.4000e-004	0.0146	9.0000e-005	0.0147	3.8900e-003	9.0000e-005	3.9700e-003	0.0000	13.0474	13.0474	3.9000e-004	0.0000	13.0571
Total	**7.2300e-003**	**5.4600e-003**	**0.0564**	**1.4000e-004**	**0.0146**	**9.0000e-005**	**0.0147**	**3.8900e-003**	**9.0000e-005**	**3.9700e-003**	**0.0000**	**13.0474**	**13.0474**	**3.9000e-004**	**0.0000**	**13.0571**

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	1.3062	11.1396	16.8776	0.0652	4.7391	0.0723	4.8114	1.2700	0.0683	1.3383	0.0000	6,022.9508	6,022.9508	0.3223	0.0000	6,031.0070
Unmitigated	1.3062	11.1396	16.8776	0.0652	4.7391	0.0723	4.8114	1.2700	0.0683	1.3383	0.0000	6,022.9508	6,022.9508	0.3223	0.0000	6,031.0070

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	2,152.00	2,152.00	2152.00	6,932,584	6,932,584
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	1,278.05	1,278.05	1278.05	5,477,378	5,477,378
Total	3,430.05	3,430.05	3,430.05	12,409,962	12,409,962

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
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.533383	0.039495	0.183627	0.126156	0.018688	0.005561	0.017029	0.066607	0.001345	0.001247	0.004677	0.000974	0.001211
Parking Lot	0.533383	0.039495	0.183627	0.126156	0.018688	0.005561	0.017029	0.066607	0.001345	0.001247	0.004677	0.000974	0.001211
Unrefrigerated Warehouse-No Rail	0.533383	0.039495	0.183627	0.126156	0.018688	0.005561	0.017029	0.066607	0.001345	0.001247	0.004677	0.000974	0.001211

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	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	564.4485	564.4485	0.0124	2.5500e-003	565.5186
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	591.9542	591.9542	0.0130	2.6800e-003	593.0763
NaturalGas Mitigated	2.8300e-003	0.0257	0.0216	1.5000e-004		1.9500e-003	1.9500e-003		1.9500e-003	1.9500e-003	0.0000	27.9827	27.9827	5.4000e-004	5.1000e-004	28.1490
NaturalGas Unmitigated	3.9100e-003	0.0355	0.0298	2.1000e-004		2.7000e-003	2.7000e-003		2.7000e-003	2.7000e-003	0.0000	38.6555	38.6555	7.4000e-004	7.1000e-004	38.8852

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					
General Office Building	34900	1.9000e-004	1.7100e-003	1.4400e-003	1.0000e-005		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004	0.0000	1.8624	1.8624	4.0000e-005	3.0000e-005	1.8735
Parking Lot	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
Unrefrigerated Warehouse-No Rail	689476	3.7200e-003	0.0338	0.0284	2.0000e-004		2.5700e-003	2.5700e-003		2.5700e-003	2.5700e-003	0.0000	36.7931	36.7931	7.1000e-004	6.7000e-004	37.0117
Total		**3.9100e-003**	**0.0355**	**0.0298**	**2.1000e-004**		**2.7000e-003**	**2.7000e-003**		**2.7000e-003**	**2.7000e-003**	**0.0000**	**38.6555**	**38.6555**	**7.5000e-004**	**7.0000e-004**	**38.8852**

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					
General Office Building	25128	1.4000e-004	1.2300e-003	1.0300e-003	1.0000e-005		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005	0.0000	1.3409	1.3409	3.0000e-005	2.0000e-005	1.3489
Parking Lot	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
Unrefrigerated Warehouse-No Rail	499248	2.6900e-003	0.0245	0.0206	1.5000e-004		1.8600e-003	1.8600e-003		1.8600e-003	1.8600e-003	0.0000	26.6418	26.6418	5.1000e-004	4.9000e-004	26.8001
Total		**2.8300e-003**	**0.0257**	**0.0216**	**1.6000e-004**		**1.9500e-003**	**1.9500e-003**		**1.9500e-003**	**1.9500e-003**	**0.0000**	**27.9827**	**27.9827**	**5.4000e-004**	**5.1000e-004**	**28.1490**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	97600	58.6873	1.2800e-003	2.7000e-004	58.7986
Parking Lot	76294.2	45.8761	1.0000e-003	2.1000e-004	45.9631
Unrefrigerated Warehouse-No Rail	810555	487.3907	0.0107	2.2100e-003	488.3147
Total		**591.9542**	**0.0129**	**2.6900e-003**	**593.0763**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	88584	53.2660	1.1700e-003	2.4000e-004	53.3670
Parking Lot	76294.2	45.8761	1.0000e-003	2.1000e-004	45.9631
Unrefrigerated Warehouse-No Rail	773828	465.3065	0.0102	2.1100e-003	466.1885
Total		**564.4485**	**0.0124**	**2.5600e-003**	**565.5185**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	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	1.3391	5.0000e-005	5.5800e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0108	0.0108	3.0000e-005	0.0000	0.0115
Unmitigated	1.3391	5.0000e-005	5.5800e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0108	0.0108	3.0000e-005	0.0000	0.0115

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	tons/yr										MT/yr					
Architectural Coating	0.0815					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.2571					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.3000e-004	5.0000e-005	5.5800e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0108	0.0108	3.0000e-005	0.0000	0.0115
Total	**1.3391**	**5.0000e-005**	**5.5800e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0108**	**0.0108**	**3.0000e-005**	**0.0000**	**0.0115**

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	tons/yr										MT/yr					
Architectural Coating	0.0815					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.2571					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.3000e-004	5.0000e-005	5.5800e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0108	0.0108	3.0000e-005	0.0000	0.0115
Total	**1.3391**	**5.0000e-005**	**5.5800e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0108**	**0.0108**	**3.0000e-005**	**0.0000**	**0.0115**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	655.3884	2.6060	0.0641	739.6296
Unmitigated	655.3884	2.6060	0.0641	739.6296

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	1.77734 / 1.08934	21.7570	0.0584	1.4600e-003	23.6525
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	77.7763 / 0	633.6314	2.5477	0.0626	715.9770
Total		**655.3884**	**2.6060**	**0.0641**	**739.6296**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	1.77734 / 1.08934	21.7570	0.0584	1.4600e-003	23.6525
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	77.7763 / 0	633.6314	2.5477	0.0626	715.9770
Total		**655.3884**	**2.6060**	**0.0641**	**739.6296**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	66.0634	3.9042	0.0000	163.6693
Unmitigated	66.0634	3.9042	0.0000	163.6693

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	9.3	1.8878	0.1116	0.0000	4.6770
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	316.15	64.1756	3.7927	0.0000	158.9923
Total		**66.0634**	**3.9042**	**0.0000**	**163.6693**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	9.3	1.8878	0.1116	0.0000	4.6770
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	316.15	64.1756	3.7927	0.0000	158.9923
Total		**66.0634**	**3.9042**	**0.0000**	**163.6693**

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

Riverside Warehouse

Riverside-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	10.00	1000sqft	0.23	10,000.00	0
Unrefrigerated Warehouse-No Rail	336.33	1000sqft	7.72	336,330.00	0
Parking Lot	86.70	1000sqft	1.99	86,698.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2019
Utility Company	Riverside Public Utilities				
CO2 Intensity (lb/MWhr)	1325.65	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Source: client provided site plan

Construction Phase - Client provided construction schedule

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Grading -

Architectural Coating - SCAQMD Rule 1113

Vehicle Trips - Trip gen provided by traffic engineer

Area Coating - SCAQMD Rule 1113

Construction Off-road Equipment Mitigation -

Area Mitigation - SCAQMD Rule 1113

Energy Mitigation -

Fleet Mix -

Riverside Warehouse - Riverside-South Coast County, Summer

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstructionPhase	NumDays	20.00	74.00
tblConstructionPhase	NumDays	230.00	130.00
tblConstructionPhase	NumDays	20.00	44.00
tblConstructionPhase	NumDays	20.00	11.00
tblConstructionPhase	NumDays	10.00	21.00
tblFleetMix	FleetMixLandUseSubType	Unrefrigerated Warehouse-No Rail	Parking Lot
tblFleetMix	FleetMixLandUseSubType	Parking Lot	Unrefrigerated Warehouse-No Rail
tblLandUse	BuildingSpaceSquareFeet	86,700.00	86,698.00
tblLandUse	LandUseSquareFeet	86,700.00	86,698.00
tblProjectCharacteristics	OperationalYear	2018	2019
tblVehicleTrips	ST_TR	2.46	215.20
tblVehicleTrips	ST_TR	1.68	3.80
tblVehicleTrips	SU_TR	1.05	215.20
tblVehicleTrips	SU_TR	1.68	3.80
tblVehicleTrips	WD_TR	11.03	215.20
tblVehicleTrips	WD_TR	1.68	3.80

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					
2017	5.0811	52.3543	30.2261	0.0678	18.2675	2.8799	21.1473	9.9840	2.6495	12.6335	0.0000	6,821.4142	6,821.4142	1.2420	0.0000	6,843.9516
2018	27.7938	32.7094	28.2011	0.0671	2.4778	1.5849	4.0627	0.6675	1.4908	2.1582	0.0000	6,726.3914	6,726.3914	0.8705	0.0000	6,748.1528
Maximum	**27.7938**	**52.3543**	**30.2261**	**0.0678**	**18.2675**	**2.8799**	**21.1473**	**9.9840**	**2.6495**	**12.6335**	**0.0000**	**6,821.4142**	**6,821.4142**	**1.2420**	**0.0000**	**6,843.9516**

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					
2017	5.0811	52.3543	30.2261	0.0678	8.3310	2.8799	11.2109	4.5222	2.6495	7.1716	0.0000	6,821.4142	6,821.4142	1.2420	0.0000	6,843.9516
2018	27.7938	32.7094	28.2011	0.0671	2.4778	1.5849	4.0627	0.6675	1.4908	2.1582	0.0000	6,726.3914	6,726.3914	0.8705	0.0000	6,748.1528
Maximum	**27.7938**	**52.3543**	**30.2261**	**0.0678**	**8.3310**	**2.8799**	**11.2109**	**4.5222**	**2.6495**	**7.1716**	**0.0000**	**6,821.4142**	**6,821.4142**	**1.2420**	**0.0000**	**6,843.9516**

	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**	**47.90**	**0.00**	**39.41**	**51.28**	**0.00**	**36.93**	**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	7.3387	4.1000e-004	0.0446	0.0000		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004		0.0948	0.0948	2.6000e-004		0.1012
Energy	0.0214	0.1946	0.1634	1.1700e-003		0.0148	0.0148		0.0148	0.0148		233.4816	233.4816	4.4800e-003	4.2800e-003	234.8690
Mobile	8.3904	59.7409	104.1746	0.3800	26.4711	0.3960	26.8671	7.0841	0.3742	7.4584		38,669.6902	38,669.6902	1.9603		38,718.6971
Total	**15.7505**	**59.9359**	**104.3827**	**0.3811**	**26.4711**	**0.4109**	**26.8820**	**7.0841**	**0.3892**	**7.4733**		**38,903.2665**	**38,903.2665**	**1.9650**	**4.2800e-003**	**38,953.6673**

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	7.3387	4.1000e-004	0.0446	0.0000		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004		0.0948	0.0948	2.6000e-004		0.1012
Energy	0.0155	0.1409	0.1183	8.5000e-004		0.0107	0.0107		0.0107	0.0107		169.0173	169.0173	3.2400e-003	3.1000e-003	170.0217
Mobile	8.3904	59.7409	104.1746	0.3800	26.4711	0.3960	26.8671	7.0841	0.3742	7.4584		38,669.6902	38,669.6902	1.9603		38,718.6971
Total	**15.7446**	**59.8822**	**104.3376**	**0.3808**	**26.4711**	**0.4069**	**26.8780**	**7.0841**	**0.3851**	**7.4692**		**38,838.8023**	**38,838.8023**	**1.9638**	**3.1000e-003**	**38,888.8200**

	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	0.04	0.09	0.04	0.08	0.00	1.00	0.02	0.00	1.05	0.05	0.00	0.17	0.17	0.06	27.57	0.17

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation/Utilities	Site Preparation	8/1/2017	8/29/2017	5	21	
2	Grading	Grading	8/30/2017	10/30/2017	5	44	
3	Building Construction	Building Construction	10/31/2017	4/30/2018	5	130	
4	Paving	Paving	5/1/2018	5/15/2018	5	11	
5	Architectural Coating	Architectural Coating	5/16/2018	8/27/2018	5	74	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 22

Acres of Paving: 1.99

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 519,495; Non-Residential Outdoor: 173,165; Striped Parking Area: 5,202 (Architectural Coating – sqft)

OffRoad Equipment

Riverside Warehouse - Riverside-South Coast County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation/Utilities	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation/Utilities	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38

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
Grading	9	23.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	9	23.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation/Utilities	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	181.00	71.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	36.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	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 Site Preparation/Utilities - 2017

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					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.9608	52.2754	23.4554	0.0380		2.8786	2.8786		2.6483	2.6483		3,894.9500	3,894.9500	1.1934		3,924.7852
Total	**4.9608**	**52.2754**	**23.4554**	**0.0380**	**18.0663**	**2.8786**	**20.9448**	**9.9307**	**2.6483**	**12.5790**		**3,894.9500**	**3,894.9500**	**1.1934**		**3,924.7852**

3.2 Site Preparation/Utilities - 2017

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	0.1204	0.0789	1.0104	2.1900e-003	0.2012	1.2900e-003	0.2025	0.0534	1.1900e-003	0.0546		217.3450	217.3450	7.3000e-003		217.5275
Total	**0.1204**	**0.0789**	**1.0104**	**2.1900e-003**	**0.2012**	**1.2900e-003**	**0.2025**	**0.0534**	**1.1900e-003**	**0.0546**		**217.3450**	**217.3450**	**7.3000e-003**		**217.5275**

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					
Fugitive Dust					8.1298	0.0000	8.1298	4.4688	0.0000	4.4688			0.0000			0.0000
Off-Road	4.9608	52.2754	23.4554	0.0380		2.8786	2.8786		2.6483	2.6483	0.0000	3,894.9500	3,894.9500	1.1934		3,924.7852
Total	**4.9608**	**52.2754**	**23.4554**	**0.0380**	**8.1298**	**2.8786**	**11.0084**	**4.4688**	**2.6483**	**7.1171**	**0.0000**	**3,894.9500**	**3,894.9500**	**1.1934**		**3,924.7852**

3.2 Site Preparation/Utilities - 2017

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	0.1204	0.0789	1.0104	2.1900e-003	0.2012	1.2900e-003	0.2025	0.0534	1.1900e-003	0.0546		217.3450	217.3450	7.3000e-003		217.5275
Total	**0.1204**	**0.0789**	**1.0104**	**2.1900e-003**	**0.2012**	**1.2900e-003**	**0.2025**	**0.0534**	**1.1900e-003**	**0.0546**		**217.3450**	**217.3450**	**7.3000e-003**		**217.5275**

3.3 Grading - 2017

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					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	4.0208	43.0184	24.2858	0.0390		2.4642	2.4642		2.2671	2.2671		3,992.7055	3,992.7055	1.2234		4,023.2895
Total	**4.0208**	**43.0184**	**24.2858**	**0.0390**	**6.5523**	**2.4642**	**9.0165**	**3.3675**	**2.2671**	**5.6345**		**3,992.7055**	**3,992.7055**	**1.2234**		**4,023.2895**

3.3 Grading - 2017

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	0.3076	0.2016	2.5822	5.5900e-003	0.9612	3.3000e-003	0.9645	0.2461	3.0400e-003	0.2491		555.4373	555.4373	0.0187		555.9035
Total	**0.3076**	**0.2016**	**2.5822**	**5.5900e-003**	**0.9612**	**3.3000e-003**	**0.9645**	**0.2461**	**3.0400e-003**	**0.2491**		**555.4373**	**555.4373**	**0.0187**		**555.9035**

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					
Fugitive Dust					2.9486	0.0000	2.9486	1.5154	0.0000	1.5154			0.0000			0.0000
Off-Road	4.0208	43.0184	24.2858	0.0390		2.4642	2.4642		2.2671	2.2671	0.0000	3,992.7055	3,992.7055	1.2234		4,023.2895
Total	**4.0208**	**43.0184**	**24.2858**	**0.0390**	**2.9486**	**2.4642**	**5.4127**	**1.5154**	**2.2671**	**3.7824**	**0.0000**	**3,992.7055**	**3,992.7055**	**1.2234**		**4,023.2895**

3.3 Grading - 2017

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	0.3076	0.2016	2.5822	5.5900e-003	0.9612	3.3000e-003	0.9645	0.2461	3.0400e-003	0.2491		555.4373	555.4373	0.0187		555.9035
Total	**0.3076**	**0.2016**	**2.5822**	**5.5900e-003**	**0.9612**	**3.3000e-003**	**0.9645**	**0.2461**	**3.0400e-003**	**0.2491**		**555.4373**	**555.4373**	**0.0187**		**555.9035**

3.4 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1149	26.5546	18.1825	0.0269		1.7879	1.7879		1.6791	1.6791		2,650.9797	2,650.9797	0.6531		2,667.3078
Total	**3.1149**	**26.5546**	**18.1825**	**0.0269**		**1.7879**	**1.7879**		**1.6791**	**1.6791**		**2,650.9797**	**2,650.9797**	**0.6531**		**2,667.3078**

3.4 Building Construction - 2017

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	0.2992	9.2385	1.8834	0.0189	0.4547	0.0902	0.5449	0.1309	0.0863	0.2172		1,984.9093	1,984.9093	0.1750		1,989.2843
Worker	1.2102	0.7933	10.1602	0.0220	2.0232	0.0130	2.0361	0.5366	0.0120	0.5485		2,185.5251	2,185.5251	0.0734		2,187.3595
Total	**1.5094**	**10.0318**	**12.0436**	**0.0408**	**2.4779**	**0.1032**	**2.5810**	**0.6675**	**0.0982**	**0.7657**		**4,170.4344**	**4,170.4344**	**0.2484**		**4,176.6438**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1149	26.5546	18.1825	0.0269		1.7879	1.7879		1.6791	1.6791	0.0000	2,650.9797	2,650.9797	0.6531		2,667.3078
Total	**3.1149**	**26.5546**	**18.1825**	**0.0269**		**1.7879**	**1.7879**		**1.6791**	**1.6791**	**0.0000**	**2,650.9797**	**2,650.9797**	**0.6531**		**2,667.3078**

3.4 Building Construction - 2017

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	0.2992	9.2385	1.8834	0.0189	0.4547	0.0902	0.5449	0.1309	0.0863	0.2172		1,984.9093	1,984.9093	0.1750		1,989.2843
Worker	1.2102	0.7933	10.1602	0.0220	2.0232	0.0130	2.0361	0.5366	0.0120	0.5485		2,185.5251	2,185.5251	0.0734		2,187.3595
Total	**1.5094**	**10.0318**	**12.0436**	**0.0408**	**2.4779**	**0.1032**	**2.5810**	**0.6675**	**0.0982**	**0.7657**		**4,170.4344**	**4,170.4344**	**0.2484**		**4,176.6438**

3.4 Building Construction - 2018

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	2.6795	23.3900	17.5804	0.0269		1.4999	1.4999		1.4099	1.4099		2,620.9351	2,620.9351	0.6421		2,636.9883
Total	**2.6795**	**23.3900**	**17.5804**	**0.0269**		**1.4999**	**1.4999**		**1.4099**	**1.4099**		**2,620.9351**	**2,620.9351**	**0.6421**		**2,636.9883**

3.4 Building Construction - 2018

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	0.2617	8.6264	1.6689	0.0188	0.4547	0.0723	0.5270	0.1309	0.0692	0.2001		1,981.8350	1,981.8350	0.1637		1,985.9270
Worker	1.0896	0.6930	8.9518	0.0213	2.0232	0.0126	2.0358	0.5366	0.0117	0.5482		2,123.6213	2,123.6213	0.0647		2,125.2376
Total	**1.3513**	**9.3194**	**10.6207**	**0.0402**	**2.4778**	**0.0850**	**2.5628**	**0.6675**	**0.0809**	**0.7483**		**4,105.4563**	**4,105.4563**	**0.2283**		**4,111.1645**

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	2.6795	23.3900	17.5804	0.0269		1.4999	1.4999		1.4099	1.4099	0.0000	2,620.9351	2,620.9351	0.6421		2,636.9883
Total	**2.6795**	**23.3900**	**17.5804**	**0.0269**		**1.4999**	**1.4999**		**1.4099**	**1.4099**	**0.0000**	**2,620.9351**	**2,620.9351**	**0.6421**		**2,636.9883**

3.4 Building Construction - 2018

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	0.2617	8.6264	1.6689	0.0188	0.4547	0.0723	0.5270	0.1309	0.0692	0.2001		1,981.8350	1,981.8350	0.1637		1,985.9270
Worker	1.0896	0.6930	8.9518	0.0213	2.0232	0.0126	2.0358	0.5366	0.0117	0.5482		2,123.6213	2,123.6213	0.0647		2,125.2376
Total	**1.3513**	**9.3194**	**10.6207**	**0.0402**	**2.4778**	**0.0850**	**2.5628**	**0.6675**	**0.0809**	**0.7483**		**4,105.4563**	**4,105.4563**	**0.2283**		**4,111.1645**

3.5 Paving - 2018

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	1.6437	17.5209	14.7964	0.0228		0.9561	0.9561		0.8797	0.8797		2,294.0887	2,294.0887	0.7142		2,311.9432
Paving	0.4740					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.1177**	**17.5209**	**14.7964**	**0.0228**		**0.9561**	**0.9561**		**0.8797**	**0.8797**		**2,294.0887**	**2,294.0887**	**0.7142**		**2,311.9432**

3.5 Paving - 2018

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	0.0903	0.0574	0.7419	1.7700e-003	0.1677	1.0500e-003	0.1687	0.0445	9.7000e-004	0.0454		175.9907	175.9907	5.3600e-003		176.1247
Total	**0.0903**	**0.0574**	**0.7419**	**1.7700e-003**	**0.1677**	**1.0500e-003**	**0.1687**	**0.0445**	**9.7000e-004**	**0.0454**		**175.9907**	**175.9907**	**5.3600e-003**		**176.1247**

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	1.6437	17.5209	14.7964	0.0228		0.9561	0.9561		0.8797	0.8797	0.0000	2,294.0887	2,294.0887	0.7142		2,311.9432
Paving	0.4740					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.1177**	**17.5209**	**14.7964**	**0.0228**		**0.9561**	**0.9561**		**0.8797**	**0.8797**	**0.0000**	**2,294.0887**	**2,294.0887**	**0.7142**		**2,311.9432**

3.5 Paving - 2018

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	0.0903	0.0574	0.7419	1.7700e-003	0.1677	1.0500e-003	0.1687	0.0445	9.7000e-004	0.0454		175.9907	175.9907	5.3600e-003		176.1247
Total	**0.0903**	**0.0574**	**0.7419**	**1.7700e-003**	**0.1677**	**1.0500e-003**	**0.1687**	**0.0445**	**9.7000e-004**	**0.0454**		**175.9907**	**175.9907**	**5.3600e-003**		**176.1247**

3.6 Architectural Coating - 2018

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					
Archit. Coating	27.2785					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.1171
Total	**27.5771**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**		**281.4485**	**281.4485**	**0.0267**		**282.1171**

3.6 Architectural Coating - 2018

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	0.2167	0.1378	1.7805	4.2400e-003	0.4024	2.5100e-003	0.4049	0.1067	2.3200e-003	0.1090		422.3777	422.3777	0.0129		422.6992
Total	**0.2167**	**0.1378**	**1.7805**	**4.2400e-003**	**0.4024**	**2.5100e-003**	**0.4049**	**0.1067**	**2.3200e-003**	**0.1090**		**422.3777**	**422.3777**	**0.0129**		**422.6992**

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					
Archit. Coating	27.2785					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.1171
Total	**27.5771**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**	**0.0000**	**281.4485**	**281.4485**	**0.0267**		**282.1171**

3.6 Architectural Coating - 2018

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	0.2167	0.1378	1.7805	4.2400e-003	0.4024	2.5100e-003	0.4049	0.1067	2.3200e-003	0.1090		422.3777	422.3777	0.0129		422.6992
Total	**0.2167**	**0.1378**	**1.7805**	**4.2400e-003**	**0.4024**	**2.5100e-003**	**0.4049**	**0.1067**	**2.3200e-003**	**0.1090**		**422.3777**	**422.3777**	**0.0129**		**422.6992**

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	8.3904	59.7409	104.1746	0.3800	26.4711	0.3960	26.8671	7.0841	0.3742	7.4584		38,669.6902	38,669.6902	1.9603		38,718.6971
Unmitigated	8.3904	59.7409	104.1746	0.3800	26.4711	0.3960	26.8671	7.0841	0.3742	7.4584		38,669.6902	38,669.6902	1.9603		38,718.6971

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	2,152.00	2,152.00	2152.00	6,932,584	6,932,584
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	1,278.05	1,278.05	1278.05	5,477,378	5,477,378
Total	3,430.05	3,430.05	3,430.05	12,409,962	12,409,962

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
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.533383	0.039495	0.183627	0.126156	0.018688	0.005561	0.017029	0.066607	0.001345	0.001247	0.004677	0.000974	0.001211
Parking Lot	0.533383	0.039495	0.183627	0.126156	0.018688	0.005561	0.017029	0.066607	0.001345	0.001247	0.004677	0.000974	0.001211
Unrefrigerated Warehouse-No Rail	0.533383	0.039495	0.183627	0.126156	0.018688	0.005561	0.017029	0.066607	0.001345	0.001247	0.004677	0.000974	0.001211

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	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	0.0155	0.1409	0.1183	8.5000e-004		0.0107	0.0107		0.0107	0.0107		169.0173	169.0173	3.2400e-003	3.1000e-003	170.0217
NaturalGas Unmitigated	0.0214	0.1946	0.1634	1.1700e-003		0.0148	0.0148		0.0148	0.0148		233.4816	233.4816	4.4800e-003	4.2800e-003	234.8690

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					
General Office Building	95.6164	1.0300e-003	9.3700e-003	7.8700e-003	6.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004		11.2490	11.2490	2.2000e-004	2.1000e-004	11.3158
Parking Lot	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
Unrefrigerated Warehouse-No Rail	1888.98	0.0204	0.1852	0.1556	1.1100e-003		0.0141	0.0141		0.0141	0.0141		222.2326	222.2326	4.2600e-003	4.0700e-003	223.5532
Total		**0.0214**	**0.1946**	**0.1634**	**1.1700e-003**		**0.0148**	**0.0148**		**0.0148**	**0.0148**		**233.4815**	**233.4815**	**4.4800e-003**	**4.2800e-003**	**234.8690**

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					
General Office Building	0.0688438	7.4000e-004	6.7500e-003	5.6700e-003	4.0000e-005		5.1000e-004	5.1000e-004		5.1000e-004	5.1000e-004		8.0993	8.0993	1.6000e-004	1.5000e-004	8.1474
Parking Lot	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
Unrefrigerated Warehouse-No Rail	1.3678	0.0148	0.1341	0.1126	8.0000e-004		0.0102	0.0102		0.0102	0.0102		160.9181	160.9181	3.0800e-003	2.9500e-003	161.8743
Total		**0.0155**	**0.1409**	**0.1183**	**8.4000e-004**		**0.0107**	**0.0107**		**0.0107**	**0.0107**		**169.0173**	**169.0173**	**3.2400e-003**	**3.1000e-003**	**170.0217**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	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	7.3387	4.1000e-004	0.0446	0.0000		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004		0.0948	0.0948	2.6000e-004		0.1012
Unmitigated	7.3387	4.1000e-004	0.0446	0.0000		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004		0.0948	0.0948	2.6000e-004		0.1012

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	0.4464					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.8880					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.2300e-003	4.1000e-004	0.0446	0.0000		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004		0.0948	0.0948	2.6000e-004		0.1012
Total	**7.3387**	**4.1000e-004**	**0.0446**	**0.0000**		**1.6000e-004**	**1.6000e-004**		**1.6000e-004**	**1.6000e-004**		**0.0948**	**0.0948**	**2.6000e-004**		**0.1012**

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	0.4464					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.8880					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.2300e-003	4.1000e-004	0.0446	0.0000		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004		0.0948	0.0948	2.6000e-004		0.1012
Total	**7.3387**	**4.1000e-004**	**0.0446**	**0.0000**		**1.6000e-004**	**1.6000e-004**		**1.6000e-004**	**1.6000e-004**		**0.0948**	**0.0948**	**2.6000e-004**		**0.1012**

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

Riverside Warehouse

Riverside-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	10.00	1000sqft	0.23	10,000.00	0
Unrefrigerated Warehouse-No Rail	336.33	1000sqft	7.72	336,330.00	0
Parking Lot	86.70	1000sqft	1.99	86,698.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2019
Utility Company	Riverside Public Utilities				
CO2 Intensity (lb/MWhr)	1325.65	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Source: client provided site plan

Construction Phase - Client provided construction schedule

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Grading -

Architectural Coating - SCAQMD Rule 1113

Vehicle Trips - Trip gen provided by traffic engineer

Area Coating - SCAQMD Rule 1113

Construction Off-road Equipment Mitigation -

Area Mitigation - SCAQMD Rule 1113

Energy Mitigation -

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstructionPhase	NumDays	20.00	74.00
tblConstructionPhase	NumDays	230.00	130.00
tblConstructionPhase	NumDays	20.00	44.00
tblConstructionPhase	NumDays	20.00	11.00
tblConstructionPhase	NumDays	10.00	21.00
tblFleetMix	FleetMixLandUseSubType	Unrefrigerated Warehouse-No Rail	Parking Lot
tblFleetMix	FleetMixLandUseSubType	Parking Lot	Unrefrigerated Warehouse-No Rail
tblLandUse	BuildingSpaceSquareFeet	86,700.00	86,698.00
tblLandUse	LandUseSquareFeet	86,700.00	86,698.00
tblProjectCharacteristics	OperationalYear	2018	2019
tblVehicleTrips	ST_TR	2.46	215.20
tblVehicleTrips	ST_TR	1.68	3.80
tblVehicleTrips	SU_TR	1.05	215.20
tblVehicleTrips	SU_TR	1.68	3.80
tblVehicleTrips	WD_TR	11.03	215.20
tblVehicleTrips	WD_TR	1.68	3.80

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					
2017	5.0782	52.3573	28.6167	0.0648	18.2675	2.8799	21.1473	9.9840	2.6495	12.6335	0.0000	6,525.0066	6,525.0066	1.2397	0.0000	6,547.7682
2018	27.7886	32.7274	26.7816	0.0642	2.4778	1.5857	4.0636	0.6675	1.4916	2.1591	0.0000	6,434.3678	6,434.3678	0.8800	0.0000	6,456.3679
Maximum	**27.7886**	**52.3573**	**28.6167**	**0.0648**	**18.2675**	**2.8799**	**21.1473**	**9.9840**	**2.6495**	**12.6335**	**0.0000**	**6,525.0066**	**6,525.0066**	**1.2397**	**0.0000**	**6,547.7682**

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					
2017	5.0782	52.3573	28.6167	0.0648	8.3310	2.8799	11.2109	4.5222	2.6495	7.1716	0.0000	6,525.0066	6,525.0066	1.2397	0.0000	6,547.7682
2018	27.7886	32.7274	26.7816	0.0642	2.4778	1.5857	4.0636	0.6675	1.4916	2.1591	0.0000	6,434.3678	6,434.3678	0.8800	0.0000	6,456.3679
Maximum	**27.7886**	**52.3573**	**28.6167**	**0.0648**	**8.3310**	**2.8799**	**11.2109**	**4.5222**	**2.6495**	**7.1716**	**0.0000**	**6,525.0066**	**6,525.0066**	**1.2397**	**0.0000**	**6,547.7682**

	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**	**47.90**	**0.00**	**39.41**	**51.28**	**0.00**	**36.92**	**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	7.3387	4.1000e-004	0.0446	0.0000		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004		0.0948	0.0948	2.6000e-004		0.1012
Energy	0.0214	0.1946	0.1634	1.1700e-003		0.0148	0.0148		0.0148	0.0148		233.4816	233.4816	4.4800e-003	4.2800e-003	234.8690
Mobile	7.1707	60.1785	89.8570	0.3502	26.4711	0.4001	26.8712	7.0841	0.3781	7.4623		35,689.8766	35,689.8766	2.0004		35,739.8857
Total	**14.5308**	**60.3735**	**90.0651**	**0.3514**	**26.4711**	**0.4150**	**26.8861**	**7.0841**	**0.3931**	**7.4772**		**35,923.4529**	**35,923.4529**	**2.0051**	**4.2800e-003**	**35,974.8559**

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	7.3387	4.1000e-004	0.0446	0.0000		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004		0.0948	0.0948	2.6000e-004		0.1012
Energy	0.0155	0.1409	0.1183	8.5000e-004		0.0107	0.0107		0.0107	0.0107		169.0173	169.0173	3.2400e-003	3.1000e-003	170.0217
Mobile	7.1707	60.1785	89.8570	0.3502	26.4711	0.4001	26.8712	7.0841	0.3781	7.4623		35,689.8766	35,689.8766	2.0004		35,739.8857
Total	**14.5248**	**60.3198**	**90.0200**	**0.3511**	**26.4711**	**0.4109**	**26.8820**	**7.0841**	**0.3890**	**7.4731**		**35,858.9887**	**35,858.9887**	**2.0039**	**3.1000e-003**	**35,910.0086**

	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	0.04	0.09	0.05	0.09	0.00	0.99	0.02	0.00	1.04	0.05	0.00	0.18	0.18	0.06	27.57	0.18

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation/Utilities	Site Preparation	8/1/2017	8/29/2017	5	21	
2	Grading	Grading	8/30/2017	10/30/2017	5	44	
3	Building Construction	Building Construction	10/31/2017	4/30/2018	5	130	
4	Paving	Paving	5/1/2018	5/15/2018	5	11	
5	Architectural Coating	Architectural Coating	5/16/2018	8/27/2018	5	74	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 22

Acres of Paving: 1.99

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 519,495; Non-Residential Outdoor: 173,165; Striped Parking Area: 5,202 (Architectural Coating – sqft)

OffRoad Equipment

Riverside Warehouse - Riverside-South Coast County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation/Utilities	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation/Utilities	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38

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
Grading	9	23.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	9	23.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation/Utilities	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	181.00	71.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	36.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	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 Site Preparation/Utilities - 2017

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					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.9608	52.2754	23.4554	0.0380		2.8786	2.8786		2.6483	2.6483		3,894.9500	3,894.9500	1.1934		3,924.7852
Total	**4.9608**	**52.2754**	**23.4554**	**0.0380**	**18.0663**	**2.8786**	**20.9448**	**9.9307**	**2.6483**	**12.5790**		**3,894.9500**	**3,894.9500**	**1.1934**		**3,924.7852**

3.2 Site Preparation/Utilities - 2017

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	0.1174	0.0819	0.8240	1.9600e-003	0.2012	1.2900e-003	0.2025	0.0534	1.1900e-003	0.0546		195.0554	195.0554	6.3900e-003		195.2150
Total	**0.1174**	**0.0819**	**0.8240**	**1.9600e-003**	**0.2012**	**1.2900e-003**	**0.2025**	**0.0534**	**1.1900e-003**	**0.0546**		**195.0554**	**195.0554**	**6.3900e-003**		**195.2150**

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					
Fugitive Dust					8.1298	0.0000	8.1298	4.4688	0.0000	4.4688			0.0000			0.0000
Off-Road	4.9608	52.2754	23.4554	0.0380		2.8786	2.8786		2.6483	2.6483	0.0000	3,894.9500	3,894.9500	1.1934		3,924.7852
Total	**4.9608**	**52.2754**	**23.4554**	**0.0380**	**8.1298**	**2.8786**	**11.0084**	**4.4688**	**2.6483**	**7.1171**	**0.0000**	**3,894.9500**	**3,894.9500**	**1.1934**		**3,924.7852**

3.2 Site Preparation/Utilities - 2017

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	0.1174	0.0819	0.8240	1.9600e-003	0.2012	1.2900e-003	0.2025	0.0534	1.1900e-003	0.0546		195.0554	195.0554	6.3900e-003		195.2150
Total	**0.1174**	**0.0819**	**0.8240**	**1.9600e-003**	**0.2012**	**1.2900e-003**	**0.2025**	**0.0534**	**1.1900e-003**	**0.0546**		**195.0554**	**195.0554**	**6.3900e-003**		**195.2150**

3.3 Grading - 2017

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					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	4.0208	43.0184	24.2858	0.0390		2.4642	2.4642		2.2671	2.2671		3,992.7055	3,992.7055	1.2234		4,023.2895
Total	**4.0208**	**43.0184**	**24.2858**	**0.0390**	**6.5523**	**2.4642**	**9.0165**	**3.3675**	**2.2671**	**5.6345**		**3,992.7055**	**3,992.7055**	**1.2234**		**4,023.2895**

3.3 Grading - 2017

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	0.3001	0.2093	2.1057	5.0100e-003	0.9612	3.3000e-003	0.9645	0.2461	3.0400e-003	0.2491		498.4749	498.4749	0.0163		498.8829
Total	**0.3001**	**0.2093**	**2.1057**	**5.0100e-003**	**0.9612**	**3.3000e-003**	**0.9645**	**0.2461**	**3.0400e-003**	**0.2491**		**498.4749**	**498.4749**	**0.0163**		**498.8829**

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					
Fugitive Dust					2.9486	0.0000	2.9486	1.5154	0.0000	1.5154			0.0000			0.0000
Off-Road	4.0208	43.0184	24.2858	0.0390		2.4642	2.4642		2.2671	2.2671	0.0000	3,992.7055	3,992.7055	1.2234		4,023.2895
Total	**4.0208**	**43.0184**	**24.2858**	**0.0390**	**2.9486**	**2.4642**	**5.4127**	**1.5154**	**2.2671**	**3.7824**	**0.0000**	**3,992.7055**	**3,992.7055**	**1.2234**		**4,023.2895**

3.3 Grading - 2017

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	0.3001	0.2093	2.1057	5.0100e-003	0.9612	3.3000e-003	0.9645	0.2461	3.0400e-003	0.2491		498.4749	498.4749	0.0163		498.8829
Total	**0.3001**	**0.2093**	**2.1057**	**5.0100e-003**	**0.9612**	**3.3000e-003**	**0.9645**	**0.2461**	**3.0400e-003**	**0.2491**		**498.4749**	**498.4749**	**0.0163**		**498.8829**

3.4 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1149	26.5546	18.1825	0.0269		1.7879	1.7879		1.6791	1.6791		2,650.9797	2,650.9797	0.6531		2,667.3078
Total	**3.1149**	**26.5546**	**18.1825**	**0.0269**		**1.7879**	**1.7879**		**1.6791**	**1.6791**		**2,650.9797**	**2,650.9797**	**0.6531**		**2,667.3078**

3.4 Building Construction - 2017

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	0.3122	9.2491	2.1488	0.0182	0.4547	0.0913	0.5460	0.1309	0.0873	0.2182		1,912.6365	1,912.6365	0.1931		1,917.4648
Worker	1.1806	0.8234	8.2854	0.0197	2.0232	0.0130	2.0361	0.5366	0.0120	0.5485		1,961.3903	1,961.3903	0.0642		1,962.9956
Total	**1.4928**	**10.0726**	**10.4342**	**0.0379**	**2.4779**	**0.1042**	**2.5821**	**0.6675**	**0.0993**	**0.7667**		**3,874.0269**	**3,874.0269**	**0.2573**		**3,880.4604**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1149	26.5546	18.1825	0.0269		1.7879	1.7879		1.6791	1.6791	0.0000	2,650.9797	2,650.9797	0.6531		2,667.3078
Total	**3.1149**	**26.5546**	**18.1825**	**0.0269**		**1.7879**	**1.7879**		**1.6791**	**1.6791**	**0.0000**	**2,650.9797**	**2,650.9797**	**0.6531**		**2,667.3078**

3.4 Building Construction - 2017

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	0.3122	9.2491	2.1488	0.0182	0.4547	0.0913	0.5460	0.1309	0.0873	0.2182		1,912.6365	1,912.6365	0.1931		1,917.4648
Worker	1.1806	0.8234	8.2854	0.0197	2.0232	0.0130	2.0361	0.5366	0.0120	0.5485		1,961.3903	1,961.3903	0.0642		1,962.9956
Total	**1.4928**	**10.0726**	**10.4342**	**0.0379**	**2.4779**	**0.1042**	**2.5821**	**0.6675**	**0.0993**	**0.7667**		**3,874.0269**	**3,874.0269**	**0.2573**		**3,880.4604**

3.4 Building Construction - 2018

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	2.6795	23.3900	17.5804	0.0269		1.4999	1.4999		1.4099	1.4099		2,620.9351	2,620.9351	0.6421		2,636.9883
Total	**2.6795**	**23.3900**	**17.5804**	**0.0269**		**1.4999**	**1.4999**		**1.4099**	**1.4099**		**2,620.9351**	**2,620.9351**	**0.6421**		**2,636.9883**

3.4 Building Construction - 2018

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	0.2741	8.6193	1.9249	0.0181	0.4547	0.0732	0.5279	0.1309	0.0700	0.2010		1,908.0127	1,908.0127	0.1815		1,912.5504
Worker	1.0633	0.7181	7.2763	0.0191	2.0232	0.0126	2.0358	0.5366	0.0117	0.5482		1,905.4199	1,905.4199	0.0564		1,906.8292
Total	**1.3374**	**9.3374**	**9.2012**	**0.0373**	**2.4778**	**0.0858**	**2.5637**	**0.6675**	**0.0817**	**0.7492**		**3,813.4326**	**3,813.4326**	**0.2379**		**3,819.3796**

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	2.6795	23.3900	17.5804	0.0269		1.4999	1.4999		1.4099	1.4099	0.0000	2,620.9351	2,620.9351	0.6421		2,636.9883
Total	**2.6795**	**23.3900**	**17.5804**	**0.0269**		**1.4999**	**1.4999**		**1.4099**	**1.4099**	**0.0000**	**2,620.9351**	**2,620.9351**	**0.6421**		**2,636.9883**

3.4 Building Construction - 2018

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	0.2741	8.6193	1.9249	0.0181	0.4547	0.0732	0.5279	0.1309	0.0700	0.2010		1,908.0127	1,908.0127	0.1815		1,912.5504
Worker	1.0633	0.7181	7.2763	0.0191	2.0232	0.0126	2.0358	0.5366	0.0117	0.5482		1,905.4199	1,905.4199	0.0564		1,906.8292
Total	**1.3374**	**9.3374**	**9.2012**	**0.0373**	**2.4778**	**0.0858**	**2.5637**	**0.6675**	**0.0817**	**0.7492**		**3,813.4326**	**3,813.4326**	**0.2379**		**3,819.3796**

3.5 Paving - 2018

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	1.6437	17.5209	14.7964	0.0228		0.9561	0.9561		0.8797	0.8797		2,294.0887	2,294.0887	0.7142		2,311.9432
Paving	0.4740					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.1177**	**17.5209**	**14.7964**	**0.0228**		**0.9561**	**0.9561**		**0.8797**	**0.8797**		**2,294.0887**	**2,294.0887**	**0.7142**		**2,311.9432**

3.5 Paving - 2018

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	0.0881	0.0595	0.6030	1.5900e-003	0.1677	1.0500e-003	0.1687	0.0445	9.7000e-004	0.0454		157.9077	157.9077	4.6700e-003		158.0245
Total	**0.0881**	**0.0595**	**0.6030**	**1.5900e-003**	**0.1677**	**1.0500e-003**	**0.1687**	**0.0445**	**9.7000e-004**	**0.0454**		**157.9077**	**157.9077**	**4.6700e-003**		**158.0245**

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	1.6437	17.5209	14.7964	0.0228		0.9561	0.9561		0.8797	0.8797	0.0000	2,294.0887	2,294.0887	0.7142		2,311.9432
Paving	0.4740					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.1177**	**17.5209**	**14.7964**	**0.0228**		**0.9561**	**0.9561**		**0.8797**	**0.8797**	**0.0000**	**2,294.0887**	**2,294.0887**	**0.7142**		**2,311.9432**

3.5 Paving - 2018

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	0.0881	0.0595	0.6030	1.5900e-003	0.1677	1.0500e-003	0.1687	0.0445	9.7000e-004	0.0454		157.9077	157.9077	4.6700e-003		158.0245
Total	**0.0881**	**0.0595**	**0.6030**	**1.5900e-003**	**0.1677**	**1.0500e-003**	**0.1687**	**0.0445**	**9.7000e-004**	**0.0454**		**157.9077**	**157.9077**	**4.6700e-003**		**158.0245**

3.6 Architectural Coating - 2018

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					
Archit. Coating	27.2785					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.1171
Total	**27.5771**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**		**281.4485**	**281.4485**	**0.0267**		**282.1171**

3.6 Architectural Coating - 2018

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	0.2115	0.1428	1.4472	3.8100e-003	0.4024	2.5100e-003	0.4049	0.1067	2.3200e-003	0.1090		378.9786	378.9786	0.0112		379.2588
Total	**0.2115**	**0.1428**	**1.4472**	**3.8100e-003**	**0.4024**	**2.5100e-003**	**0.4049**	**0.1067**	**2.3200e-003**	**0.1090**		**378.9786**	**378.9786**	**0.0112**		**379.2588**

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					
Archit. Coating	27.2785					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.1171
Total	**27.5771**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**	**0.0000**	**281.4485**	**281.4485**	**0.0267**		**282.1171**

3.6 Architectural Coating - 2018

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	0.2115	0.1428	1.4472	3.8100e-003	0.4024	2.5100e-003	0.4049	0.1067	2.3200e-003	0.1090		378.9786	378.9786	0.0112		379.2588
Total	**0.2115**	**0.1428**	**1.4472**	**3.8100e-003**	**0.4024**	**2.5100e-003**	**0.4049**	**0.1067**	**2.3200e-003**	**0.1090**		**378.9786**	**378.9786**	**0.0112**		**379.2588**

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	7.1707	60.1785	89.8570	0.3502	26.4711	0.4001	26.8712	7.0841	0.3781	7.4623		35,689.8766	35,689.8766	2.0004		35,739.8857
Unmitigated	7.1707	60.1785	89.8570	0.3502	26.4711	0.4001	26.8712	7.0841	0.3781	7.4623		35,689.8766	35,689.8766	2.0004		35,739.8857

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	2,152.00	2,152.00	2152.00	6,932,584	6,932,584
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	1,278.05	1,278.05	1278.05	5,477,378	5,477,378
Total	3,430.05	3,430.05	3,430.05	12,409,962	12,409,962

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
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.533383	0.039495	0.183627	0.126156	0.018688	0.005561	0.017029	0.066607	0.001345	0.001247	0.004677	0.000974	0.001211
Parking Lot	0.533383	0.039495	0.183627	0.126156	0.018688	0.005561	0.017029	0.066607	0.001345	0.001247	0.004677	0.000974	0.001211
Unrefrigerated Warehouse-No Rail	0.533383	0.039495	0.183627	0.126156	0.018688	0.005561	0.017029	0.066607	0.001345	0.001247	0.004677	0.000974	0.001211

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	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	0.0155	0.1409	0.1183	8.5000e-004		0.0107	0.0107		0.0107	0.0107		169.0173	169.0173	3.2400e-003	3.1000e-003	170.0217
NaturalGas Unmitigated	0.0214	0.1946	0.1634	1.1700e-003		0.0148	0.0148		0.0148	0.0148		233.4816	233.4816	4.4800e-003	4.2800e-003	234.8690

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					
General Office Building	95.6164	1.0300e-003	9.3700e-003	7.8700e-003	6.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004		11.2490	11.2490	2.2000e-004	2.1000e-004	11.3158
Parking Lot	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
Unrefrigerated Warehouse-No Rail	1888.98	0.0204	0.1852	0.1556	1.1100e-003		0.0141	0.0141		0.0141	0.0141		222.2326	222.2326	4.2600e-003	4.0700e-003	223.5532
Total		**0.0214**	**0.1946**	**0.1634**	**1.1700e-003**		**0.0148**	**0.0148**		**0.0148**	**0.0148**		**233.4815**	**233.4815**	**4.4800e-003**	**4.2800e-003**	**234.8690**

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					
General Office Building	0.0688438	7.4000e-004	6.7500e-003	5.6700e-003	4.0000e-005		5.1000e-004	5.1000e-004		5.1000e-004	5.1000e-004		8.0993	8.0993	1.6000e-004	1.5000e-004	8.1474
Parking Lot	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
Unrefrigerated Warehouse-No Rail	1.3678	0.0148	0.1341	0.1126	8.0000e-004		0.0102	0.0102		0.0102	0.0102		160.9181	160.9181	3.0800e-003	2.9500e-003	161.8743
Total		**0.0155**	**0.1409**	**0.1183**	**8.4000e-004**		**0.0107**	**0.0107**		**0.0107**	**0.0107**		**169.0173**	**169.0173**	**3.2400e-003**	**3.1000e-003**	**170.0217**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	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	7.3387	4.1000e-004	0.0446	0.0000		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004		0.0948	0.0948	2.6000e-004		0.1012
Unmitigated	7.3387	4.1000e-004	0.0446	0.0000		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004		0.0948	0.0948	2.6000e-004		0.1012

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	0.4464					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.8880					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.2300e-003	4.1000e-004	0.0446	0.0000		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004		0.0948	0.0948	2.6000e-004		0.1012
Total	**7.3387**	**4.1000e-004**	**0.0446**	**0.0000**		**1.6000e-004**	**1.6000e-004**		**1.6000e-004**	**1.6000e-004**		**0.0948**	**0.0948**	**2.6000e-004**		**0.1012**

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	0.4464					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.8880					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.2300e-003	4.1000e-004	0.0446	0.0000		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004		0.0948	0.0948	2.6000e-004		0.1012
Total	**7.3387**	**4.1000e-004**	**0.0446**	**0.0000**		**1.6000e-004**	**1.6000e-004**		**1.6000e-004**	**1.6000e-004**		**0.0948**	**0.0948**	**2.6000e-004**		**0.1012**

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

Greenhouse Gas Emission Worksheet

N20 Mobile Emissions Riverside Warehouse

From CalEEMod Vehicle Fleet Mix Output:

Annual VMT: 12,409,962

Vehicle Type	Percent Type	CH4 Emission Factor (g/mile)*	CH4 Emission (g/mile)**	N2O Emission Factor (g/mile)*	N2O Emission (g/mile)**
Light Auto	53.3%	0.04	0.021332	0.04	0.021332
Light Truck < 3750 lbs	3.9%	0.05	0.00197	0.06	0.002364
Light Truck 3751-5750 lbs	18.4%	0.05	0.0091814	0.06	0.011018
Med Truck 5751-8500 lbs	12.6%	0.12	0.0151387	0.2	0.025231
Lite-Heavy Truck 8501-10,000 lbs	1.9%	0.12	0.0022426	0.2	0.003738
Lite-Heavy Truck 10,001-14,000 lbs	0.6%	0.09	0.0005005	0.125	0.000695
Med-Heavy Truck 14,001-33,000 lbs	1.7%	0.06	0.00102	0.05	0.00085
Heavy-Heavy Truck 33,001-60,000 lbs	6.7%	0.06	0.003996	0.05	0.00333
Other Bus	0.1%	0.06	0.0000807	0.05	6.73E-05
Urban Bus	0.1%	0.06	7.482E-05	0.05	6.24E-05
Motorcycle	0.5%	0.09	0.0004209	0.01	4.68E-05
School Bus	0.1%	0.06	5.844E-05	0.05	4.87E-05
Motor Home	0.1%	0.09	0.000109	0.125	0.000151
Total	**100.0%**		**0.056125**		**0.068934**

Total Emissions (metric tons) =
Emission Factor by Vehicle Mix (g/mi) x Annual VMT(mi) x 0.000001 metric tons/g

Conversion to Carbon Dioxide Equivalency (CO2e) Units based on Global Warming Potential (GWP)

CH4	21	GWP
N2O	310	GWP
1 ton (short, US) =	0.90718474	metric ton

Annual Mobile Emissions:

	Total Emissions		Total CO2e units	
N20 Emissions:	0.8555	metric tons N2O	**265.20**	metric tons CO2e
		Project Total:	***265.20 metric tons CO2e***	

References

* from Table C.4: Methane and Nitrous Oxide Emission Factors for Mobile Sources by Vehicle and Fuel Type (g/mile).
in California Climate Action Registry General Reporting Protocol, Reporting Entity-Wide Greenhouse Gas Emissions, Version 3.1, January 2009.
Assume Model year 2000-present, gasoline fueled.

** Source: California Climate Action Registry General Reporting Protocol, Reporting Entity-Wide Greenhouse Gas Emissions, Version 3.1, January 2009.

Greenhouse Gas Emission Worksheet
Construction Emissions Riverside Warehouse

Annual Mobile Emissions:

	Project Total:	***553 metric tons CO2e***
References	**Amortarized (30 years)**	**18.42**
CalEEMod Output		

750 Marlborough Drive Project

MSHCP Consistency Analysis and Habitat Assessment

prepared for
Guthrie Pericles, LLC
Mr. Douglas Thompson
1451 Research Park Drive, Suite 200
Riverside, California 92507-2154
Via email: Doug@recounsel.net

prepared by
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December 2017

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Exhibit 9 - CEQA Documents

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Figures

Appendices

Executive Summary

This report contains the results of a Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) Consistency Analysis and Habitat Assessment Report for the 750 Marlborough Drive Project, an approximate 22.5-acre property herein referred to as "project site" or "site". The report was completed to document existing site conditions and to determine potential impacts to sensitive biological resources for consistency with the MSHCP. The project site is located at 750 Marlborough Avenue in the city of Riverside, Riverside County, California and is adjacent to Box Springs Mountain Reserve. The 750 Marlborough Drive Project proposes to construct a commercial warehouse building totaling 339,510 square feet.

The Riverside County Integrated Project (RCIP) Conservation Summary Report was queried using the parcel information for the project site to determine potential MSHCP sensitive species survey and conservation requirements for the project. The proposed project does not occur with in areas requiring surveys for amphibians, mammals, Narrow Endemic Plant Species or Criteria Area Species. However, the property occurs within a small portion of Proposed Constrained Linkage 4, Proposed Constrained Linkage 7, the existing Core A, and the MSHCP survey area for burrowing owl (*Athene cunicularia*), a California Species of Special Concern. A habitat assessment and four focused surveys for burrowing owl was conducted. In addition, the MSHCP Consistency Analysis also includes a habitat assessment for Narrow Endemic Plant Species, riparian/riverine habitat, riparian/riverine species and vernal pool/fairy shrimp habitat.

The site contains suitable nesting habitat for burrowing owl and other nesting birds on and within the 500-foot buffer around the site. Pre-construction presence/absence surveys for western burrowing owl should be conducted in suitable habitat within 500 feet of the proposed construction/development site. Surveys should be conducted within 30 days prior to disturbance to avoid direct take of burrowing owls (MSHCP Species-Specific Objective 6). Surveys should be conducted in accordance with the CDFW and California Burrowing Owl Consortium guidelines as referenced within the MSHCP Burrowing Owl Survey Instructions. In the event that owls are discovered and may be affected by the proposed project, conservation of occupied habitat on-site is required according to the species conservation requirements (Volume II-B, Species Accounts, birds) Appendix E in the MSHCP.

Due to the presence of suitable habitat for nesting birds immediately adjacent to and within the site, if clearing and grubbing occurs during the nesting season (generally February through August but variable based on annual climatic conditions), a survey for active nests should be conducted by a qualified biologist within 1 week prior to any ground disturbing activities.

With payment of MSHCP Development Mitigation Fees and implementation of the measures described above, impacts to special-status plant and wildlife species covered under the "take" provisions of the MSHCP would be less than significant. The proposed project is not expected to result in any significant impacts to any additional species-status plant and wildlife species that are not covered under the "take" provisions of the MSHCP, and the project would not impact Box Springs Mountain Reserve.

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1 Introduction

1.1 Project Summary

This report documents the findings of a Multiple Species Habitat Conservation Plan (MSHCP) Consistency Analysis and Habitat Assessment to comply with the Western Riverside County MSHCP. This assessment was completed to document existing site conditions and to determine potential impacts to sensitive biological resources for the approximately 22.5-acre 750 Marlborough Drive Project (project), located in the city of Riverside, Riverside County, California. The report also contains the results of an MSHCP-required habitat assessment for burrowing owl (*Athene canicularia*; BUOW), and includes an analysis of potential project-related impacts to biological resources.

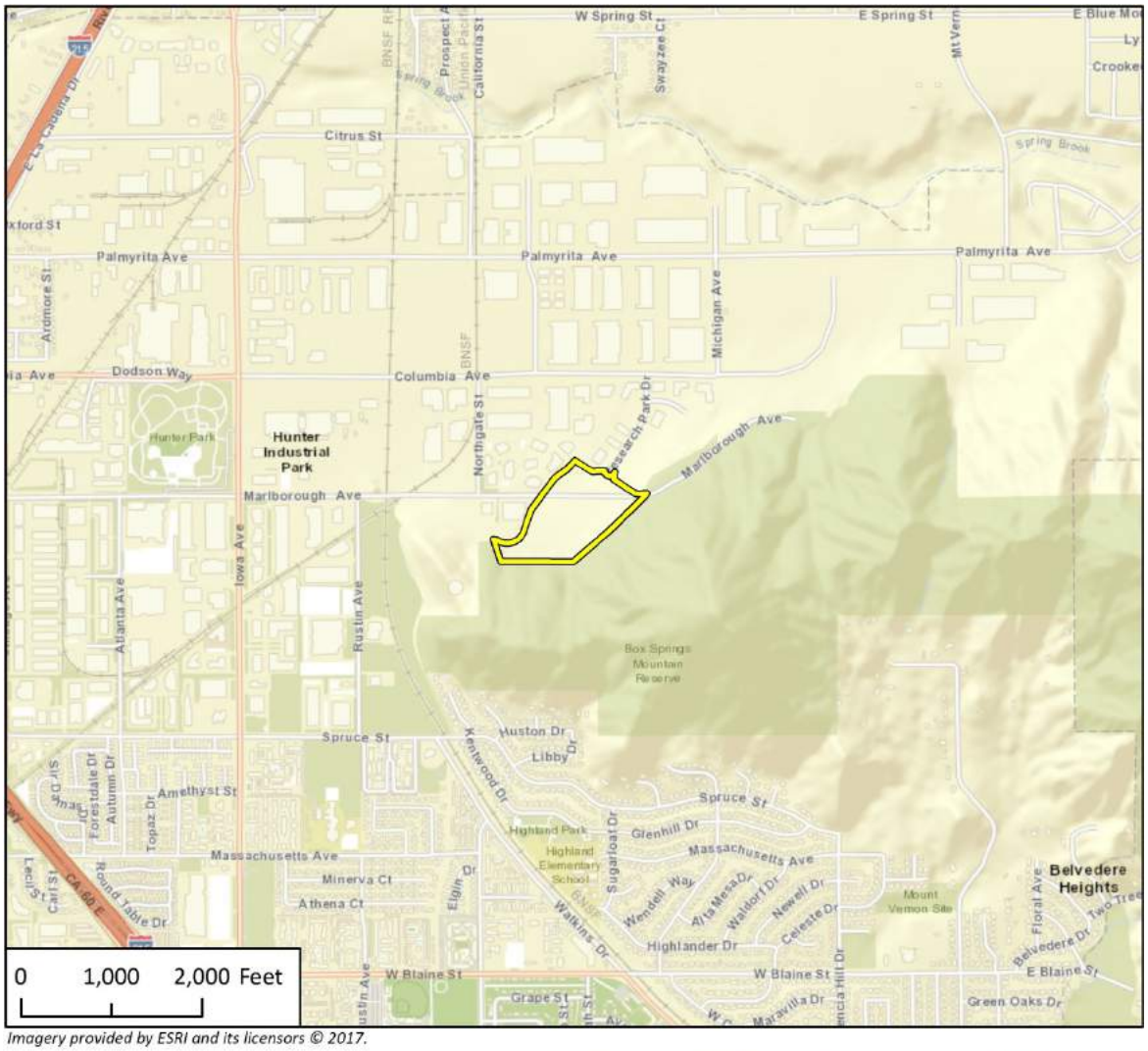
1.2 Project Location

The project site is located within the city of Riverside, west of the terminus of Marlborough Avenue and south of the terminus of Research Park Drive, at the foot of the western portion of the Box Springs Mountains (Figure 1). Specifically, the site is located at 750 Marlborough Avenue. The site is depicted on the Riverside East, United States Geological Survey (USGS) 7.5-minute topographic map, within Section 17, Township 2 South, Range 4 West. It is located on Assessor's Parcel Numbers 257-060-002, 257-030-042, and 257-030-016. Land use immediately adjacent to the property includes industrial development to the north and east, and open space to the west and south.

1.3 Project Description

Rincon understands the 750 Marlborough Drive Project proposes to construct one commercial warehouse building with an office area totaling 339,510 square feet (sq. ft.) with an additional 86,698 sq. ft. dedicated to a parking lot and landscaping. The total project footprint will also include the installation of a water quality basin to catch any on site run-off. One cemented culvert that runs east-west across the site will be removed and redirected underground. Primary vehicular access to the project site would be provided by an entrance located at the end of Marlborough Avenue, on the eastern border of the site. An additional entrance is located at the norther border of the site at the Research Park Drive cul-de-sac. Utilities such as a sewer line, water line, electricity, and a telephone line will be installed several feet underneath the Gage Canal where it meets the terminus of Marlborough Avenue. The northeastern most portion of the project site was previously graded but is not currently developed and will be used as a temporary laydown area during construction. Site plans can be found in Appendix A.

Figure 1 Regional Location of Project



The project also includes the development of a ten-foot-wide multi-use trail, made of decomposed granite material as specified by City of Riverside Parks and Recreation Department, which will run along the southern and eastern sides of the project. The trail will be sloped to a drainage ditch/channel that generally runs along the southern and eastern side of the trail for storm water protection. As the trail is needed for fire protection, the trail will provide a 12-foot clearance for fire service vehicles and will be designed to keep the maximum slope no greater than 15 percent where feasible. The trail will also be used for maintenance purposes to help maintain the proposed graded slopes and the storm water protection system, which consists of the drainage ditch/channel adjacent to the trail and the proposed storm drain that is proposed under the trail. Lastly the trail will be used as a public recreational trail as part of the City of Riverside trail network.

2 Methodology

2.1 Western Riverside County MSHCP Consistency Analysis

The proposed project was analyzed to determine consistency with the requirements set forth in the Western Riverside County MSHCP. The Riverside County Integrated Project (RCIP) Conservation Summary Report (Riverside County Land Information Systems 2017) was queried using the parcel information for the project site to determine potential MSHCP sensitive species survey and conservation requirements for the project. Per the RCIP generator, the MSHCP identifies this area as requiring habitat assessments for western burrowing owl only (Appendix B).

To ensure consistency with the requirements set forth in the MSHCP (RCIP 2003), including survey requirements for inadequately covered species, the project site was assessed, and geographic information systems (GIS) software was used to map the site in relation to MSHCP areas, including criteria cells, conservation areas, and wildlife movement corridors and linkages; survey areas for plant, bird, mammal, and amphibian species; Criteria Area Species Survey Area (CASSA); and the Narrow Endemic Plant Survey Area (NEPSA).

The MSHCP also requires an assessment of the potentially significant project effects on riparian/riverine areas and vernal pools, if applicable. According to the MSHCP, the documentation for the assessment shall include mapping and a description of the functions and values of the mapped areas with respect to the species listed in Section 6.1.2, Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools. An assessment of potential indirect impacts to existing or proposed MSHCP conservation areas that may exist on or adjacent to the site through an urban/wildlands interface analysis must also be included.

2.2 Literature Review

Prior to the field visit, a literature review was conducted to establish the environmental and regulatory setting of the proposed project. Specific literature reviewed is provided in the reference section of this document. The literature review included the U.S. Department of Agriculture (USDA) Soil Survey for the Western Riverside Area, Riverside East USGS 7.5-minute topographic quadrangle, and literature detailing the habitat requirements of subject species, as well as aerial photographs and topographic maps (Google Earth, 2017). The MSHCP, species accounts, and other reference materials were reviewed for habitat assessment requirements as well as habitat suitability elements for special-status species included in the assessment. The primary objective of the habitat assessment was to evaluate the project site's potential to contain suitable habitat for special status species as well as to determine the applicability of other MSHCP and California Environmental Quality Act (CEQA) requirements as they pertain to the proposed project.

The California Natural Diversity Data Base (CNDDB), Biogeographic Information and Observation System (BIOS – http://www.bios.dfg.ca.gov) and United States Fish and Wildlife Service (USFWS) Critical Habitat Portal (http://criticalhabitat.fws.gov) was reviewed to determine if any special-status wildlife, plant or vegetation communities were previously recorded on site. The *National Wetlands*

Inventory (NWI) (USFWS 2017) was reviewed to determine if any wetland and/or non-wetland waters had been previously documented and mapped on or in the vicinity of the proposed study area. Other resources included the California Native Plant Society (CNPS) online *Inventory of Rare and Endangered Plants of California* (2017), California Department of Fish and Wildlife (CDFW) *Special Animals List* (May 2017), and CDFW *Special Vascular Plants, Bryophytes, and Lichens List* (May 2017).

2.3 Field Reconnaissance Survey

The field reconnaissance survey documented existing site conditions and the potential presence of special-status biological resources, including special-status plant and wildlife species, special-status plant communities, jurisdictional waters and wetlands, and habitat for nesting birds. Rincon biologist, Lily Sam, conducted the habitat assessment on May 4, 2017, between 1700 and 1900 hours. Survey conditions included temperatures ranging from 88-94^{o} F with clear skies and calm winds. The survey area consisted of the area within the proposed limits of work (22.5-acre project site) and an additional 500-foot buffer. The biologist surveyed the project site on foot. Where portions of the survey area were inaccessible on foot (e.g., steep hills), the biologist visually inspected these areas with binoculars (8 x 40).

The potential presence of special-status species is based on the literature review and field survey designed to assess habitat suitability only. Definitive surveys to confirm the presence or absence of special-status species were not performed. Definitive surveys for sensitive plant and wildlife species generally require specific survey protocols and extensive field survey time, and are usually conducted only at certain times of the year. The findings and opinions conveyed in this report are based on this methodology.

2.3.1 Vegetation Mapping

When applicable, vegetation communities observed on-site were mapped on a site-specific aerial photograph. All accessible portions of the survey area were covered on foot. Inaccessible areas were mapped using binoculars and aerial photography interpretation. Vegetation was generally classified using the systems provided in the *Preliminary Descriptions of the Terrestrial Communities of California* (Holland 1986), and modified using *A Manual of California Vegetation, Second Edition* (MCV) (Sawyer et al. 2009) as necessary to reflect the existing site conditions.

2.3.2 Flora

All plant species observed in the project site were noted, and plants that could not be identified in the field were identified later using taxonomic keys. The reconnaissance survey included a directed search for sensitive plants that would have been apparent at the time of the survey. Floral nomenclature for native and non-native plants follows Baldwin et al. (2012) as updated by The Jepson Online Interchange (University of California, Berkeley 2017*).* For ornamental plants, nomenclature follows U.S. Department of Agriculture (USDA) PLANTS Database (USDA 2017), and for special-status plants follows Baldwin et al. (2012) and California Native Plant Society (CNPS 2017).

2.3.3 Fauna

Animal species observed directly or detected from calls, tracks, scat, nests, or other sign in the project site were noted. The survey was performed during the day therefore, the identification of

nocturnal animals was limited to sign if present on-site. Zoological nomenclature for birds is in accordance with the American Ornithologists' Union Checklist (2017) and for mammals, Wilson & DeeAnn M. Reeder (2005).

2.3.4 Jurisdictional Waters

Aerial photography and the *National Wetlands Inventory* (NWI) (USFWS 2017) were reviewed prior to conducting general surveys. The photographs were used to locate and inspect any potential natural drainage features and water bodies that may be considered riparian/riverine habitat or under the jurisdiction of United States Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), and/or California Department of Fish and Wildlife (CDFW). A formal assessment and delineation of jurisdictional waters and wetlands was not conducted because the project site did not contain any potential natural drainage features or water bodies that may be considered riparian/riverine habitat or under the jurisdiction of USACE, RWQCB, or CDFW.

2.4 Riparian/Riverine/Vernal Pools and Fairy Shrimp Habitat Assessment

MSHCP Section 6.1.2, Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools, describes the process through which protection of riparian/riverine areas, vernal pools, and fairy shrimp species will occur within the MSHCP Area. Protection of these resources is important for a number of MSHCP conservation objectives. An assessment of a project's potentially significant effects on riparian/riverine areas, vernal pools, and fairy shrimp habitat is required. Guidelines for determining whether or not these resources exist on site are described as follows:

- **Riparian/Riverine Areas** include "lands which contain habitat dominated by trees, shrubs, persistent emergent, or emergent mosses and lichens which occur close to or which depend upon soil moisture from a nearby fresh water source or areas with fresh water flow during all or a portion of the year." Riparian/riverine areas under the MSHCP also include drainage areas that are vegetated or have upland (non-riparian/riverine) vegetation that drain directly into an area that is described for conservation under the MSHCP (or areas already conserved).
- **Vernal Pools** are described by the MSHCP as "seasonal wetlands that occur in depression areas that have wetland indicators of all three parameters (soils, vegetation, and hydrology) during the wetter portion of the growing season but normally lack wetland indictors of hydrology and /or vegetation during the drier portion of the growing season."
- **Listed Fairy Shrimp Habitat,** as described under MSHCP Section 6.1.2, is habitat for Riverside fairy shrimp (*Streptocephalus woottoni*), vernal pool fairy shrimp (*Branchinecta lynchi*), or Santa Rosa Plateau fairy shrimp (*Linderiella santarosae*), and includes ephemeral pools, artificially created habitat, and/or other features determined appropriate by a qualified biologist.

Riparian/riverine habitat and vernal pools within the study area were identified, mapped, and recorded during the field reconnaissance survey, if found.

2.5 Burrowing Owl Habitat Assessment

The burrowing owl habitat assessment and focus survey occurred during the May 4 field survey in accordance with MSHCP survey requirements. This assessment involved walking through potentially suitable habitat within the survey area (the project site and a 500-foot buffer where accessible) to

have 100 percent visual coverage of the ground surface. Due to some development constraints and terrain (i.e. steep hills to the south and east), some of the 500-foot buffer was inaccessible on foot; therefore, the biologist visually inspected these areas with binoculars. Following the identification of suitable burrowing owl habitat within the project site, Step II surveys as indicated by the MSHCP burrowing owl survey instructions were implemented and a focused survey was conducted two hours before sunset. Three additional protocol-level surveys for burrowing owl were conducted during the breeding season (March 1 - August 31) to comply with the requirements of the MSHCP and to be considered conclusive. Protocol-level surveys followed the *Burrowing Owl Survey Instructions for the Western Riverside MSHCP Area* (RCTLMA, 2006). See Appendix C for the Burrowing Owl Survey Report for more details.

3 Existing Conditions

This section provides a brief discussion of the existing conditions observed on-site. Site photographs are located in Appendix D. The Riverside region climate can be classified as Mediterranean with generally dry summers and mild, wet winters. The average annual rainfall in the region is about 10.32 inches, most of which occurs between November and March (NOAA 2017). The project is located directly southeast of the Gage Canal, which exists as an underground channel just outside of the project footprint.

The proposed project site currently consists of previously disked lots with vegetated areas on the south and east margins at the toe of the Box Springs Mountains. A cement-lined culvert traverses directly east-west through the site and will eventually divert water on site into a new detention basin. Storm water flows are already contained on the project site and will continue to function as a closed system following construction. The detention basin will be located at the southwest portion of the project site. No riparian habitat exists within the cement lined drainage. There is no regular water source, suitable vegetation or soils found, and no riverine features that support downstream resources.

3.1 Land Use

The project site is an undeveloped plot of land located in the city of Riverside. The site is heavily disturbed by recent grubbing and disking to remove emerging grasses and other weedy vegetation. Land uses adjacent to the site include industrial development to the north and west, and open space to the east and south. The adjacent open space is connected with the Box Springs Mountains Reserve managed by Riverside County Parks Department and is a Public Quasi-Public (PQP) Land under the MSHCP. Within the 347,000 acres of public and quasi-public lands already set aside as habitat in the MSHCP, habitat reserves such as Box Springs Mountain are important for monitoring and managing conserved land in Riverside County.

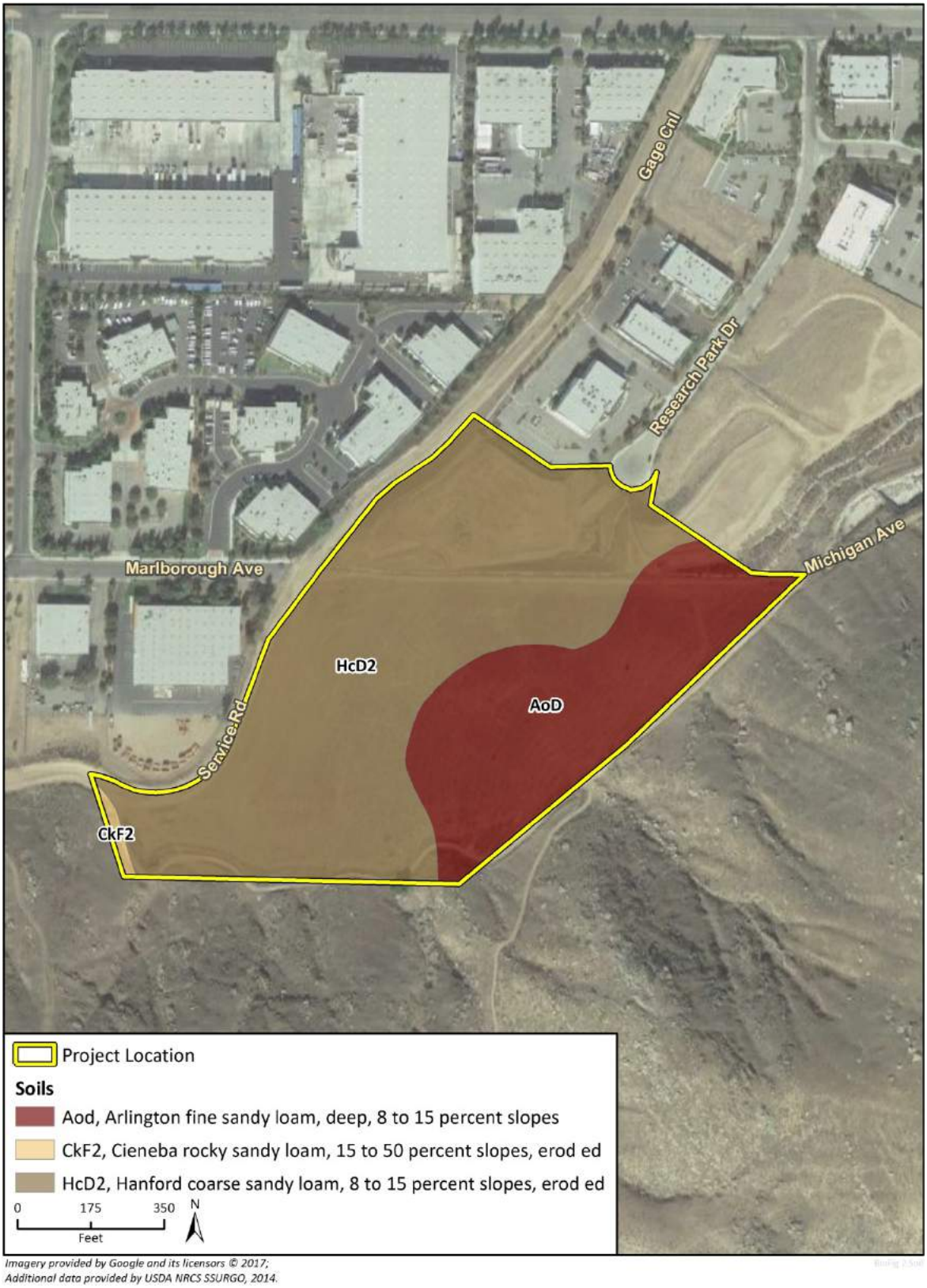
3.2 Topography and Soils

The project site occurs at an elevation range of approximately 1030 to 1130 feet above mean sea level. The topography of the survey area is predominately flat with a gradual downward slope towards Marlborough Avenue. The observed surface soils on the project site contain evidence of heavy disturbance from recent disking and other soil moving activities.

Based on the most recent soil survey for Western Riverside Area (USDA 2017) APNs 257-060-002, 257-030-042, and 257-030-016, the site consists of four mapped soil types (Figure 2):

- Arlington fine sandy loam, deep, 8 to 15 percent slopes (Aod)
- Cieneba rocky sandy loam, 15 to 50 percent slopes, eroded (CkF2)
- Fallbrook sandy loam, 15 to 25 percent slopes, eroded (FaE2)
- Hanford course sandy loam, 8 to 15 percent slopes, eroded (HcD2)

Figure 2 USDA Soils Map



Arlington Soils

The Arlington soils are well drained with slow to medium runoff and slow permeability. They are nearly level to strongly sloping and are on alluvial fans and terraces at elevations of about 400 to 2,000 feet. Generally, this soil series is used mostly for growing grain, citrus, and truck crops. Naturalized vegetation typical for this soil is primarily annual grasses and forbs (USDA, National Cooperative Soil Survey, 2017). These soils are mildly alkaline and non-hydric.

Cieneba Soils

The Cieneba soils are excessively drained with low to high runoff and moderately rapid permeability in the soil and much slower permeability in the weathered bedrock. It is typically formed in material weathered from granitic rock. Cieneba soils are on hills and mountains and have slopes of 9 to 85 percent. This soil is mostly used for wildlife, recreation, watershed, and incidental grazing. Vegetation typical for this soil series is mainly chaparral and chemise with widely spread foothill pine or oak trees.

Fallbrook Series Soils

Fallbrook series soils consist of deep, well-drained soils that formed in material weathered from granitic rocks and typically have slopes of 5 to 75 percent. Generally, the Fallbrook soils are gently rolling to very steep and are on round hills at elevations of 200 to 3,000 feet or as high as 3,500 feet on south facing slopes. Extensive areas are used for grazing, but there are also important production uses for avocados, citrus, truck crops, and non-irrigated small grain and hay. Uncultivated areas are mainly dominated by annual grasses and forbs with considerable chaparral, chemise, flattop buckwheat and other shrubs.

Hanford Soil Series

The Hanford soil series consists of very deep and well drained soils that formed in moderately coarse textured alluvium dominantly from granite. Hanford soils are typically found on stream bottoms, floodplains, and alluvial fans at elevations of 150 to 3,500 feet and have slopes of 0 to 15 percent. Hanford soils are used for growing a wide range of fruits, vegetables, and general farm crops. They are also used for urban development and dairies. Vegetation in uncultivated areas is mainly annual grasses and associated herbaceous plants.

3.3 Vegetation

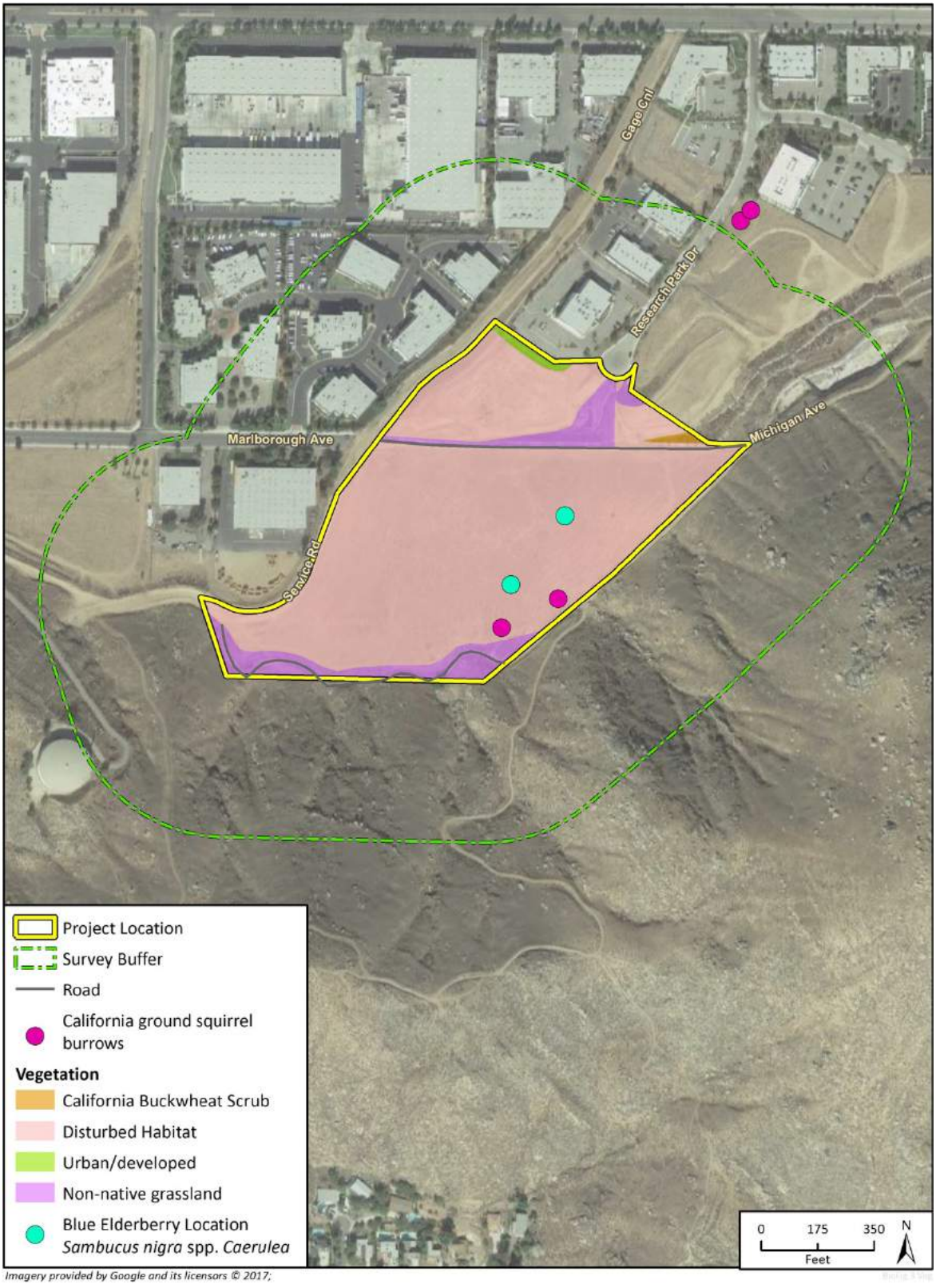
Due to the past grading and disking the site, native vegetation communities or habitat types within the survey area were limited (Figure 3). Existing vegetation was mapped as four distinct habitat types as outlined below. A floral compendium is provided in Appendix E.

3.3.1 Disturbed Habitat

Disturbed habitats are areas that have been physically disturbed (by previous human activity) and are no longer recognizable as a native or naturalized vegetation association, but continue to retain a soil substrate. Examples of disturbed habitat include areas that have been graded, repeatedly cleared for fuel management purposes, and/or have experienced repeated use that prevents natural revegetation (i.e., dirt parking lots, trails that have been present for several decades)(Holland 1986).

These areas show evidence of frequent and repeated disturbance from foot traffic, vehicle use, and clearing/grading. The disturbed habitat community on-site was dominated primarily by ruderal, non-native, annual species such as foxtail brome (*Bromus madritensis ssp. rubens*), Russian thistle (*Salsola tragus*), other brome grasses (*Bromus* spp.), wild oat (*Avena fatua*), common Mediterranean grass (*Schismus barbatus*), and black mustard (*Brassica nigra*). Two blue elderberry (*Sambucus nigra)* trees were found inter-mixed within the Disturbed Habitat.

Figure 3 Existing Biological Resources



3.3.2 Non-native Grassland

Non-native grasslands typically have a dense to sparse cover of annual grasses with flowering culms approximately 0.2- 0.5 (1.0) meter (m) high. This habitat is often associated with numerous species of showy flowered, native annual forbs ("wildflowers"), especially in years of favorable rainfall. The presence of *Avena*, *Bromus*, *Erodium*, and *Brassica* are common indicators. In some areas, depending on past disturbance and annual rainfall, annual forbs may be the dominant species; however, it is presumed that grasses will soon dominate. Germination occurs with the onset of the late fall rains; growth, flowering, and seed-set occur from winter through spring. With a few exceptions, the plants are dead through the summer-fall dry season, persisting as seeds. Remnant native species are variable. This can include grazed and even dry-farmed (i.e., disked) areas where irrigation is not present.

The non-native grassland communities within the project site are dominated primarily by wild oat (*Avena fatua*), various brome species (*Bromus* spp.), Mediterranean grass (*Schismus barbatus*), and black mustard (*Brassica nigra).* There is one Peruvian pepper tree (*Schinus molle*) located at the eastern edge of the project site. Some native species such as common fiddleneck (*Amsinckia intermedia*), pineapple weed (*Matricaria discoidea*), Southern California dudleya (*Dudleya lanceolata*), and brittlebush (*Encelia farinosa*) were intermixed into the non-native grassland community.

3.3.3 Urban/Developed

Urban or developed areas that have been constructed upon or otherwise physically altered to an extent that native vegetation is no longer supported. Developed land is characterized by permanent or semi-permanent structures, pavement or hardscape, and landscaped areas that often require irrigation. Areas where no natural land is evident due to a large amount of debris or other materials being placed upon it may also be considered Urban/Developed. Common species of this habitat include: tree tobacco (*Nicotiana glauca*) and ice plant (*Carpobrotus edulis*).

3.3.4 California Buckwheat Scrub

California buckwheat (*Eriogonum fasciculatum*) scrub is usually found on upland slopes, intermittently flooded arroyos, channels and washes with rarely flooded low-gradient deposits. Soils are typically course, well drained, and are usually moderately acidic to slightly saline. On-site, California buckwheat is the dominant or co-dominant species in the shrub canopy with California sagebrush (*Artemisia californica*), and brittlebush.

The other native species found within the California Buckwheat Scrub within the project site include common fiddleneck and pineapple weed. Non-native species such as Mediterranean grass, foxtail brome, and wild oat were also found within the California Buckwheat Scrub habitat.

3.4 General Wildlife

The project site provides limited habitat for wildlife species that commonly occur in urban communities in Riverside County. Wildlife observations included red-tailed hawk (*Buteo jamaicensis*), Anna's hummingbird (*Calypte anna*), common raven (*Covus corax*), house finch (*Haemorhous mexicanus*), hooded oriole (*Icterus cucullatus*), California towhee (*Melozone crissalis*), northern mockingbird (*Mimus polyglottos*), rock wren (*Salpinctes obsoletus*), Say's phoebe (*Sayornis*

saya), lesser goldfinch (*Spinus psaltria*), western meadowlark (*Sturnella neglecta*), Cassin's kingbird (*Tyrannus vociferans*), mourning dove (*Zenaida macroura*), coyote (*Canus latrans*) and California ground squirrel (*Otospermophilus beecheyi*). A complete list of wildlife observed is provided in Appendix E. Sensitive species with potential to occur within the survey area are discussed in Section 4.0.

3.5 Jurisdictional Waters

The project site did not contain any potential natural drainage features or water bodies that may be considered riparian/riverine habitat or under the jurisdiction of the USACE, RWQCB, and/or CDFW. The cement lined drainage that traverses the site is not a potential jurisdictional water resource because it was excavated in an upland area and has no direct hydrologic connectivity to other upstream or downstream resources. Ephemeral storm runoff from the surrounding hills disperses on site and drains into the cement lined culvert, staying in a closed system. The Gage Canal runs underground along the service road that hugs the eastern perimeter of the site. No impacts to the Gage Canal are anticipated.

4 Western Riverside County MSHCP Consistency Analysis

4.2 Habitat Assessment

4.2.1 Narrow Endemic and Criteria Area Plant Species

The project site is not within a Narrow Endemic Plant Species Survey Area or an MSHCP Criteria Area. The CNDDB shows that two plants; the marsh sandwort (*Arenaria paludicola*) and the salt marsh bird's beak (*Cordylanthus maritimus*), have been recorded near the project site. Marsh sandwort typically occurs in freshwater wetlands or wetland-riparian habitats. No freshwater wetlands occur within the project site. In addition, the salt marsh bird's beak generally occurs within coastal strands or coastal salt marsh. The site does not contain suitable habitat for Criteria Area or Narrow Endemic Plant Species due to the highly disturbed soils and soil types. None were observed during the reconnaissance field survey and none are expected to occur.

4.2.2 Riparian/Riverine Habitat

As defined in Section 6.1.2 of the MSHCP, riparian/riverine areas are lands that contain habitat dominated by trees, shrubs, persistent emergent or emergent mosses and lichens that occur close to or are depend on a nearby freshwater source, or areas that contain a freshwater flow during all or a portion of the year. These habitats may support one or more species listed in Section 6.1.2 of the MSHCP.

The culvert within the project site is lined with cement, with no hydrophytic vegetation, and has no up or downstream connectivity to riparian or riverine resources. Since the conveyance of water within the cement lined culvert in the project site remains within a closed system, no riverine conditions exist. Gage Canal, located just along the outer western perimeter of the site, is an underground active canal. According to the project site plans, no impacts to the Canal are anticipated for this scope of work (Appendix A).

No riparian or riverine areas occur within the site; however, some small canyons and scour occur on the hillside of the Box Spring Mountains outside of the project site. Some vegetation is present within the canyons that may suggest that they convey ephemeral flows onto the site; however, ephemeral storm flows disperse into sheet flow and do not leave the project site. Some species, such as blue elderberry, occur within the drainages outside of the project area.

The project site does not contain water features or habitats as defined under Section 6.1.2; therefore, the project would not impact riparian/riverine habitat. No further actions related to riparian/riverine habitat are recommended pursuant to the MSHCP.

4.2.3 Riparian/Riverine Species

As discussed in Section 4.2.2, the project site does not contain riparian/riverine habitat and as such does not provide suitable quality habitat for riparian/riverine species, such as arroyo toad (*Anaxyrus californicus*), mountain yellow-legged frog (*Rana muscosa*), California red-legged frog (*Rana*

draytonii), bald eagle (*Haliaeetus leucocephalus*), least Bell's vireo (*Vireo bellii pusillus*), peregrine falcon (*Falco peregrinus*), southwestern willow flycatcher (*Empidonax trailii extremus*), western yellow-billed cuckoo (*Coccyzus americanus*), Santa Ana sucker (*Catostomus santaanae*), Riverside fairy shrimp (*Streptocephalus wootoni*), vernal pool fairy shrimp (*Branchinecta lynchi*), Brand's phacelia (*Phacelia stellaris*), California Orcutt grass (*Orcuttia californica*), California black walnut (*Juglans californica*), Coulter's matilija poppy (*Romneya coulteri*), Engelmann oak (*Quercus engelmannii*), Fish's milkwort (*Polygala cornuta* var. *fishiae*), graceful tarplant (*Holocarpha virgate* ssp. *elongata*), lemon lily (*Lilium parryi*), Mojave tarplant (*Deinandra mohavensis*), mud nama (*Nama stenocarpum*), ocellated Humboldt lily (*Lilium humboldtii ssp. ocellatum*), Orcutt's brodiaea (*Brodiaea orcuttii*), Parish's meadowfoam (*Limnanthes alba ssp. Parishii*), prostrate navarretia (*Navarretia prostrata*), San Diego button-celery (*Eryngium aristulatum* var. *parishii*), San Jacinto Valley crownscale (*Atriplex coronate* var. *notatior*), San Miguel savory (*Clinopodium chandleri*), Santa Ana River woolly-star (*Eriastrum densifolium* ssp. *sanctorum*), slender-horned spine flower (*Dedecahema leptoceras*), smooth tarplant (*Centromadia pungens* ssp. *laevis*), spreading navarretia (*Navarretia fossalis*), thread-leaved brodiaea (*Brodiaea filifolia*), and vernal barley (*Hordeum intercedens*) as listed in Section 6.1.2 of the MSHCP. The drainage on site is cement lined and free of any riparian vegetation. No further actions related to riparian/riverine species are recommended pursuant to the MSHCP.

4.2.4 Vernal Pools/Fairy Shrimp Habitat

Vernal pools are seasonal wetlands that occur in depressions and typically have wetland indicators that represent all three parameters (soils, vegetation, and hydrology) and are defined based on vernal pool indicator plant species during the wetter portion of the growing season but normally lack wetland indicators associated with vegetation and/or hydrology during the drier portion of the growing season.

No ponding or evidence of standing water was observed during the site assessment or in historic aerials. No vernal pool or fairy shrimp habitat occurs on the project site, and no further actions related to vernal pools are recommended pursuant to the MSHCP.

4.2.5 Urban/Wildlands Interface Guidelines

According to Section 6.1.4 of the MSHCP, the Urban/Wildlands Interface Guidelines are intended to address indirect effects associated with locating development in proximity to the MSHCP Conservation Area. The project site is directly adjacent to Public-Quasi Public (PQP) Conservation Lands (Box Springs North Reserve) directly to the south and to the east. Therefore, the Urban/Wildlife Interface Guidelines are applicable.

4.2.6 Burrowing Owl

The MSHCP Additional Surveys Needs and Procedures (Section 6.3.2) identify a specific burrowing owl survey area within the MSHCP Plan Area (Burrowing Owl Survey Area Map, Figure 6-4 of the MSHCP, Volume I). The MSHCP also identifies species-specific objectives for the burrowing owl surveys if suitable habitat occurs on a proposed project site.

Burrowing owls are small crepuscular (active primarily during twilight) owls, which use rodent burrows for nesting and roosting. They inhabit grasslands and prairies and often prefer areas with moderate disturbance and/or berms or drainages. Nesting burrowing owls use the burrows of small mammals and large rodents in grasslands and scrubs that may or may not have been subjected to

disturbance. Reasons for their decline include habitat destruction, insecticide poisoning, rodenticide (particularly squirrel eradication), and shooting.

As required by the RCIP, a burrowing owl habitat assessment was conducted by Rincon biologist Lily Sam on May 4, 2017. The survey area contains elements of suitable habitat for burrowing owl, including flat, open areas occupied by non-native herbs and grasses, earthen levees and berms, manmade concrete and cement structures, and vacant urban lots. Portions of the survey area are also partially surrounded by fences, which provide perching substrate for burrowing owls to attain good visibility. In summary, suitable burrows were identified during the habitat assessment. Two potential burrowing owl burrows were identified within APN 257-060-002, and two potential burrows were identified within the 500-foot buffer outside the parcel boundary within a vacant lot located just north of the project site (Figure 3). Following the Habitat Assessment, four focused surveys were conducted on May 4th, August 1st, 10th and 16th in 2017. See Appendix C for more details. No burrows with burrowing owl sign (i.e. scat, pellets, and white wash) or burrowing owls were observed during the surveys. California ground squirrels (*Otospermophilus beecheyi*) were observed entering and exiting the burrows.

4.3 Other Sensitive Biological Resources

Sensitive biological resources not addressed by the MSHCP include United States Fish and Wildlife Service (USFWS) critical habitat and nesting birds.

4.3.1 Nesting Birds

California Fish and Game Code 3503 (CFGC) and the Migratory Bird Treaty Act (MBTA) protect native birds and their nests from direct take. The project site contains vegetation suitable for nesting birds. The Grassland Habitat available on the project site potentially provides habitat for ground nesters such as the western meadowlark. The properties adjacent to the project site contain ornamental/landscaping that may provide suitable nesting habitat for several avian species. No nesting birds or nesting behavior was observed during the habitat assessment but the project can potentially impact nesting birds. If construction occurs within the breeding season, mitigation proposed in section 5.3.1 is recommended.

4.3.2 Wildlife Movement

The project site is located within the Riverside/Norco and the Highgrove Area Plan which contains a small portion of Proposed Constrained Linkage 4, Proposed Constrained Linkage 7, Existing Noncontiguous Habitat Block A, and Core A. Proposed Linkage 4 is comprised of generally upland Habitat in Reche Canyon. This Linkage likely provides for movement of common mammals such as bobcat, connecting to Box Springs Reserve, the Badlands and San Bernardino County. Proposed Linkage 7 consists of a patchwork of riparian Habitat associated with the San Jacinto River and Canyon Lake and adjacent upland Habitat occurring within Kabian Park, Canyon Lake, and Four Seasons Conservation Land. Existing Noncontiguous Habitat Block A consists of the Box Springs Mountains, located in the extreme northern region of the Plan Area. Existing Noncontiguous Habitat Block A includes two pieces of land connected to each other by Proposed Constrained Linkage 8. This habitat block is in turn connected to other MSHCP conserved lands via Proposed Constrained Linkage 7 and Proposed Linkage 4 (Reche Canyon). Existing Core A consists of Prado Basin and the Santa Ana River, located in the northwest region of the Plan Area.

Though the linkages intersect a small portion of the Riverside/Norco and Highgrove Area Plan, the project site is situated at the base of Box Springs Mountain in a primarily flat and previously graded area adjacent to industrially developed areas and is not located in Cells, Cell Groups, or sub-units within the Riverside/ Norco and Highgrove Area Plans. As such, the project will not hinder the movement of wildlife mentioned in the Proposed Constrained Linkage 4, Proposed Constrained Linkage 7, the Existing Noncontiguous Habitat Block A and the Box Springs Mountain Reserve will be left.

The project site does not likely currently support wildlife movement as it is boarded on three sides by industrial land use and roads which does not offer any means of movement through or between natural areas or areas with abundant high-quality habitat. The project site also does not contain any high quality riparian habitat and therefore, development will not impact the existing Core A.

5 Impact Analysis

This section discusses the possible adverse impacts to biological resources that may occur from implementation of the proposed project and suggests appropriate avoidance, minimization, and mitigation measures that would reduce those impacts to less than significant levels.

5.1 MSHCP Requirements

The project site occurs within the MSHCP fee area. Payment of any necessary development mitigation fees, as well as compliance with the requirements of Section 6.0 of the MSHCP, is intended to provide full mitigation under CEQA, the National Environmental Policy Act (NEPA), the California Endangered Species Act (CESA), and the Federal Endangered Species Act (FESA) for impacts on species and habitats covered by the MSHCP, pursuant to agreements with the USFWS and the CDFW, as set forth in the implementing agreement for the MSHCP.

5.1.1 Urban/Wildlands Interface Guidelines

Due to the proximity of the site to Public Quasi-Public (PQP) Lands, the project must follow the 6.1.4 guidelines as described in the MSHCP. The edge effects of this project should be minimal due to the fact that the project is not fragmenting any linkages and is an expansion of an already developed area. The habitat within the adjacent hills of the Box Spring Park consists mostly of non-native grassland, which lends little value or function for wildlife or plants. The guidelines are intended to address the indirect effects associated with locating development in proximity to the MSHCP conservation area.

- **Drainage:** The project shall incorporate measures, including measures through the National Pollutant Discharge Elimination System (NPDES) requirements to ensure that the quantity and quality of runoff discharged to the MSHCP Conservation Area is not altered in an adverse way when compared with existing conditions. In particular, measures shall be put in place to avoid discharge of untreated surface runoff from developed and paved areas into the MSHCP Conservation Area. Storm water systems shall be designed to prevent the release of toxins, chemicals, petroleum products, exotic plant materials or other elements that might degrade or harm biological resources or ecosystem processes within the MSHCP Conservation Area. This can be accomplished using a variety of methods including natural detention basins, grass swales or mechanical trapping devices. Regular maintenance shall occur to ensure effective operations of runoff control systems.
- **Toxics:** Land uses proposed in proximity to the MSHCP Conservation Area that use chemicals or generate bioproducts such as manure that are potentially toxic or may adversely affect wildlife species, Habitat or water quality shall incorporate measures to ensure that application of such chemicals does not result in discharge to the MSHCP Conservation Area. Measures such as those employed to address drainage issues shall be implemented.
- **Lighting:** Night lighting shall be directed away from the MSHCP Conservation Area to protect species within the MSHCP Conservation Area from direct night lighting. Shielding shall be

incorporated in project designs to ensure ambient lighting in the MSHCP Conservation Area is not increased.

- **Noise:** Proposed noise generating land uses affecting the MSHCP Conservation Area shall incorporate setbacks, berms or walls to minimize the effects of noise on MSHCP Conservation Area resources pursuant to applicable rules, regulations and guidelines related to land use noise standards. For planning purposes, wildlife within the MSHCP Conservation Area should not be subject to noise that would exceed residential noise standards.
- **Invasives:** When approving landscape plans for Development that is proposed adjacent to the MSHCP Conservation Area, Permittees shall consider the invasive, non-native plant species listed in *Table 6-2* of the MSHCP and shall require revisions to landscape plans (subject to the limitations of their jurisdiction) to avoid the use of invasive species for the portions of Development that are adjacent to the MSHCP Conservation Area. Considerations in reviewing the applicability of this list shall include proximity of planting areas to the MSHCP Conservation Areas, species considered in the planting plans, resources being protected within the MSHCP Conservation Area and their relative sensitivity to invasion, and barriers to plant and seed dispersal, such as walls, topography and other features.
- **Barriers:** Proposed land uses adjacent to the MSHCP Conservation Area shall incorporate barriers, where appropriate in individual project designs to minimize unauthorized public access, domestic animal predation, illegal trespass or dumping in the MSHCP Conservation Area. Such barriers may include native landscaping, rocks/boulders, fencing, walls, signage and/or other appropriate mechanisms.
- **Grading\Land development:** Manufactured slopes associated with proposed site development shall not extend into the MSHCP Conservation Area.

5.2 Habitat Assessment

The project is not expected to impact Narrow Endemic or Criteria Area plant species. Therefore, the project will not conflict with Sections 6.1.2 and 6.1.3 of the MSHCP. There is potential for burrowing owl to occur on site with the presence of open grasslands and appropriately sized small mammal burrows observed, Section 6.3.2 of the MSHCP indicates that further surveys should be required.

6 Mitigation Measures

6.1Nesting Birds

The project could adversely affect nesting birds if construction occurs while they are present on or adjacent to the site through direct mortality or abandonment of nests. The loss of a nest due to construction activities would be a violation of the MBTA and CFGC. Implementation of the following recommended measures would help assure avoidance and/or minimization of potential impacts to nesting birds and raptors:

> To avoid take of nesting birds, vegetation removal and initial ground disturbance should occur outside the nesting bird breeding season between the months of February through August. If project activities occur during the nesting season, which can vary based on annual climatic conditions, geographic location, and avian species requirements; or if potential nesting activity is observed by qualified project personnel, then a nesting bird survey should be conducted by a qualified biologist within one (1) week of proposed construction activities. If active nests of protected native species are located, construction work should be delayed until after the nesting season or until the young are no longer dependent upon the nest site. Construction in the vicinity of an active nest should be conducted at the discretion of a biological monitor.

6.2 Burrowing Owls

A habitat assessment and focused surveys were conducted and it was determined that the project site contains suitable burrowing owl habitat (Rincon Consultants, Inc., 2017). No burrowing owls or signs of burrowing owls were detected, however, with the presence of suitable habitat on the project site, implementation of the following recommended measures pursuant with Objective 6 of the MSHCP Species Conservation Objectives for burrowing owl, would help assure avoidance and/or minimization of potential impacts to burrowing owls:

> Pre-construction presence/absence surveys for burrowing owl within the survey area where suitable habitat is present will be conducted for all Covered Activities through the life of the permit. Surveys will be conducted within 30 days prior to disturbance. Take of active nests will be avoided.

The pre-construction survey should be conducted by a qualified biologist in accordance with the CDFW and California Burrowing Owl Consortium guidelines within the development footprint and a 150 meter (500-foot) buffer within 30 days of grading or other significant site disturbance.

If owls are not occupying habitat within the disturbance area during the pre-construction survey, the proposed disturbance activities may proceed. A burrow is considered occupied when there is confirmed use by BUOW. In the event that owls are discovered and may be affected by the proposed project, avoidance measures should be developed in compliance with the MSHCP and in coordination with the CDFW and/or Western Riverside County RCA.

7 Limitations, Assumptions, and Use Reliance

A Western Riverside County MSHCP consistency analysis and burrowing owl habitat assessment has been performed in accordance with professionally accepted biological investigation practices conducted at this time and in this geographic area. The biological investigation is limited by the scope of work performed. In addition, general biological (or protocol) surveys do not guarantee that the organisms are not present and will not be discovered in the future within the site. In particular, mobile wildlife species could occupy the site on a transient basis, or re-establish populations in the future. Our field studies were based on current industry practices, which change over time and may not be applicable in the future. No other guarantees or warranties, expressed or implied, are provided. The findings and opinions conveyed in this report are based on findings derived from site reconnaissance, jurisdictional areas, review of CNDDB RareFind5, and specified historical and literature sources. Standard data sources relied upon during the completion of this report, such as the CNDDB, may vary with regard to accuracy and completeness. In particular, the CNDDB is compiled from research and observations reported to CDFW that may or may not have been the result of comprehensive or site-specific field surveys. Although Rincon believes the data sources are reasonably reliable, Rincon cannot and does not guarantee the authenticity or reliability of the data sources it has used. Additionally, pursuant to our contract, the data sources reviewed included only those that are practically reviewable without the need for extraordinary research and analysis.

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9 Certification and List of Preparers

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

Date: May 26, 2017 Signed: 

Lily Sam, Biologist

Rincon Consultants, Inc.

Primary Author:

- Lily Sam, Biologist

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- Jon Montgomery, GIS/IT Analyst
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Field Reconnaissance Survey:

- Lily Sam, Biologist

Appendix A

Project Site Plans

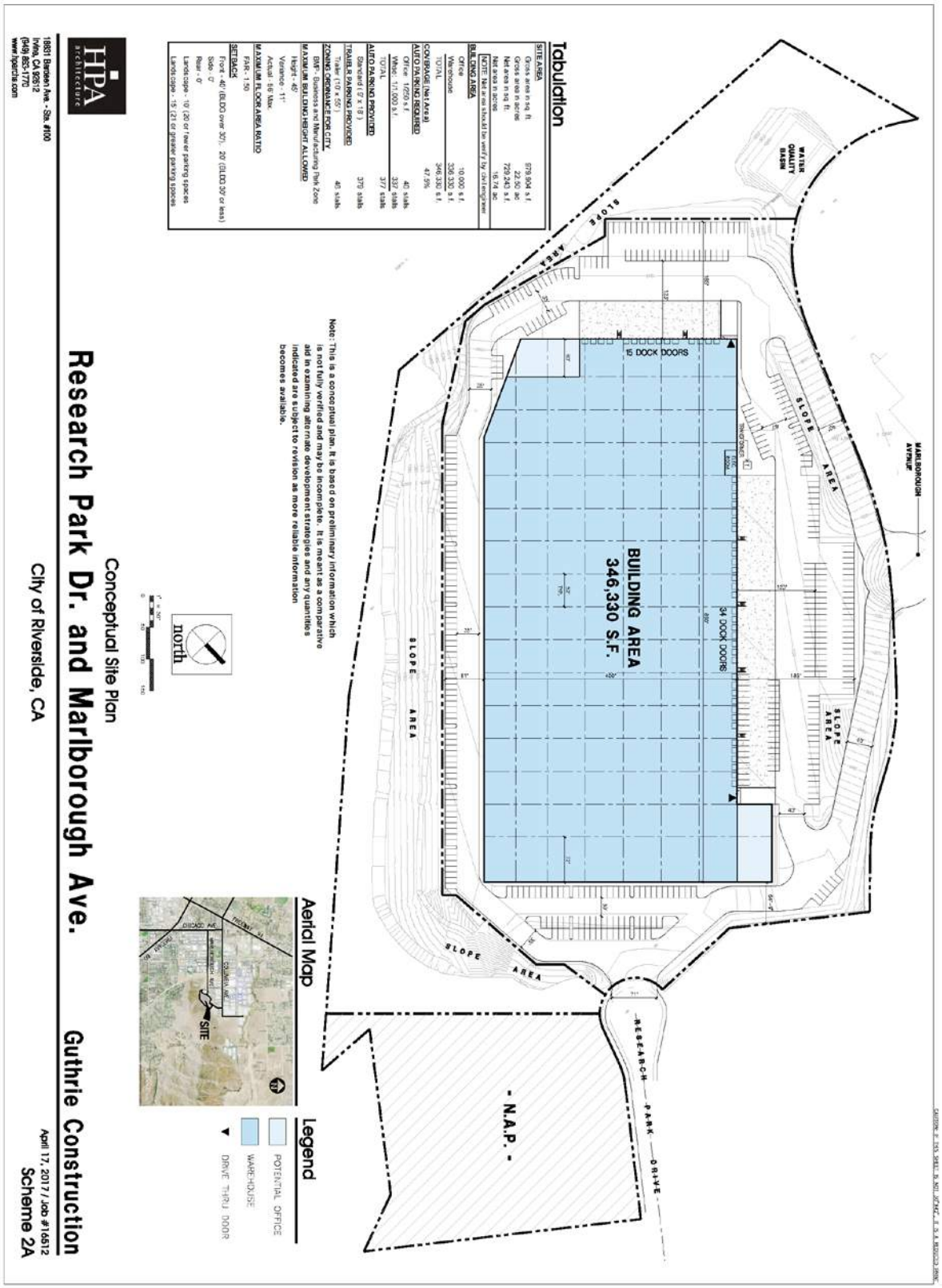
Tabulation
SITE AREA
Gross area in sq. ft. 879,934 s.f.
Gross area in acres 20.20 ac.
Net area in sq. ft. 729,240 s.f.
Net area in acres 16.74 ac.
NOTE: Net area shall be verified by civil engineer
BUILDING AREA
Office 10,000 s.f.
Warehouse 336,330 s.f.
TOTAL 346,330 s.f.
COVERAGE (Net Area) 47.5%
AUTO PARKING REQUIRED
Office 1/250 s.f. 40 stalls
Other 1/1,000 s.f. 332 stalls
TOTAL 377 stalls
AUTO PARKING PROVIDED
Standard (9' x 18') 379 stalls
TRAILER PARKING PROVIDED 45 stalls
Trailer (10' x 55')
ZONING: ORDINANCE FOR CITY
BMP - Business and Manufacturing Park Zone
MAXIMUM BUILDING HEIGHT ALLOWED
Height - 45'
Variance - 11'
Actual - 56' Max.
MAXIMUM FLOOR AREA RATIO
FAR - 1.50
SETBACK
Front - 40' (BLDG over 30'), 20' (BLDG 30' or less)
Side - 0'
Rear - 0'
Landscape - 10' (20 or fewer parking spaces
Landscape - 15' (21 or greater parking spaces
Note: This is a conceptual plan. It is based on preliminary information which is not fully verified and may be incomplete. It is meant as a comparative and in examining alternate development strategies and any quantities indicated are subject to revision as more reliable information becomes available.
15 DOCK DOORS
BUILDING AREA
346,330 S.F.
34 DOCK DOORS
SLOPE AREA
WATER QUALITY BASIN
MARLBOROUGH AVENUE
RESEARCH PARK DRIVE
- N.A.P. -
north
Aerial Map
SITE
Legend
POTENTIAL OFFICE
WAREHOUSE
DRIVE THRU DOOR
HPA architecture
18831 Bardeen Ave. - Ste. #100
Irvine, CA 92612
(949) 863-1770
www.hparch.com
Conceptual Site Plan
Research Park Dr. and Marlborough Ave.
Guthrie Construction
City of Riverside, CA
April 17, 2017 / Job #16512
Scheme 2A

Exhibit 9 - CEQA Documents

Appendix B

The Riverside County Integrated Project (RCIP) Conservation Summary Report

Exhibit 9 - CEQA Documents

Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP)

APN	Cell	Cell Group	Acres	Area Plan	Sub Unit
257030016	Not A Part	Independent	3.94	Cities of Riverside and Norco	Not a Part
257030042	Not A Part	Independent	3.97	Cities of Riverside and Norco	Not a Part
257060002	Not A Part	Independent	17.2	Cities of Riverside and Norco	Not a Part
257060002	Not A Part	Independent	0.01	Highgrove	Not a Part

Habitat Assessments

Habitat assessment shall be required and should address at a minimum potential habitat for the following species:

APN	Amphibia Species	Burrowing Owl	Criteria Area Species	Mammalian Species	Narrow Endemic Plant Species	Special Linkage Area
257030016	NO	YES	NO	NO	NO	NO
257030042	NO	YES	NO	NO	NO	NO
257060002	NO	YES	NO	NO	NO	NO

Burrowing Owl

If potential habitat for these species is determined to be located on the property, focused surveys may be required during the appropriate season.

Background

The final MSHCP was approved by the County Board of Supervisors on June 17, 2003. The federal and state permits were issued on June 22, 2004 and implementation of the MSHCP began on June 23, 2004.

For more information concerning the MSHCP, contact your local city or the County of Riverside for the unincorporated areas. Additionally, the Western Riverside County Regional Conservation Authority (RCA), which oversees all the cities and County implementation of the MSHCP, can be reached at:

Western Riverside County Regional Conservation Authority
3403 10th Street, Suite 320
Riverside, CA 92501
Phone: 951-955-9700
Fax: 951-955-8873
www.wrc-rca.org

Introduction

As urbanization has increased within western Riverside County, state and federal regulations have required that public and private developers obtain "Take permits" from Wildlife Agencies for impacts to endangered, threatened, and rare species and their Habitats. This process, however, has resulted in costly delays in public and private Development projects and an assemblage of unconnected Habitat areas designated on a project-by-project basis. This piecemeal and uncoordinated effort to mitigate the effects of Development does not sustain wildlife mobility, genetic flow, or ecosystem health, which require large, interconnected natural areas.

A variety of capitalized terms are used in this report. Definitions for those terms are provided at the end of this report.

The MSHCP is a criteria-based plan, focused on preserving individual species through Habitat conservation. The MSHCP is one element of the Riverside County Integrated Project (RCIP), a comprehensive regional planning effort begun in 1999.The purpose of the RCIP is to integrate all aspects of land use, transportation, and conservation planning and implementation in order to develop a comprehensive vision for the future of the County. The overall goal of the MSHCP is rooted in the RCIP Vision Statement and supporting policy directives. The MSHCP will enhance maintenance of biological diversity and ecosystem processes while allowing future economic growth. Preserving a quality of life characterized by well-managed and well-planned growth integrated with an open-space system is a component of the RCIP vision. The MSHCP proposes to conserve approximately 500,000 acres and 146 different species. Approximately 347,000 acres are anticipated to be conserved on existing Public/Quasi-Public Lands, with additional contributions on approximately 153,000 acres from willing sellers. The overall goal of the MSHCP can be supported by the following:

Biological Goal

In the MSHCP Plan Area, conserve Covered Species and their Habitats.

Economic Goal

Improve the future economic development in the County by providing an efficient, streamlined regulatory process through which Development can proceed in an efficient way. The MSHCP and the General Plan will provide the County with a clearly articulated blueprint describing where future Development should and should not occur.

Social Goal

Provide for permanent open space, community edges, and recreational opportunities, which contribute to maintaining the community character of Western Riverside County.

This report has been generated to summarize the guidance in the MSHCP Plan that pertains to this property. Guidelines have been incorporated in the MSHCP Plan to allow applicants to evaluate the application of the MSHCP Criteria within specific locations in the MSHCP Plan Area. Guidance is provided through Area Plan Subunits, Cell Criteria, Cores and Linkages and identification of survey requirements. The guidance and Criteria incorporate flexibility at a variety of levels. The information

within this report is composed of three parts: a summary table, Reserve Assembly guidance and survey requirements within the MSHCP Plan Area. The summary table provides specific information on this property to help determine whether it is located within the MSHCP Criteria Area or any survey areas. The Reserve Assembly guidance provides direction on assembly of the MSHCP Conservation Area if the property is within the Criteria Area. The survey requirements section describes the surveys that must be conducted on the property if Habitat is present for certain identified species within the Criteria Area or mapped survey areas.

Reserve Assembly Guidance within the Criteria Area

The Reserve Assembly guidance only pertains to properties that are within the Criteria Area. Please check the summary table to determine whether this property is within the Criteria Area. If it is located inside of the Criteria Area, please read both this section and the section about survey requirements within the MSHCP Plan Area. If the property is located outside the Criteria Area, only read the survey requirements within the MSHCP Plan Area section.

The Area Plan Subunits, Cell Criteria and Cores and Linkages provide guidance on assembly of the MSHCP Conservation Area. The Area Plan Subunits section lists Planning Species and Biological Issues and Considerations that are important to Reserve Assembly within a specific Area Plan Subunit. The Cell Criteria identify applicable Cores or Linkages and describe the focus of desired conservation within a particular Cell or Cell Group. Cores and Linkages guidance includes dimensional data and biological considerations within each identified Core or Linkage.

The following is the Area Plan text and Cell Criteria that pertains specifically to this property. The Area Plan text includes the target acreage for conservation within the entire Area Plan, identification of Cores and Linkages within the entire Area Plan and Area Plan Subunit Planning Species and Biological Issues and Considerations. It is important to keep in mind that the Area Plan Subunits, Cell Criteria and Cores and Linkages are drafted to provide guidance for a geographic area that is much larger than an individual property. The guidance is intended to provide context for an individual property and, therefore, all of the guidance and Criteria do not apply to each individual property.

Cities of Riverside/Norco

This section identifies target acreages, applicable Cores and Linkages, Area Plan Subunits and Criteria for the Cities of Riverside/Norco. For a summary of the methodology and map resources used to develop the target acreages and Criteria for the MSHCP Conservation Area, including this Area Plan, see Section 3.3.1.

Target Acreages

The target conservation acreage range for the Cities of Riverside/Norco is 3,465 – 3,615 acres; it is composed of approximately 3,375 acres of existing Public/Quasi-Public Lands and 90 – 240 acres of Additional Reserve Lands. The City of Norco and City of Riverside sit entirely within the Cities of Riverside/Norco. The target acreage range within the City of Norco is 60 – 140 acres. The target acreage range within the City of Riverside is 55 – 125 acres. The target acreages of both Cities are included within the 90 – 240 acre target conservation range on Additional Reserve Lands for the entire Cities of Riverside/Norco.

Applicable Cores and Linkages

The MSHCP Conservation Area comprises a variety of existing and proposed Cores, Linkages, Constrained Linkages and Noncontiguous Habitat Blocks (referred to here generally as "Cores and Linkages"). The Cores and Linkages listed below are within the Cities of Riverside/Norco. For descriptions of these Cores and Linkages and more information about the biologically meaningful elements of the MSHCP Conservation Area within the Cities of Riverside/Norco, see Section 3.2.3 and MSHCP Volume II, Section A.

Cores and Linkages within the Cities of Riverside/Norco

- Contains a small portion of Proposed Constrained Linkage 7
- Contains a small portion of Existing Core A

Descriptions of Planning Species, Biological Issues and Considerations and Criteria for each Area Plan Subunit within the Cities of Riverside/Norco are presented later in this section. These descriptions, combined with the descriptions of the Cores and Linkages referred to above, provide information about biological issues to be considered in conjunction with Reserve Assembly within the Cities of Riverside/Norco. As noted in Section 3.1, the Area Plan boundaries established as part of the Riverside County General Plan were selected to provide an organizational framework for the Area Plan Subunits and Criteria. While these boundaries are not biologically based, unlike the Cores and Linkages, they relate specifically to General Plan boundaries and the jurisdictional boundaries of incorporated Cities and were selected to facilitate implementation of the MSHCP in the context of existing institutional and planning boundaries.

Area Plan Subunits

The Cities of Riverside/Norco is divided into two Subunits. For each Subunit, target conservation acreages are established along with a description of the Planning Species, Biological Issues and Considerations, and Criteria for each Subunit. For more information regarding specific conservation objectives for the Planning Species, see Section 9.0. Subunit boundaries are depicted on the Cells and Cell Groupings map displays (Figures 3-34 and 3-35). Table 3-18 presents the Criteria for the Cities of Riverside/Norco.

Highgrove Area Plan

This section identifies target acreages, applicable Cores and Linkages, Area Plan Subunits and Criteria for the Highgrove Area Plan. For a summary of the methodology and map resources used to develop the target acreages and Criteria for the MSHCP Conservation Area, including this Area Plan, see Section 3.3.1.

Target Acreages

The target conservation acreage range for the Highgrove Area Plan is 1,450 – 1,780 acres; it is composed of approximately 1,105 acres of existing Public/Quasi-Public Lands and 345 – 675 acres of Additional Reserve Lands.

Applicable Cores and Linkages

The MSHCP Conservation Area comprises a variety of existing and proposed Cores, Linkages, Constrained Linkages and Noncontiguous Habitat Blocks (referred to here as "Cores and Linkages"). The Cores and Linkages listed below are within the Highgrove Area Plan. For descriptions of these Cores and Linkages and more information about the biologically meaningful elements of the MSHCP Conservation Area within the Highgrove Area Plan, see Section 3.2.3 and MSHCP Volume II, Section A.

Cores and Linkages within the Highgrove Area Plan

Contains a small portion of Proposed Constrained Linkage 7

- Contains a small portion of Proposed Linkage 4
- Contains a small portion of Existing Noncontiguous Habitat Block A

Descriptions of Planning Species, Biological Issues and Considerations and Criteria for each Area Plan Subunit within the Highgrove Area Plan are presented later in this section. These descriptions, combined with the descriptions of the Cores and Linkages referred to above, provide information about biological issues to be considered in conjunction with Reserve Assembly within the Highgrove Area Plan. As noted in Section 3.1, the Area Plan boundaries established as part of the Riverside County General Plan were selected to provide an organizational framework for the Area Plan Subunits and Criteria. While these boundaries are not biologically based, unlike the Cores and Linkages, they relate specifically to General Plan boundaries and the jurisdictional boundaries of incorporated Cities and were selected to facilitate implementation of the MSHCP in the context of existing institutional and planning boundaries.

Area Plan Subunits

The Highgrove Area Plan is divided into two Subunits. For each Subunit, target conservation acreages are established along with a description of the Planning Species, Biological Issues and Considerations, and Criteria for each Subunit. For more information regarding specific conservation objectives for the Planning Species, see Section 9.0. Subunit boundaries are depicted on the Cells and Cell Groupings map displays (Figures 3-10 and 3-11). Table 3-6 presents the Criteria for the Highgrove Area Plan.

Cell Criteria

A preliminary check indicates that this parcel is not subject to cell criteria under the draft MSHCP. Other requirements, including species surveys, may apply under the plan. It is recommended that you review the full text of the draft document for additional details. See www.rcip.org to read the document on-line or to find a location to view the hard copy document.

Surveys Within the MSHCP Plan Area

Of the 146 species covered by the MSHCP, no surveys will be required by applicants for public and private projects for 106 of these Covered Species. Covered Species for which surveys may be required by applicants for public and private Development projects include 4 birds, 3 mammals, 3 amphibians, 3 crustaceans, 14 Narrow Endemic Plants, and 13 other sensitive plants within the Criteria Area. Of these 40 species, survey area maps are provided for 34 species, and surveys will be

undertaken within suitable Habitat areas in locations identified on these maps in the MSHCP Plan. The remaining six species are associated with riparian/riverine areas and vernal pools and include least Bell's vireo, southwestern willow flycatcher, western yellow-billed cuckoo, Riverside fairy shrimp, Santa Rosa Plateau fairy shrimp, and vernal pool fairy shrimp. Although there are no survey area maps for these six species, surveys for these species, if necessary, will be undertaken as described below. It is the goal of the MSHCP to provide for conservation of Covered Species within the approximately 500,000 acre MSHCP Conservation Area (comprised of approximately 347,000 acres of existing Public/Quasi-Public Lands and 153,000 acres of new conservation on private lands). Conservation that may be identified to be desirable as a result of survey findings is not intended to increase the overall 500,000 acres of conservation anticipated under the MSHCP. Please refer to Section 6.0 of the MSHCP Plan, Volume I for more specific information regarding species survey requirements.

As projects are proposed within the MSHCP Plan Area, an assessment of the potentially significant effects of those projects on riparian/riverine areas and vernal pools will be performed as currently required by the California Environmental Quality Act (CEQA) using available information augmented by project-specific mapping. If the mapping identifies suitable habitat for any of the six species associated with riparian/riverine areas and vernal pools listed above and the proposed project design does not incorporate avoidance of the identified habitat, focused surveys for these six species will be conducted, and avoidance and minimization measures will be implemented in accordance with the species-specific objectives for these species. For more specific information regarding survey requirements for species associated with riparian/riverine areas and vernal pools, please refer to Section 6.1.2 of the MSHCP Plan, Volume I.

Habitat conservation is based on the particular Habitat requirements of each species as well as the known distribution data for each species. The existing MSHCP database does not, however, provide the level of detail sufficient to determine the extent of the presence or distribution of Narrow Endemic Plant Species within the MSHCP Plan Area. Since conservation planning decisions for these plant species will have a substantial effect on their status, additional information regarding the presence of these plant species must be gathered during the long-term implementation of the MSHCP to ensure that appropriate conservation of the Narrow Endemic Plants occurs. For more specific information regarding survey requirements for Narrow Endemic Plants, please refer to Section 6.1.3 of the MSHCP Plan, Volume I.

In addition to the Narrow Endemic Plant Species, additional surveys may be needed for certain species in conjunction with Plan implementation in order to achieve coverage for these species. The MSHCP must meet the Federal Endangered Species Act issuance criteria for Habitat Conservation Plans (HCP) which require, among other things, that the HCP disclose the impacts likely to result from the proposed Taking, and measures the applicant will undertake to avoid, minimize and mitigate such impacts. For these species in which coverage is sought under the MSHCP, existing available information is not sufficient to make findings necessary to satisfy these issuance criteria for Take authorization. Survey requirements are incorporated in the MSHCP to provide the level of information necessary to receive coverage for these species in the MSHCP.

Efforts have been made prior to approval of the MSHCP and will be made during the early baseline studies to be conducted as part of the MSHCP management and monitoring efforts to collect as much information as possible regarding the species requiring additional surveys. As data are collected and conclusions can be made regarding the presence of occupied Habitat within the MSHCP Conservation Area for these species, it is anticipated that survey requirements may be

modified or waived. Please refer to Sections 6.1.3 and 6.3.2 of the MSHCP Plan, Volume I for more specific information regarding survey requirements.

Appendix C

Protocol Burrowing Owl Survey Report

Appendix D

Project Site Photos

Exhibit 9 - CEQA Documents

Photograph 1. View of site from Research Park Drive. Facing South

Photograph 2. View of drainage facing east, filled with ruderal weeds and grass

Photograph 3. The Project area along the western perimeter and the service road, facing north

Photograph 4. Project site facing northeast from southeast corner, showing adjacent hills and habitat

Appendix E

Floral and Wildlife Compendia

Exhibit 9 - CEQA Documents

Plant and Animal Species Observed Within the Project Area on May 4, 2017

Scientific Name	Common Name	Status	Native or Introduced
Plants			
Trees			
Sambucus nigra	blue elderberry	None	Native
Schinus molle	Peruvian pepper tree	None	Introduced
Shrubs			
Artemisia californica	California sagebrush	None	Native
Encelia farinosa	brittlebush	None	Native
Eriogonum fasciculatum	California buckwheat	None	Native
Nicotiana glauca	tree tobacco	None	Introduced
Herbs			
Amsinkia intermedia	common fiddleneck	None	Native
Brassica nigra	black mustard	None	Introduced
Carpobrotus edulis	ice plant	None	Introduced
Dudleya lanceolata	southern California dudleya	None	Native
Matricaria discoidea	pineapple weed	None	Native
Salsola tragus	Russian thistle, tumbleweed	None	Introduced; Limited
Grasses			
Avena fatua	wild oat	None	Introduced; Moderate
Bromus diandrus	ripgut grass	None	Introduced; Moderate
Bromus madritensis	foxtail brome	None	Introduced; Moderate
Schismus barbatus	Mediterranean grass	None	Introduced
Animals			
Birds			
Buteo jamaicensis	red-tailed hawk	None	Native
Calypte anna	Anna's hummingbird	None	Native
Corvus corax	common raven	None	Native
Haemorhous maxicanus	house finch	None	Native
Icterus cucullatus	hooded oriole	None	Native
Melozone crissalis	California towhee	None	Native
Mimus polyglottos	northern mockingbird	None	Native
Salpinctes obsoletus	rock wren	None	Native
Sayornis saya	Say's phoebe	None	Native
Spins psaltria	lesser goldfinch	None	Native
Sturnella neglecta	western meadowlark	None	Native
Tyrannus vociferans	Cassin's kingbird	None	Native
Zenaida macroura	mourning dove	None	Native
Mammals			
Canus latrans	coyote	None	Native
Otospermophilus beecheyi	California ground squirrel	None	Native