

TECHNICAL MEMORANDUM

To: Judy Egüez, Senior Planner
City of Riverside Community & Economic Development, Planning Division

From: Jessie Fan and Heidi Rous, Kimley-Horn and Associates, Inc.

Date: August 17, 2023

Subject: 1575 University Avenue Project – CEQA Consistency

1.0 INTRODUCTION

This technical memorandum assesses the potential environmental effects of the proposed 1575 University Avenue Project (Project), as described in Section 3.0, Project Description, below, under Section 15168(c) of the California Environmental Quality Act (CEQA) Guidelines.

CEQA Guidelines Section 15168(c) sets forth criteria to utilize a program EIR for “later activities” within the scope of a program environmental impact report (EIR). The City of Riverside (City) certified the City of Riverside Housing and Public Safety Element Updates and Environmental Justice Policies Project Final Environmental Impact Report (Certified PEIR or PEIR) on October 5, 2021. The Certified PEIR (State Clearinghouse No. 2021040089) evaluated the (1) adoption and implementation of the update to the Housing Element for the 2021-2029 period (Housing Element Update); (2) adoption and implementation of the Public Safety Element Update; (3) development of the associated Environmental Justice Policies; and (4) update to the Zoning Code and Specific Plans to address the requirements of the 6th Regional Housing Needs Assessment (RHNA) cycle. The Certified PEIR evaluates an increase of 31,564 new dwelling units and 3,181,903 square feet of non-residential development, herein referred to as the development associated with the Housing Element Update.

Based on the Certified PEIR’s analysis and pursuant to CEQA Guidelines Section 15168(c), this memorandum includes a written checklist to evaluate environmental impacts specific to the proposed Project and determine whether the Project-specific environmental effects would be within the scope of the Certified PEIR. For each impact area addressed under CEQA, this document describes and relies on the analysis in the Certified PEIR and confirms that the effects of the proposed Project were examined as part of the Certified PEIR. This document relies on and incorporates the applicable and feasible mitigation measures from the Certified PEIR.¹

¹ The mitigation measures incorporated herein were taken from the Housing Element Final EIR Mitigation Monitoring and Reporting Program (MMRP), dated September 2021, https://riversideca.gov/cedd/sites/riversideca.gov/cedd/files/pdf/planning/2021/Housing_Element/Attachment%2013%20-%20Final%20Environmental%20Impact%20Report_09-21.pdf. Accessed June 5, 2023.

2.0 STATUTORY AUTHORITY & REQUIREMENTS

CEQA Guidelines Section 15168(c) permits the lead agency to approve a subsequent activity or project if it is found to be “within the scope” of a certified Program EIR, provided that no subsequent EIR would be required pursuant to CEQA Guidelines Section 15162. Whether a later activity is within the scope of the Program EIR is a factual question that the lead agency determines based on substantial evidence in the record. Pursuant to CEQA Guidelines Section 15168(c)(2), factors that the lead agency may consider in making that determination include, but are not limited to, consistency of the later activity with the type of allowable land use, overall planned density and building intensity, geographic area analyzed for environmental impacts and covered infrastructure as described in the Certified PEIR.

CEQA Guidelines Section 15168(a) defines a program EIR as:

[A]n EIR which may be prepared on a series of actions that can be characterized as one large project and are related either:

- (1) Geographically,*
- (2) As logical parts in the chain of contemplated actions,*
- (3) In connection with issuance of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program, or*
- (4) As individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects which can be mitigated in similar ways.*

CEQA Guidelines Section 15168(c) sets forth criteria to use a program EIR for “later activities.” Specifically, CEQA Guidelines Section 15168(c) states the following:

(c) Use with Later Activities. Later activities in the program must be examined in the light of the program EIR to determine whether an additional environmental document must be prepared.

- (1) If a later activity would have effects that were not examined in the program EIR, a new Initial Study would need to be prepared leading to either an EIR or a Negative Declaration. That later analysis may tier from the program EIR as provided in Section 15152.*
- (2) If the agency finds that pursuant to Section 15162, no subsequent EIR would be required, the agency can approve the activity as being within the scope of the project covered by the program EIR, and no new environmental document would be required. Whether a later activity is within the scope of a program EIR is a factual question that the lead agency determines based on substantial evidence in the record. Factors that an agency may consider in making that determination include, but are not limited to, consistency of the*

later activity with the type of allowable land use, overall planned density and building intensity, geographic area analyzed for environmental impacts, and covered infrastructure, as described in the program EIR.

- (3) An agency shall incorporate feasible mitigation measures and alternatives developed in the program EIR into later activities in the program.*
- (4) Where the later activities involve site specific operations, the agency should use a written checklist or similar device to document the evaluation of the site and the activity to determine whether the environmental effects of the operation were within the scope of the program EIR.*
- (5) A program EIR will be most helpful in dealing with later activities if it provides a description of planned activities that would implement the program and deals with the effects of the program as specifically and comprehensively as possible. With a good and detailed project description and analysis of the program, many later activities could be found to be within the scope of the project described in the program EIR, and no further environmental documents would be required.*

CEQA Guidelines Section 15162 requires the preparation of a Subsequent EIR when an EIR has been certified or a negative declaration has been adopted for a project and one or more of the following circumstances exist:

1. Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
2. Substantial changes occur with respect to the circumstances under which the project is undertaken, which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or
3. New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the negative declaration was adopted, shows any of the following:
 - a. The project will have one or more significant effects not discussed in the previous EIR or negative declaration;
 - b. Significant effects previously examined will be substantially more severe than shown in the previous EIR;

- c. Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or
- d. Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

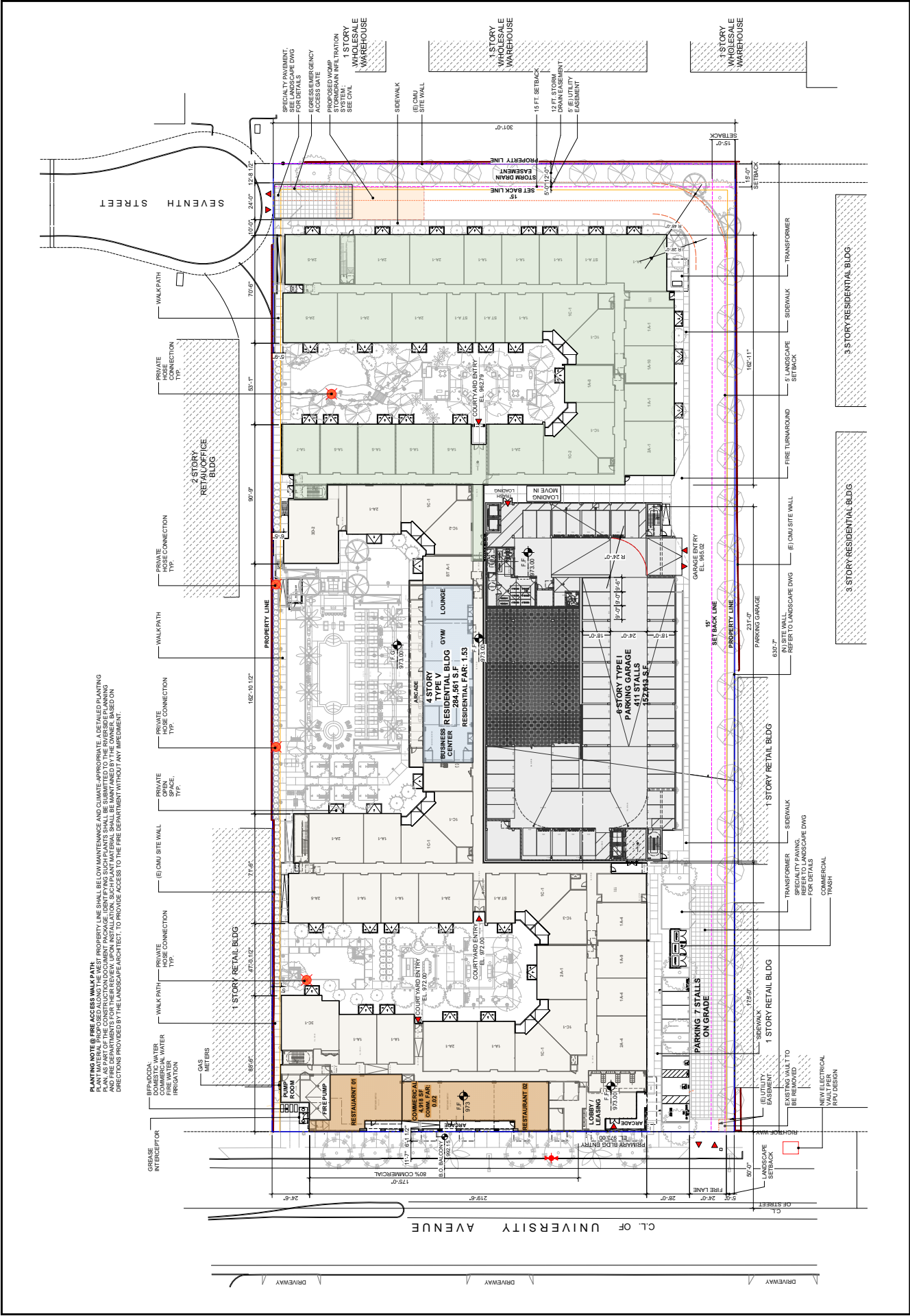
3.0 PROJECT DESCRIPTION

The Project would be located on a 4.29-acre site (Assessor Parcel Number [APN] 250-170-036) (Project Site) bounded by Seventh Street to the north, University Avenue to the south, Cranford Avenue to the east, and Chicago Avenue to the west (see **Figure 1: Local Vicinity Map**). The Project would demolish the existing 24,848-square-foot commercial building and surface parking lot and would construct a new mixed-use development with 257 dwelling units and 4,918 square feet of restaurant uses (see **Figure 2: Conceptual Site Plan**). The Project would also provide a total of 499 vehicle parking spaces: 488 of which would be within a parking garage, and 11 would be provided on-grade. The Project would have a maximum height of 50 feet and contain approximately 284,561 square feet of gross building area see **Figures 3 through 8** for Project elevations). Project construction activities (e.g., demolition, site preparation, grading, paving, building construction, and architectural coating) is anticipated to begin in January 2024 and end in January 2026. The Project would be operational in January 2026.



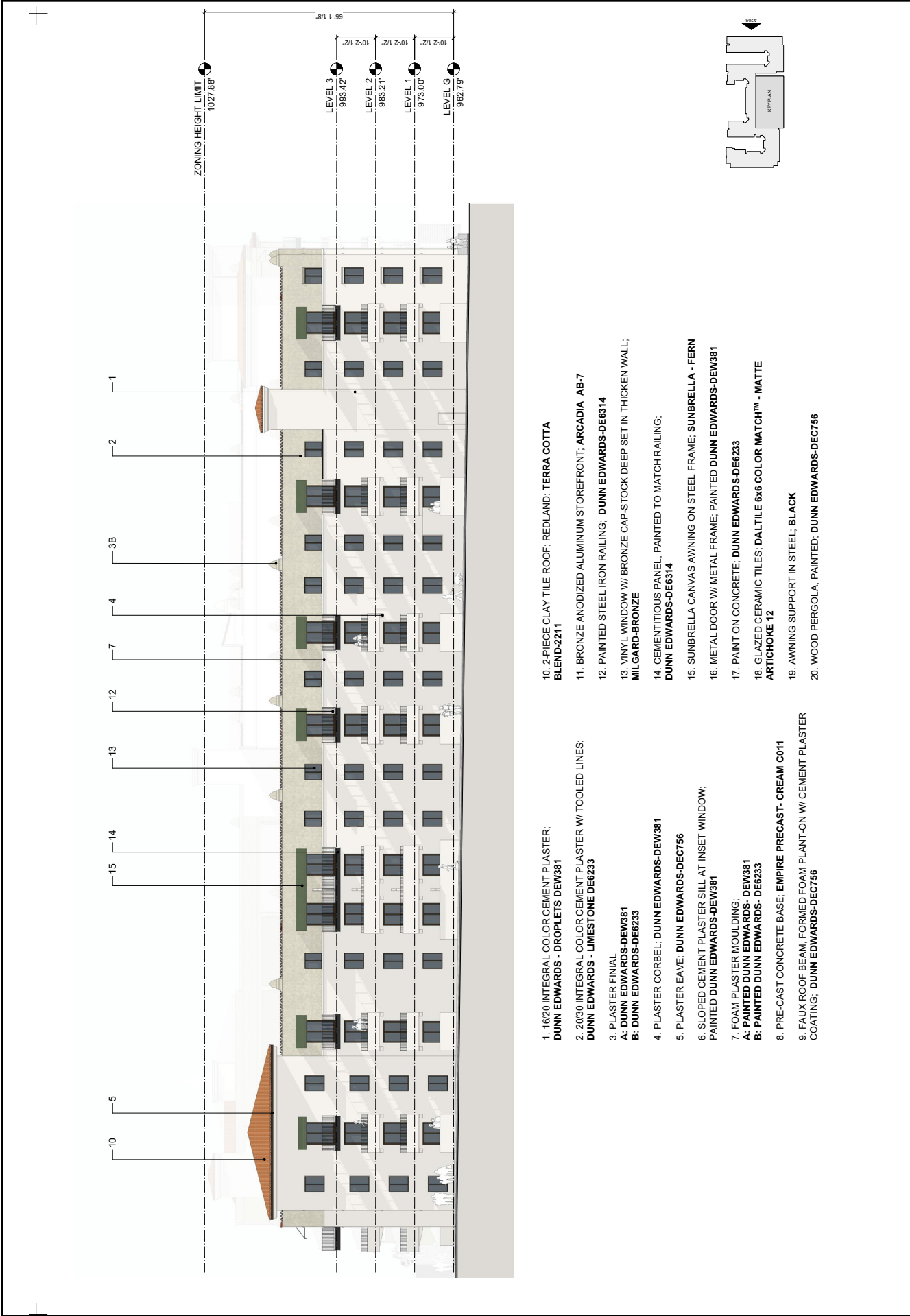
Source: Google Earth Pro, 2023

Figure 1: Local Vicinity Map
 1575 University Avenue Project
 Riverside, CA



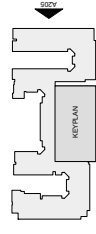
Source: DesignARC, 2023

Figure 2: Conceptual Site Plan
1575 University Avenue Project
Riverside, CA



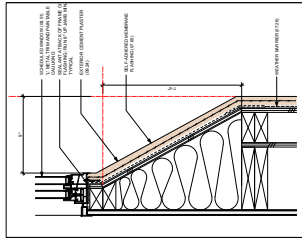
- 1. 16/20 INTEGRAL COLOR CEMENT PLASTER;
DUNN EDWARDS - DROPLETS DEW381
- 2. 20/30 INTEGRAL COLOR CEMENT PLASTER W/ TOOLED LINES;
DUNN EDWARDS - LIMESTONE DE6233
- 3. PLASTER FINIAL
A: DUNN EDWARDS-DEW381
B: DUNN EDWARDS-DE6233
- 4. PLASTER CORBEL; DUNN EDWARDS-DEW381
- 5. PLASTER EAVE; DUNN EDWARDS-DEC756
- 6. SLOPED CEMENT PLASTER SILL AT INSET WINDOW;
PAINTED DUNN EDWARDS-DEW381
- 7. FOAM PLASTER MOLDING;
A: PAINTED DUNN EDWARDS- DEW381
B: PAINTED DUNN EDWARDS- DE6233
- 8. PRE-CAST CONCRETE BASE; EMPIRE PRECAST- CREAM C011
- 9. FAUX ROOF BEAM, FORMED FOAM PLANT-ON W/ CEMENT PLASTER
COATING; DUNN EDWARDS-DEC756

- 10. 2-PIECE CLAY TILE ROOF; REDLAND: TERRA COTTA
BLEND-2211
- 11. BRONZE ANODIZED ALUMINUM STOREFRONT; ARCADIA AB-7
- 12. PAINTED STEEL IRON RAILING; DUNN EDWARDS-DE6314
- 13. VINYL WINDOW W/ BRONZE CAP-STOCK DEEP SET IN THICKEN WALL;
MILGARD-BRONZE
- 14. CEMENTITIOUS PANEL, PAINTED TO MATCH RAILING;
DUNN EDWARDS-DE6314
- 15. SUNBRELLA CANVAS AWNING ON STEEL FRAME; SUNBRELLA - FERN
- 16. METAL DOOR W/ METAL FRAME; PAINTED DUNN EDWARDS-DEW381
- 17. PAINT ON CONCRETE; DUNN EDWARDS-DE6233
- 18. GLAZED CERAMIC TILES; DAL TILE 6x6 COLOR MATCH™ - MATTE
ARTICHOKE 12
- 19. AWNING SUPPORT IN STEEL; BLACK
- 20. WOOD PERGOLA, PAINTED; DUNN EDWARDS-DEC756



Source: DesignARC, 2023

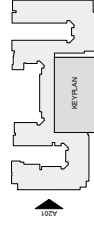
Figure 3: North Elevation
1575 University Avenue Project
Riverside, CA



1. SBMF* / 1620 INTEGRAL CEMENT PLASTER; COLOR: MATCH **DUNN EDWARDS - DROPLETS DEW381**
2. SBMF* / 2030 INTEGRAL COLOR CEMENT PLASTER W/ TOOLED LINES; COLOR: MATCH **DUNN EDWARDS - LIMESTONE DE6233**
3. PLASTER FINIAL
A: **DUNN EDWARDS-DEW381**
B: **DUNN EDWARDS-DE6233**
4. PLASTER CORBEL; **DUNN EDWARDS-DEW381**
5. PLASTER EAVE; **DUNN EDWARDS-DEC756**
6. SLOPED CEMENT PLASTER SILL AT INSET WINDOW; PAINTED **DUNN EDWARDS-DEW381**
7. FOAM PLASTER MOLDING;
A: **PAINTED DUNN EDWARDS-DEW381**
B: **PAINTED DUNN EDWARDS-DE6233**
8. PRE-CAST CONCRETE BASE; **EMPIRE PRECAST-CREAM C011**
9. FAUX ROOF BEAM, FORMED FOAM PLANT-ON W/ CEMENT PLASTER COATING; **DUNN EDWARDS-DEC756**

* SBMF - LA Hebra Stucco Santa Barbara Mission Finish

10. 2-PIECE CLAY TILE ROOF; REDLAND; **TERRA COTTA BLEND-2211**
11. BRONZE ANODIZED ALUMINUM STOREFRONT; **ARCADIA AB-7**
12. PAINTED STEEL IRON RAILING; **DUNN EDWARDS-DE6314**
13. VINYL WINDOW W/ BRONZE CAP-STOCK DEEP SET IN THICKEN WALL; **MILGARD-BRONZE**
14. CEMENTITIOUS PANEL, PAINTED TO MATCH RAILING; **DUNN EDWARDS-DE6314**
15. SUNBRELLA CANVAS AWNING ON STEEL FRAME; **SUNBRELLA - FERN DUNN EDWARDS-DEW381**
16. METAL DOOR W/ METAL FRAME; PAINTED **DUNN EDWARDS-DEW381**
17. PAINT ON CONCRETE; **DUNN EDWARDS-DE6233**
18. GLAZED CERAMIC TILES; **DALTILE 6x6 COLOR MATCH™ - MATTE ARTCHOKE 12**
19. AWNING SUPPORT IN STEEL; **BLACK**
20. WOOD PERGOLA, PAINTED; **DUNN EDWARDS-DEC756**



Source: DesignARC, 2023

Figure 4: South Elevation
1575 University Avenue Project
Riverside, CA



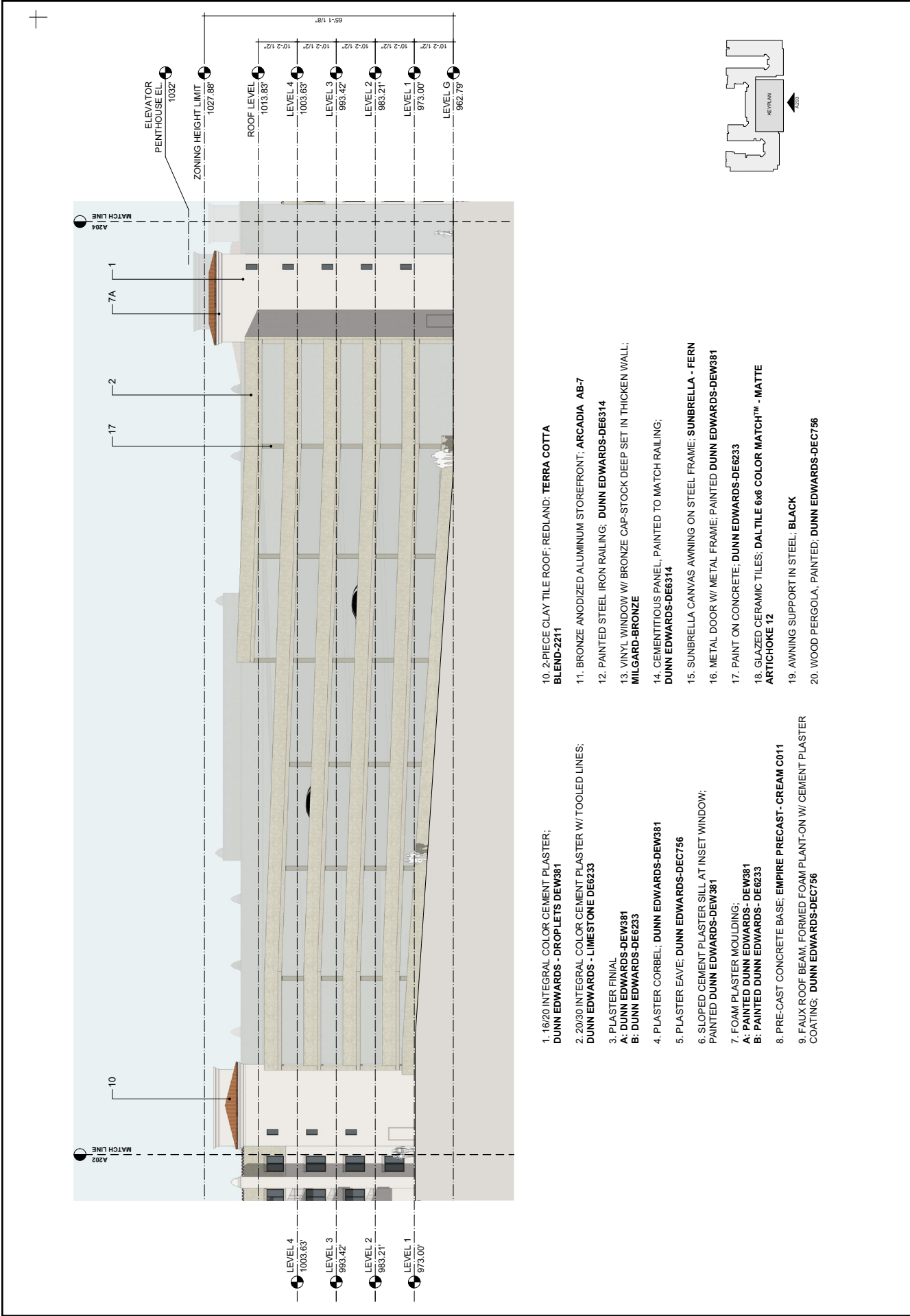
- 1. SBMF* / 16/20 INTEGRAL CEMENT PLASTER;
COLOR: MATCH **DUNN EDWARDS - DROPLETS DEW381**
- 2. SBMF* / 20/30 INTEGRAL COLOR CEMENT PLASTER W/ TOOLED LINES;
COLOR: MATCH **DUNN EDWARDS - LIMESTONE DE6233**
- 3. PLASTER FINIAL
A: DUNN EDWARDS-DEW381
B: DUNN EDWARDS-DE6233
- 4. PLASTER CORBEL; **DUNN EDWARDS-DEW381**
- 5. PLASTER EAVE; **DUNN EDWARDS-DEC756**
- 6. SLOPED CEMENT PLASTER SILL AT INSET WINDOW;
PAINTED **DUNN EDWARDS-DEW381**
- 7. FOAM PLASTER MOLDING;
A: PAINTED DUNN EDWARDS- DEW381
B: PAINTED DUNN EDWARDS- DE6233
- 8. PRE-CAST CONCRETE BASE; **EMPIRE PRECAST - CREAM C011**
- 9. FAUX ROOF BEAM, FORMED FOAM PLANT-ON W/ CEMENT PLASTER COATING; **DUNN EDWARDS-DEC756**

* SBMF - LA Habra Stucco Santa Barbara Mission Finish

- 10. 2-PIECE CLAY TILE ROOF; REDLAND; **TERRA COTTA BLEND-2211**
- 11. BRONZE ANODIZED ALUMINUM STOREFRONT; **ARCADIA AB-7**
- 12. PAINTED STEEL IRON RAILING; **DUNN EDWARDS-DE6314**
- 13. VINYL WINDOW W/ BRONZE CAP-STOCK DEEP SET IN THICKEN WALL;
MILGARD-BRONZE
- 14. CEMENTITIOUS PANEL, PAINTED TO MATCH RAILING;
DUNN EDWARDS-DE6314
- 15. SUNBRELLA CANVAS AWNING ON STEEL FRAME; **SUNBRELLA - FERN**
- 16. METAL DOOR W/ METAL FRAME; PAINTED **DUNN EDWARDS-DEW381**
- 17. PAINT ON CONCRETE; **DUNN EDWARDS-DE6233**
- 18. GLAZED CERAMIC TILES; DALTILE 6x6 COLOR MATCH™ - MATTE
ARTICHOKE 12
- 19. AWNING SUPPORT IN STEEL, BLACK
- 20. WOOD PERGOLA, PAINTED; **DUNN EDWARDS-DEC756**

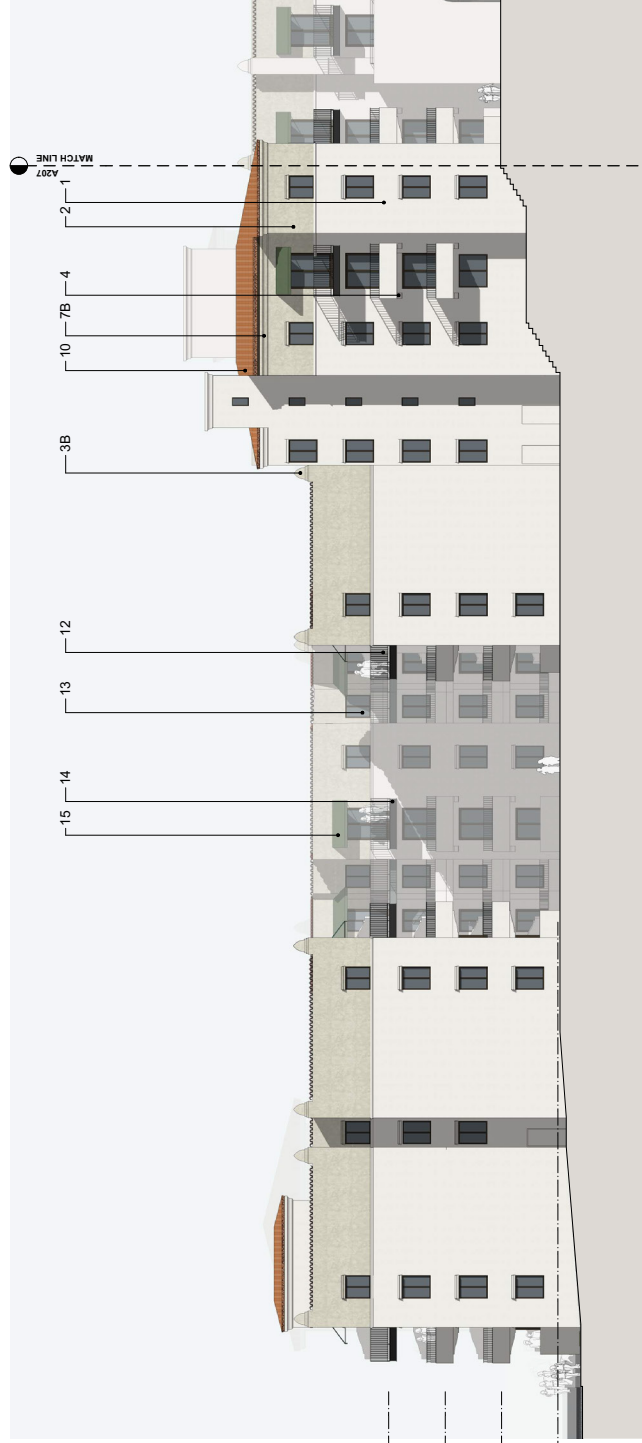
Source: DesignARC, 2023

Figure 5: East Elevation – South
1575 University Avenue Project
Riverside, CA



Source: DesignARC, 2023

Figure 6: East Elevation – Garage
 1575 University Avenue Project
 Riverside, CA



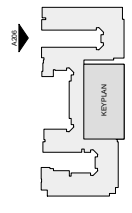
LEVEL 3
993.42'

LEVEL 2
983.21'

LEVEL 1
973.00'

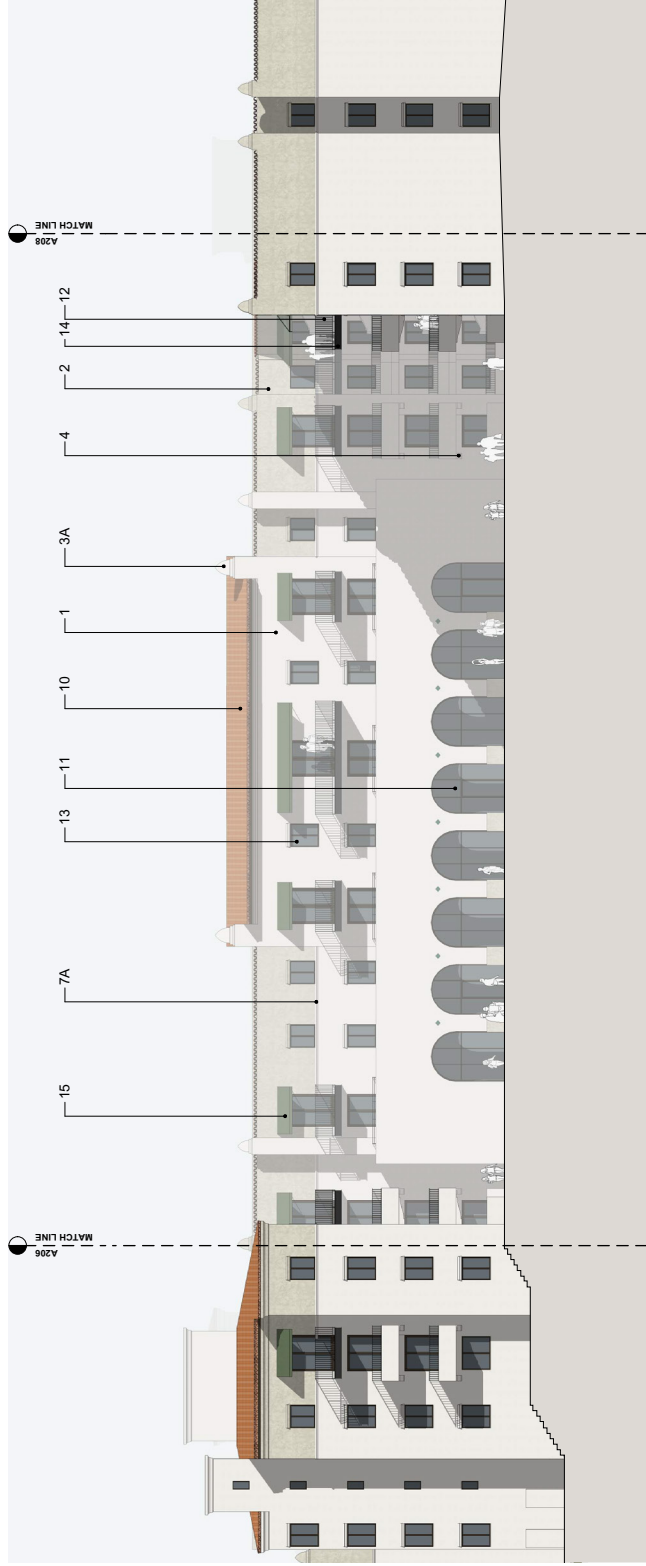
LEVEL G
962.79'

- 1. 1620 INTEGRAL COLOR CEMENT PLASTER; DUNN EDWARDS - DROPLETS DEW381
- 2. 2030 INTEGRAL COLOR CEMENT PLASTER W/ TOOLED LINES; DUNN EDWARDS - LIMESTONE DE6233
- 3. PLASTER FINIAL
A: DUNN EDWARDS-DEW381
B: DUNN EDWARDS-DE6233
- 4. PLASTER CORBEL; DUNN EDWARDS-DEW381
- 5. PLASTER EAVE; DUNN EDWARDS-DEC756
- 6. SLOPED CEMENT PLASTER SILL AT INSET WINDOW; PAINTED DUNN EDWARDS-DEW381
- 7. FOAM PLASTER MOULDING;
A: PAINTED DUNN EDWARDS- DEW381
B: PAINTED DUNN EDWARDS- DE6233
- 8. PRE-CAST CONCRETE BASE; EMPIRE PRECAST - CREAM C011
- 9. FAUX ROOF BEAM, FORMED FOAM PLANT-ON W/ CEMENT PLASTER COATING; DUNN EDWARDS-DEC756
- 10. 2-PIECE CLAY TILE ROOF; REDLAND; TERRA COTTA BLEND-2211
- 11. BRONZE ANODIZED ALUMINUM STOREFRONT; ARCADIA AB-7
- 12. PAINTED STEEL IRON RAILING; DUNN EDWARDS-DE6314
- 13. VINYL WINDOW W/ BRONZE CAP-STOCK DEEP SET IN THICKEN WALL; MILGARD-BRONZE
- 14. CEMENTITIOUS PANEL, PAINTED TO MATCH RAILING; DUNN EDWARDS-DE6314
- 15. SUNBRELLA CANVAS AWNING ON STEEL FRAME; SUNBRELLA - FERN
- 16. METAL DOOR W/ METAL FRAME; PAINTED DUNN EDWARDS-DEW381
- 17. PAINT ON CONCRETE; DUNN EDWARDS-DE6233
- 18. GLAZED CERAMIC TILES; DAL TILE 6x6 COLOR MATCH™ - MATTE ARTICHOKE 12
- 19. AWNING SUPPORT IN STEEL; BLACK
- 20. WOOD PERGOLA, PAINTED; DUNN EDWARDS-DEC756



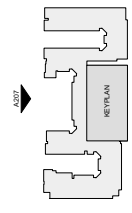
Source: DesignARC, 2023

Figure 7: West Elevation – North
1575 University Avenue Project
Riverside, CA



- 1. 16/20 INTEGRAL COLOR CEMENT PLASTER; DUNN EDWARDS - DROPLETS DEW381
- 2. 20/30 INTEGRAL COLOR CEMENT PLASTER W/ TOOLED LINES; DUNN EDWARDS - LIMESTONE DE6233
- 3. PLASTER FINIAL
A: DUNN EDWARDS-DEW381
B: DUNN EDWARDS-DE6233
- 4. PLASTER CORBEL; DUNN EDWARDS-DEW381
- 5. PLASTER EAVE; DUNN EDWARDS-DEC756
- 6. SLOPED CEMENT PLASTER SILL AT INSET WINDOW; PAINTED DUNN EDWARDS-DEW381
- 7. FOAM PLASTER MOLDING;
A: PAINTED DUNN EDWARDS -DEW381
B: PAINTED DUNN EDWARDS -DE6233
- 8. PRE-CAST CONCRETE BASE; EMPIRE PRECAST- CREAM C011
- 9. FAUX ROOF BEAM, FORMED FOAM PLANT-ON W/ CEMENT PLASTER COATING; DUNN EDWARDS-DEC756

- 10. 2-PIECE CLAY TILE ROOF; REDLAND; TERRA COTTA BLEND-2211
- 11. BRONZE ANODIZED ALUMINUM STOREFRONT; ARCADIA AB-7
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- 13. VINYL WINDOW W/ BRONZE CAP-STOCK DEEP SET IN THICKEN WALL; MILGARD-BRONZE
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- 15. SUNBRELLA CANVAS AWNING ON STEEL FRAME; SUNBRELLA - FERN
- 16. METAL DOOR W/ METAL FRAME; PAINTED DUNN EDWARDS-DEW381
- 17. PAINT ON CONCRETE; DUNN EDWARDS-DE6233
- 18. GLAZED CERAMIC TILES; DAL TILE 6x6 COLOR MATCH™ - MATTE ARTCHONE 12
- 19. AWNING SUPPORT IN STEEL; BLACK
- 20. WOOD PERGOLA, PAINTED; DUNN EDWARDS-DEC796



Source: DesignARC, 2023

Figure 8: West Elevation – Pool Courtyard

1575 University Avenue Project
Riverside, CA

As part of the Housing Element Update, the City identified available sites for potential future housing development (Opportunity Sites) that would not contain significant constraints to development. As summarized in Chapter 2, Project Description, of the Certified PEIR, the Certified PEIR evaluates an increase of 31,564 new dwelling units and 3,181,903 square feet of non-residential development, or up to 31,175 dwelling units and 1,433,460 square feet over existing conditions as determined in the Certified PEIR.

As stated on page 1-5 of Chapter 1: Introduction and Scope of Environmental Impact Report, of the Certified PEIR, “while [this Certified PEIR] does not preclude future environmental review required under CEQA for subsequent development projects (i.e., Opportunity Sites), the analysis in [this Certified PEIR] and provision of program-level mitigation measures would streamline further CEQA review for specific projects to support facilitation of future development of individual Opportunity Sites. Projects that are within the scope of the analysis of [this Certified PEIR], whereby all Project-specific impacts could be adequately minimized or avoided through application of program-level mitigation, may be able to proceed without subsequent CEQA documentation.” Further, as stated on page 5-4 of Chapter 5, Other CEQA Considerations, of the Certified PEIR, “the City will use [the Certified PEIR] as the basis for streamlining CEQA reviews of future residential and mixed-use development on Opportunity Sites consistent with the Housing and Public Safety Element Updates.”

The Project would be located on an Opportunity Site in the northeastern quadrant of the City. As stated above, the Project would develop a mixed-use building that includes residential and commercial uses that would be consistent with the types of uses analyzed within the Certified PEIR. Therefore, based on the analysis provided in Section 5, Comparative Analysis of Project Impacts, below, the Project would meet the applicability and requirements of CEQA Guidelines Section 15168(c)(2).

4.0 PREVIOUS ENVIRONMENTAL DOCUMENTS INCORPORATED BY REFERENCE

Consistent with CEQA Guidelines Section 15150, the following documents were used in preparation of this document and are incorporated herein by reference:

- City’s Housing and Public Safety Element Updates and Environmental Justice Policies Draft Environmental Impact Report, State Clearinghouse No. 2021040089, July 2021
- City’s Housing and Public Safety Element Updates and Environmental Justice Policies Final Environmental Impact Report, State Clearinghouse No. 2021040089, September 2021
- Kimley-Horn and Associates, 1575 University Avenue Project – Responses to Planning Comment Summary Matrix, December 13, 2022 (see **Attachment A** of this Memorandum)
- Kimley-Horn and Associates, Updated CalEEMod Modeling Results, July 2023 (see **Attachment B** of this Memorandum).

5.0 COMPARATIVE ANALYSIS OF PROJECT IMPACTS

This section provides an impact assessment of the Project. A Modified CEQA Guidelines Appendix G Environmental Checklist Form was used to compare the anticipated environmental effects of the Project with those disclosed in the Certified PEIR to evaluate whether the Project's environmental effects would be within the scope of effects identified in the Certified PEIR in accordance with CEQA Guidelines Section 15168 and to review whether any of the conditions set forth in PRC Section 21166 or CEQA Guidelines Section 15162 requiring preparation of a Supplemental or Subsequent EIR have been triggered. Note, that to the extent that a Project impact does not trigger the need for a supplemental or subsequent EIR pursuant to CEQA Guidelines Section 15162, it is found to be within the scope of the impact analyzed in the Certified PEIR pursuant to CEQA Guidelines Section 15168(c)(4). The environmental effects for each of the following impact areas were evaluated:

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

The Environmental Checklist Form and evaluation below provides the following information for each of the environmental impact categories listed above:

- Impact Determination in the Certified PEIR — This section lists the impact determination made in

the Certified PEIR for each impact category evaluated in the PEIR.²

- Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts? — Pursuant to CEQA Guidelines Section 15162(a)(1), this section indicates whether the Project would result in new significant impacts that have not already been considered and mitigated by the prior environmental review or a substantial increase in the severity of a previously identified impact. This question also addresses whether the impact is within the scope of the impact analyzed in the Certified PEIR pursuant to CEQA Guidelines Section 15168(c)(4). To the extent that the Project does not have an impact that triggers the need for a subsequent or supplemental EIR due to the involvement of a new significant impact or more severe significant impact, the impact is considered within the scope of the Certified PEIR.
- Mitigation Measures Addressing Impacts — This section indicates whether the prior environmental document provides mitigation measures to address effects in the related impact category. In some cases, the mitigation measures have already been implemented. If “None” is indicated, a significant impact was not identified and mitigation was not required. Mitigation measures from the Certified PEIR MMRP that are being imposed on the Project are included after the analysis. For those mitigation measures in the topic area that are not applicable to the Project, either because the Project is not anticipated to have a significant impact or because the mitigation measure is not relevant to the Project, the mitigation measure will be indicated as “N/A” or “not applicable.”
- Conclusion — For each environmental topic, a discussion of the conclusion relating to the analysis is provided.

5.1 Aesthetics

Thresholds	Impact Determination in the Certified PEIR	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Mitigation Measures Addressing Impacts
AESTHETICS: Except as provided in Public Resources Code Section 21099, would the Project:			
a) Have a substantial adverse effect on a scenic vista?	Less Than Significant	No	N/A
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	Less Than Significant	No	N/A

² It should be noted that the Certified PEIR addresses impacts from the Housing Element Update, Public Safety Element Update, and Environmental Justice Policies. As the Public Safety Element Update and Environmental Justice Policies are policy documents and would not result in physical environmental impacts, only the impacts from the Housing Element Update from the Certified PEIR are addressed in this document.

<p>c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?</p>	<p>Less Than Significant</p>	<p>No</p>	<p>N/A</p>
<p>d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?</p>	<p>Less Than Significant</p>	<p>No</p>	<p>N/A</p>

Impact Determination in the Certified PEIR

Impacts regarding aesthetic were discussed in Section 3.15, Effects Not Found to be Significant, of the Certified PEIR.

Regarding Threshold (a), the Certified PEIR determined that development associated with the Housing Element Update would increase residential densities and non-residential intensities in specific areas and would be concentrated in existing transit corridors or urban areas, would not be concentrated in open space areas, and would not block scenic views of surrounding mountains or the Santa Ana River. Development would require design review and must demonstrate conformance with relevant General Plan 2025 policies and Riverside Municipal Code (RMC) standards. Therefore, implementation of the Housing Element Update would not have a substantial adverse effect on a scenic vista, and the impact would be less than significant.

Regarding Threshold (b), the Certified PEIR determined that there are no State Scenic Highways within the City. Although scenic parkways exist within the City, the Certified PEIR determined that implementation of the Housing Element Update would not result in any effects on scenic highways or scenic resources. As the development associated with the Housing Element Update would not be on sites with rock outcroppings or scenic historic resources, impacts would be less than significant.

Regarding Threshold (c), compliance with General Plan 2025 policies, RMC, Specific Plan standards, and the Riverside Citywide Design Guidelines and Sign Guidelines, development under the Housing Element Update would not result in substantial degradation of visual character and quality, and impacts would be less than significant.

Regarding Threshold (d), the Certified PEIR concluded that while implementation of the Housing Element Update development would introduce new lighting and glare sources, compliance with Riverside County Ordinance No. 655 requirements, existing Riverside General Plan 2025 Final Program Environmental Impact Report (GP FPEIR) Mitigation Measure AES-1, and RMC Sections 19.556 and 19.590.070, impacts would be less than significant.

Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?

Senate Bill (SB) 743 (PRC Section 21099(d)) sets forth new guidelines for evaluating project transportation impacts under CEQA, as follows: *"Aesthetics and parking impacts of a residential, mixed-use residential, or employment center project on an infill site within a transit priority area (TPA) shall not be considered significant impacts on the environment."* PRC Section 21099 defines a "transit priority area" as an area within 0.5 mile of a major transit stop that is "existing or planned, if the planned stop is scheduled to be completed within the planning horizon included in a Transportation Improvement Program adopted pursuant to Section 450.216 or 450.322 of Title 23 of the Code of Federal Regulations." PRC Section 21064.3 defines "major transit stop" as "a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods." PRC Section 21099 defines an "employment center project" as "a project located on property zoned for commercial uses with a floor area ratio of no less than 0.75 and that is located within a transit priority area." PRC Section 21099 defines an "infill site" as a lot located within an urban area that has been previously developed, or on a vacant site where at least 75 percent of the perimeter of the site adjoins, or is separated only by an improved public right-of-way from, parcels that are developed with qualified urban uses.

The Project Site is located in a Southern California Association of Governments (SCAG)-designated High Quality Transit Area, which is defined as being within one half-mile of a well-served transit stop or transit corridor with 15-minute or less service frequency during peak commute hours. Therefore, PRC Section 21099 applies to the Project, and the Project's aesthetic impacts shall not be considered significant impacts on the environment. As such, the proposed Project would not result in new significant impacts or substantially more severe impacts than disclosed in the Certified PEIR.

Mitigation Measures Addressing Impact

Mitigation Measure from the Riverside GP FEIR

GP FEIR MM AES-1: Conduct literature review, habitat assessment, and surveys.

To further reduce impacts related to light pollution, the City shall require at the time of issuance of building permits all development which introduces light sources, or modifications to existing light sources, to have shielding devices or other light pollution limiting characteristics such as hoods or lumen restrictions.

No mitigation measures from the Certified PEIR would be applicable to the Project. No additional mitigation measures are required for the Project.

Conclusion

Based on the above, the Project’s potential environmental impacts to aesthetics would be within the scope of the Certified PEIR and would not result in any of the conditions set forth in PRC Section 21166(c) or CEQA Guidelines Sections 15162 or 15163 that would require the preparation of a Supplemental or Subsequent EIR.

5.2 Agricultural and Forestry Resources

Thresholds	Impact Determination in the Certified PEIR	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Mitigation Measures Addressing Impacts
AGRICULTURAL AND FORESTRY RESOURCES: 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?	No Impact	No	N/A
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	No Impact	No	N/A
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	No Impact	No	N/A
d) Result in the loss of forest land or conversion of forest land to non-forest use?	No Impact	No	N/A
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?	No Impact	No	N/A

Impact Determination in the Certified PEIR

Impacts regarding agricultural and forestry resources were discussed in Section 3.15, Effects Not Found to be Significant, of the Certified PEIR. The Certified PEIR determined that development associated with the Housing Element Update would not occur in areas designated as Important Farmland, Farmland of

Statewide Importance, Unique Farmland, or Other Land; therefore, no conversion of these lands would occur. None of the opportunity sites are within Williamson Act preserves or contracted land. None of the Opportunity Sites are zoned for forest land, timberland, or timberland zoned Timberland Production areas. Development associated with the Housing Element Update would not result in the conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use. Implementation of the Housing Element Update would have no impact on agricultural and forestry resources.

Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?

The Project Site is located on an Opportunity Site as designated in the Housing Element Update and Certified PEIR. It is not designated as Important Farmland, Farmland of Statewide Importance, Unique Farmland, or Other Land, within a Williamson Act preserve or contracted land, or zoned for forest land, timberland, or timberland zoned Timberland Production areas. The Project Site is developed with a commercial building and does not include any agricultural or forest land. Therefore, the Project would have no impact on agricultural and forestry resources. As such, the proposed Project would not result in new significant impacts or substantially more severe impacts than disclosed in the Certified PEIR.

Mitigation Measures Addressing Impact

No mitigation measures from the Certified PEIR would be applicable to the Project. No additional mitigation measures are required for the Project.

Conclusion

Based on the above, the Project’s potential environmental impacts to agricultural and forestry resources would be within the scope of the Certified PEIR and would not result in any of the conditions set forth in PRC Section 21166(c) or CEQA Guidelines Sections 15162 or 15163 that would require the preparation of a Supplemental or Subsequent EIR.

5.3 Air Quality

Thresholds	Impact Determination in the Certified PEIR	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Mitigation Measures Addressing Impacts
AIR QUALITY: Would the Project:			
a) Conflict with or obstruct implementation of the applicable air quality plan?	Significant and Unavoidable	No	Yes
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	Significant and Unavoidable	No	Yes

c) Expose sensitive receptors to substantial pollutant concentrations?	Significant and Unavoidable	No	Yes
d) Result in other emissions (such as those leading to odors adversely affecting a substantial number of people?)	Less Than Significant	No	N/A

Impact Determination in the Certified PEIR

Impacts regarding air quality under Thresholds (a) through (c) were discussed in Section 3.1, Air Quality, of the Certified PEIR. Threshold (d) was discussed in Section 3.15, Effects Not Found to be Significant, of the Certified PEIR.

Regarding Threshold (a), as detailed in the Certified PEIR, while the construction emission impacts associated with each development under the Housing Element Update would be short-term in nature, the concurrent construction of a multitude of individual development projects could generate combined criteria pollutant emissions on a daily basis that could exceed the South Coast Air Quality Management District’s (SCAQMD) project-level thresholds. Additionally, the long-term operational emissions from buildout of the Housing Element Update would exceed SCAQMD’s daily emissions threshold for reactive organic gases (ROG), nitrous oxides (NO_x), and carbon monoxide (CO). To reduce impacts, the Housing Element Update would implement Mitigation Measures MM-AQ-1 and MM-AQ-2 to reduce criteria air pollution emissions from further construction-related and operational activities due to new development associated with the Housing Element Update. Additionally, the Housing Element Update’s emissions would increase concentrations of criteria pollutants or their precursors in a manner that could obstruct the SCAQMD’s efforts to achieve attainment of ambient air quality standards for any air quality criteria pollutant for which it is currently in nonattainment or jeopardize the current attainment status of the South Coast Air Basin for other criteria pollutants. The Housing Element Update would not be consistent with the 2016 Air Quality Management Plan (AQMP) under Criterion No. 1. Regarding Criterion No. 2, the growth associated with the Housing Element Update were not considered in SCAG’s growth assumptions in the 2016 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) upon which the regional emissions inventory for the South Coast Air Basin in the 2016 AQMP was based. It should be noted that future updates to the AQMP will incorporate the updated growth projections resulting from the Housing Element Update and would be incorporated by SCAG and SCAQMD into their regional planning projections and would become consistent with the AQMP. Therefore, the Housing Element Update would not be consistent with the 2016 AQMP, and impacts are potentially significant. While implementation of MM-AQ-1 and MM-AQ-2 would reduce criteria air pollutant emissions, they would not be able to reduce the emissions associated with buildout of the Housing Element Update to below SCAQMD’s significance thresholds. As determined in the Certified PEIR, the Housing Element Update’s impacts on air quality would be significant and unavoidable.

Regarding Thresholds (b) and (c), as evaluated in the Certified PEIR, anticipated construction activities associated with concurrent construction of a multitude of individual development projects could generate combined criteria pollutant emissions on a daily basis that could exceed SCAQMD’s project-level thresholds. As noted in the Certified PEIR, the City would need to require all future developments subject to CEQA requiring approval on a case-by-case basis to ascertain whether an individual development would generate potentially significant air quality impacts during construction, and, where necessary, would require implementation of additional mitigation measures to minimize air emissions and reduce potentially significant impacts. Implementation of the Housing Element Update would result in increases of certain criteria air pollutant emissions during operation as compared to existing conditions and would exceed the SCAQMD regional significance thresholds for ROG, NO_x, and CO. Reductions from implementation of Mitigation Measure MM-AQ-2 are uncertain and have not been quantified in the Certified PEIR. Further, development projects that would propose uses subject to SCAQMD permitting for air toxics (e.g., industrial facilities, dry cleaners, and gasoline-dispensing facilities) would ensure that health risks are minimized. Mitigation Measure MM-AQ-3 would ensure mobile sources of toxic air contaminants (TACs) not covered under SCAQMD permits are considered during subsequent project-level environmental review by the City. Implementation of the development associated with the Housing Element Update could generate TACs from both permitted and non-permitted (e.g., trucks) sources that would contribute to elevated levels in the South Coast Air Basin. Even with implementation of mitigation measures, construction and operational impacts are considered significant and unavoidable.

Regarding Threshold (d), the Certified PEIR concluded that implementation of the Housing Element Update would result in less than significant impacts related to odor.

Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?

Regarding Threshold (a), as discussed under 5.14, Population and Housing, of this Memorandum, based on the City’s average household size of 3.28, the Project’s 257 dwelling units would result in 843 new residents, which would represent approximately 1.2 percent of the estimated population growth (approximately 70,500 new residents) forecasted by SCAG’s 2020-2045 RTP/SCS between 2016 and 2045. This increase in population would be well within the existing population projections for the City. Therefore, because the Project would result in a minimal increase in population, it would be consistent with the projections set forth in SCAG’s 2020-2045 RTP/SCS and which were used in the 2022 AQMP. Thus, the Project would not conflict with or obstruct implementation of the 2022 AQMP. As shown in Table 1 and Table 2 below, the Project’s construction and operational emissions would not exceed the SCAQMD thresholds.

Table 1: Project Construction Emissions						
Construction Year	Emissions (pounds per day) ¹					
	ROG	NO _x	CO	SO ₂	PM10	PM2.5
2024	2.68	46.5	50.3	0.11	13.7	7.16
2025	42.9	15.7	34.8	0.04	4.3	1.41

Table 1: Project Construction Emissions						
Construction Year	Emissions (pounds per day)¹					
	ROG	NO_x	CO	SO₂	PM10	PM2.5
2026	42.9	1.31	3.7	<0.01	0.72	0.22
SCAQMD Threshold	75	100	550	150	150	55
SCAQMD Threshold Exceeded?	No	No	No	No	No	No
1. SCAQMD Rule 403 Fugitive Dust applied. The Rule 403 reduction/credits include the following: properly maintain mobile and other construction equipment; replace ground cover in disturbed areas quickly; water exposed surfaces three times daily; water all haul roads thrice daily; and limit speeds on unpaved roads to 15 miles per hour. Reductions percentages from the SCAQMD CEQA Handbook (Tables XI-A through XI-E) were applied. Pursuant to Certified PEIR Mitigation Measure MM-AQ-1, construction equipment was assumed to be Tier 3 and was applied to the modeling. No additional mitigation was applied to construction equipment.						
Source: CalEEMod version 2022.1.1.14.						

Table 2: Project Operational Emissions						
Source	Emissions (pounds per day)¹					
	ROG	NO_x	CO	SO₂	PM₁₀	PM_{2.5}
Area	9.15	0.20	21.40	<0.01	0.01	0.01
Energy	0.06	0.99	0.48	<0.01	0.08	0.08
Mobile	3.59	3.44	29.70	0.07	6.43	1.67
Total	12.80	4.43	51.60	0.08	6.53	1.77
SCAQMD Threshold	55	55	550	150	150	55
SCAQMD Threshold Exceeded?	No	No	No	No	No	No
1. Worst-case seasonal maximum daily emissions are reported.						
Source: CalEEMod version 2022.1.1.14.						

Therefore, the Project would be consistent with the 2022 AQMP, and impacts would be less than significant. Therefore, the Project would not create any new significant impacts or substantially more severe significant impacts than disclosed in the Certified PEIR.

Regarding Threshold (b), pursuant to Certified PEIR Mitigation Measures MM-AQ-1 and MM-AQ-2 and as shown in Table 1 and Table 2 above, the Project’s construction and operational emissions were estimated and were determined to not exceed the applicable SCAQMD daily thresholds.³ The conclusions of the

³ Consistent with the CalEEMod User’s Guide, the air quality modeling uses Project-specific information from the Applicant’s construction team when available; if not the CalEEMod defaults were used.

Certified PEIR indicated significant and unavoidable construction air quality impacts assuming the developments associated with the Housing Element Update were to occur concurrently. As analyzed in Attachment A of this Memorandum, Project construction emissions would not exceed the SCAQMD's significance thresholds for criteria pollutants. Based on SCAQMD guidance, individual construction projects that exceed SCAQMD's recommended daily thresholds for project-specific impacts would also cause a cumulatively considerable increase in emissions for those pollutants for which the South Coast Air Basin is in non-attainment. As the Project's construction emissions would not exceed SCAQMD thresholds, the Project's contribution to cumulative air quality impacts due to regional and localized emissions would also not be cumulatively considerable. The Project would not be required to implement the mitigation measures proposed in the Certified PEIR MMRP, and impacts would be less than significant without such mitigation. As such, the proposed Project would not result in new significant impacts or substantially more severe impacts than disclosed in the Certified PEIR.

Regarding Threshold (c), Project-related localized construction emissions would not exceed applicable SCAQMD localized significance thresholds, and the Project would not be expected to cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard. Although the Project would not exceed localized significance thresholds, the Certified PEIR identified that other construction projects in the City analyzed under the Housing Element Update may result in significant and unavoidable localized impacts. While Project construction may contribute to the significant and unavoidable impacts identified in the Certified PEIR due to unknown and uncontrollable overlapping construction, the Project's construction impacts would be within the scope of impacts analyzed in the Certified PEIR and would not result in new or more severe impacts.

Regarding operational impacts, the analysis prepared for CO attainment in the South Coast Air Basin by SCAQMD can be used to assist in evaluating the potential for project-related CO exceedances in the South Coast Air Basin. CO attainment was thoroughly analyzed as part of SCAQMD's 2003 AQMP and the 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan).⁴ As discussed in the 1992 CO Plan, peak CO concentrations in the South Coast Air Basin are due to unusual meteorological and topographical conditions, and not due to the impact of particular intersections. Considering the region's unique meteorological conditions and the increasingly stringent CO emissions standards, CO modeling was performed as part of the 1992 CO Plan and subsequent plan updates and AQMPs.

In the 1992 CO Plan, a CO hot spot analysis was conducted for four busy intersections in Los Angeles at the peak morning and afternoon time periods. The intersections evaluated included: Long Beach Boulevard and Imperial Highway (Lynwood); Wilshire Boulevard and Veteran Avenue (Westwood); Sunset Boulevard and Highland Avenue (Hollywood); and La Cienega Boulevard and Century Boulevard (Inglewood). These analyses did not predict a violation of CO standards. The busiest intersection evaluated was that at Wilshire Boulevard and Veteran Avenue, which had a daily traffic volume of approximately 100,000 vehicles per day. The 2003 AQMP estimated that the 1-hour concentration for this intersection

⁴ SCAQMD, Federal Attainment Plan for Carbon Monoxide, 1992.

was 4.6 parts per million (ppm), which indicates that the most stringent 1-hour CO standard (20.0 ppm) would likely not be exceeded until the daily traffic at the intersection exceeded more than 400,000 vehicles per day.⁵ The AQMP CO hotspots modeling also took into account worst-case meteorological conditions and background CO concentrations. The Los Angeles County Metropolitan Transportation Authority (Metro) evaluated the level of service (LOS) in the vicinity of the Wilshire Boulevard/Veteran Avenue intersection and found it to be Level E at peak morning traffic and Level F at peak afternoon traffic.^{6,7} As an initial screening step, if a project intersection does not exceed 400,000 vehicles per day, then the project does not need to prepare a detailed CO hot spot analysis. If a project would potentially result in a CO hotspot based on the initial screening, detailed modeling may be performed using California LINE Source Dispersion Model, version 4 (CALINE4), which is a model used to assess air quality impacts near transportation facilities (i.e., roadways, intersections, street canyons, and parking facilities).

Consistent with the CO methodology above, if a project intersection does not exceed 400,000 vehicles per day, then there is no need to prepare a detailed CO hot spot analysis for the Project. As stated in the Certified PEIR, the roadway segment within the City that would experience the highest level of average daily trips would be Van Buren Boulevard, north of Jurupa Avenue, which would experience 81,400 average daily trips. The highest recorded CO hourly concentration at the Riverside-Rubidoux monitoring station was 2.4 ppm in 2017, which is substantially lower than the California Ambient Air Quality Standards (CAAQS) 1-hour threshold of 20 ppm. The Project would generate 889 net daily trips, or approximately 1.1 percent of the average trips on Van Buren Boulevard, and total traffic volumes along Van Buren Boulevard during Project operation would be well below the volumes that would cause or contribute to a CO hotspot. There is no reason unique to the South Coast Air Basin meteorology to conclude that the CO concentrations near to Van Buren Boulevard would exceed the 1-hour CO standard if modeled in detail, based on the studies undertaken for the 2003 AQMP. In addition, CO background concentrations within the vicinity of the modeled intersection have substantially decreased since preparation of the 2003 AQMP primarily due to ongoing fleet turnover of older on-road light duty vehicles and use of cleaner fuels. In 2003, the 1-hour background CO concentration was 5 ppm and has decreased to 2 ppm in 2018. Therefore, the Project does not trigger the need for a detailed CO hotspots model and would not cause any new or exacerbate any existing CO hotspots. Impacts would be less than significant.

With respect to TACs, the Project's construction activities would be limited in duration and considered a short-term source of TAC emissions. SCAQMD's CEQA Air Quality Handbook does not recommend analysis of TACs from short-term construction activities associated with land use development projects. The rationale for not requiring a health risk assessment for construction activities is the limited duration of exposure. According to SCAQMD methodology, health effects from carcinogenic air toxics are usually

⁵ Based on the ratio of the CO standard (20.0 ppm) and the modeled value (4.6 ppm).

⁶ Metro measured traffic volumes and calculated the LOS for the intersection Wilshire Boulevard/ Sepulveda Avenue, which is a block west along Wilshire Boulevard, still east of Interstate 405.

⁷ Metro, Congestion Management Program for Los Angeles County. Exhibit 2-6 and Appendix A, 2004.

described in terms of individual cancer risk. Specifically, “Individual Cancer Risk” is the likelihood that a person continuously exposed to concentrations of toxic air contaminants (TACs) over a lifetime will contract cancer based on the use of standard risk assessment methodology, and OEHHA guidance evaluates residential exposure over a 30-year duration.

Because the construction schedule for the Project estimates that construction would be limited to approximately two years, construction of the Project would not result in a substantial, long-term (i.e., 30-year) source of TAC emissions. Long-term emissions of TACs during operations and corresponding individual cancer risk are anticipated to be minimal after construction as the Project does not include any substantial operational sources of TAC emissions (e.g., it is not a warehouse distribution facility). Because there is such a short-term exposure period (approximately two years out of a 30-year lifetime), further evaluation of construction TAC emissions is not warranted. As such, Project-related TAC emission impacts during construction would be less than significant and consequently would not result in a potential health risk impact.

From an operational standpoint, the Project would not include any land uses or activities that would involve the use, storage, or processing of carcinogenic TACs. The City follows the guidance of the SCAQMD, which recommends that HRAs be conducted for substantial sources of diesel particulate matter (DPM), such as truck stops and warehouse distribution facilities that generate more than 100 trucks per day or more than 40 trucks with operating transport refrigeration units. Based on this guidance, a HRA is not required as the residential mixed use Project would not generate substantial amounts of DPM during operation.

As such, the proposed Project would not result in new significant impacts or substantially more severe impacts than disclosed in the Certified PEIR.

Regarding Threshold (d), odors generated during Project construction would be localized and temporary in nature and would not be sufficient to affect a substantial number of people or result in a nuisance as defined by SCAQMD Rule 402. The Project’s residential and commercial uses are not land uses associated with odor complaints. Therefore, the Project would not create any new significant impacts related to odors nor result in a substantial increase in a previously identified significant impact. As such, the proposed Project would not result in new significant impacts or substantially more severe impacts than disclosed in the Certified PEIR.

Mitigation Measures Addressing Impact

The following mitigation measures set forth in the Certified PEIR and the associated MMRP to address air quality impacts were implemented as part of the Project. Certified PEIR MM-AQ-3 related to uses subject to SCAQMD permitting for air toxics (e.g., industrial facilities, dry cleaners, and gasoline-dispensing facilities) is not applicable to the Project. No additional mitigation measures are required.

MM-AQ-1: Implement measures to reduce construction-related criteria air pollutant emissions.

Prior to approval by the City for non-ministerial projects proposed on Opportunity Sites, applicants shall prepare and submit a technical assessment evaluating potential project construction-related air quality impacts to the Planning Division for review and approval. The evaluation shall be prepared in conformance with SCAQMD methodology for assessing air quality impacts. If construction-related criteria air pollutants are determined to have the potential to exceed the SCAQMD-adopted thresholds of significance, the City shall require that applicants for new development projects incorporate mitigation measures and/or project design features to reduce air pollutant emissions during construction activities. These identified measures shall be incorporated into all appropriate construction documents (e.g., construction management plans or construction drawings) submitted to the City and shall be verified by the City's Building and Safety Division. While specific mitigation measures and/or project design features to reduce construction-related emissions would be determined during project-level analysis, potential mitigation could include, but is not limited to:

- Requiring fugitive-dust control measures that exceed SCAQMD's Rule 403, such as:
 - Use of nontoxic soil stabilizers to reduce wind erosion
 - Applying water every 3 hours to active soil-disturbing activities
 - Tarping and/or maintaining a minimum of 24 inches of freeboard on trucks hauling dirt, sand, soil, or other loose materials
- Using construction equipment rated by EPA as having Tier 3 (model year 2006 or newer) or Tier 4 (model year 2008 or newer) emission limits, applicable for engines between 50 and 750 horsepower
- Ensuring that construction equipment is properly serviced and maintained to the manufacturer's standards
- Limiting nonessential idling of construction equipment to no more than 5 consecutive minutes
- Limiting onsite vehicle travel speeds on unpaved roads to 15 miles per hour
- Installing wheel washers for all exiting trucks or washing all trucks and equipment leaving the project area
- Using Super-Compliant VOC paints for coating of architectural surfaces whenever possible

MM-AQ-2: Implement measures to reduce criteria air pollutant emissions during operation.

Prior to approval by the City for non-ministerial development projects proposed on Opportunity Sites, applicants shall prepare and submit a technical assessment evaluating potential project operation phase-related air quality impacts to the Planning Division for review and approval. The evaluation shall be prepared in conformance with SCAQMD methodology in assessing air quality impacts. If operations-related air pollutants are determined to have the potential to exceed the SCAQMD-adopted thresholds of significance, the Planning Division shall require incorporation of mitigation measures and/or project design features to reduce air pollutant emissions during operational activities, to be included as part of the conditions of approval. Possible mitigation measures and/or project design features to reduce long-term emissions could include, but are not limited to, the following:

- Providing truck delivery and loading areas and truck parking spaces shall include signage as a reminder to limit idling of vehicles while parked for loading/unloading in accordance with CARB Rule 2845 (13 California Code of Regulations Chapter 10 § 2485)
- Providing changing/shower facilities as specified in Section A5.106.4.3 of the California Green Building Standards Code (CALGreen) (Nonresidential Voluntary Measures)
- Providing bicycle parking facilities per Section A4.106.9 (Residential Voluntary Measures) of CALGreen
- Providing preferential parking spaces for low-emitting, fuel-efficient, and carpool/van vehicles per Section A5.106.5.1 of CALGreen (Nonresidential Voluntary Measures)
- Encouraging facilities to support electric charging stations per Section A5.106.5.3 (Nonresidential Voluntary Measures) and Section A5.106.8.2 (Residential Voluntary Measures) of CALGreen
- Providing appliances shall be Energy Star–certified appliances or appliances of equivalent energy efficiency (e.g., dishwashers, refrigerators, clothes washers, and dryers). Installation of Energy Star–certified or equivalent appliances shall be verified by Building & Safety during plan check
- Equipping landscaped common areas with electrical outlets to enable use of electric landscaping equipment to the extent feasible

Conclusion

Based on the above, the Project’s potential environmental impacts to air quality would be within the scope of the Certified PEIR and would not result in any of the conditions set forth in PRC Section 21166(c) or CEQA Guidelines Sections 15162 or 15163 that would require the preparation of a Supplemental or Subsequent EIR.

5.4 Biological Resources

Thresholds	Impact Determination in the Certified PEIR	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Mitigation Measures Addressing Impacts
BIOLOGICAL RESOURCES: Would the project:			
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	Less Than Significant with Mitigation Incorporated	No	Yes
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community	Less Than Significant with Mitigation Incorporated	No	Yes

identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?			
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	Less Than Significant with Mitigation Incorporated	No	Yes
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	Less Than Significant with Mitigation Incorporated	No	Yes
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	Less Than Significant	No	N/A
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?	Less Than Significant with Mitigation Incorporated	No	Yes

Impact Determination in the Certified PEIR

Impacts regarding biological resources under Thresholds (a) through (d), and (f) were discussed in Section 3.2, Biological Resources, of the Certified PEIR. Threshold (e) was discussed in Section 3.15, Effects Not Found to be Significant, of the Certified PEIR.

Regarding Threshold (a), the Certified PEIR determined that development associated with the Housing Element Update could result in direct and indirect impacts on special-status plant and animal species, although impacts are expected to be minor given the placement of the Opportunity Sites within urban, developed areas. Implementation of Mitigation Measure MM-BIO-1 would avoid or minimize any potential impacts on special-status plant and/or animal species. With implementation of Mitigation Measure MM-BIO-1, impacts from the development associated with the Housing Element Update would be reduced to less than significant.

Regarding Threshold (b), the Certified PEIR determined that the Opportunity Sites were selected to avoid greenbelts, arroyos and canyons, and other areas of high biological sensitivity. Future development under the Housing Element Update could result in the removal and/or disturbance of sensitive natural

communities. Implementation of Mitigation Measure MM-BIO-1 would avoid or minimize any potential impacts on sensitive natural communities. With implementation of Mitigation Measure MM-BIO-1, impacts from the development associated with the Housing Element Update would be reduced to less than significant.

Regarding Threshold (c), although future development associated with the Housing Element Update could result in the removal and/or disturbance of Western Riverside County Multiple Species Habitat Conservation Plan (WRC MSHCP)-designated Riparian/Riverine habitats, wetlands, and/or potentially jurisdictional aquatic resources, implementation of Mitigation Measure MM-BIO-1 would avoid or minimize any potential impacts on WRC MSHCP-designated Riparian/Riverine habitats, wetlands, and/or potentially jurisdictional aquatic resources. With implementation of Mitigation Measure MM-BIO-1, impacts from the development associated with the Housing Element Update would be reduced to less than significant.

Regarding Threshold (d), trees, shrubs, and structures throughout the City, including within the Opportunity Sites, could provide suitable habitat for nesting birds, including raptors, protected by the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (CFGF) sections. Construction of future development has the potential to impact active native resident and/or migratory bird nests if, and to the extent that, those trees and shrubs are trimmed or removed, or the structures are demolished, during the avian nesting season and they contain nests. Construction could also occur adjacent to active nests causing nest failures or abandonment. Implementation of Mitigation Measure MM-BIO-1 would avoid or minimize any potential impacts on nesting birds and WRC MSHCP specific planning species are a result of any future development under the Housing Element Update. With implementation of Mitigation Measure MM-BIO-1, impacts from the development associated with the Housing Element Update would be reduced to less than significant.

Regarding Threshold (e), construction and/or operational activities resulting from development associated with the Housing Element Update could require pruning or tree removal during vegetation clearing and grading and other construction activities. Operational activities designed to keep housing and public safety areas landscaped, clear, and accessible would require vegetation management, which could involve tree-trimming and/or tree removal. The trimming or removal of street trees would be subject to local tree policies and ordinances, regardless of whether the work was being performed as a part of construction or operational activities. Future projects under the Housing Element Update would be required to comply with the Urban Forestry Policy Manual, RMC, WRC MSHCP mitigation fees, and the Upper Santa Ana River Habitat Conservation Plan. With compliance with these policies and ordinances, impacts would be less than significant.

Regarding Threshold (f), as described in the Certified PEIR, development associated with the Housing Element Update would be required to implement Mitigation Measure MM-BIO-1 to demonstrate compliance with the WRC MSHCP and to reduce impacts to less than significant.

Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?

As described in Attachment A of this Memorandum, pursuant to Certified PEIR Mitigation Measure MM-BIO-1, a literature review, habitat assessment, and survey were conducted for the Project Site. As determined in the Biological Assessment Report, there are no natural communities on the Project Site. Of the eight special-status plant species considered to potentially occur within the Project Site, none were detected during the site survey. Of the 29 special-status wildlife species considered to potentially occur within the Project Site, none were observed during the site survey. There is no native habitat on-site to support special-status species. The removal of the ruderal vegetation would not threaten or endanger any regional wildlife populations, and the Project Site does not occur within or adjacent to designed critical habitat. Project construction would be subject to the federal MBTA and the CFGC Sections 3503, 3503.5, and 3501 to avoid disturbance of nesting birds.

The Project would be consistent with the WRC MSHCP. The Project Site is not within any wildlife migration corridors identified in the MSHCP Schematic Cores and Linkages Map. The Project Site does not contain MSHCP riparian/riverine areas, and none of these areas would be impacted. The Project Site is not located within a Narrow Endemic Plant Species Survey Area, Amphibian Survey Area, Burrowing Owl Survey Area, or Mammal Survey Area as defined in the MSHCP. Therefore, impacts to narrow endemic plant species or wildlife habitat would be covered through payment of appropriate MSHCP development fees, as applicable. Therefore, biological resources impacts would be less than significant. As such, the proposed Project would not result in new significant impacts or substantially more severe impacts than disclosed in the Certified PEIR.

Mitigation Measures Addressing Impact

The following mitigation measures set forth in the Certified PEIR and the associated MMRP to address biological resources impacts were implemented as part of the Project. No additional mitigation measures are required.

MM-BIO-1: Conduct literature review, habitat assessment, and surveys.

Preliminary Review: Prior to construction on Opportunity Sites that are vacant or where the potential presence of biological or aquatic resources exists, a consistency review shall be performed to ensure that the project is consistent with the requirements of the WRC MSHCP. For the project-specific WRC MSHCP consistency process, the applicant shall employ a qualified biologist approved by the City to review the future Opportunity Site project. The qualified biologist shall conduct a site-specific literature review, which shall consider, at a minimum, the future development project, site location, GIS information, WRC MSHCP survey areas and requirements, and known sensitive biological resources. The review shall assess the site for special-status plants and/or wildlife, aquatic resources, sensitive natural communities, wildlife corridors or nurseries, or other regulated biological resources covered by the WRC MSHCP and/or pursuant to CEQA, FESA, or CESA that could be affected by the project. In some cases, a literature review would be sufficient for the biologist to make a no impact

and/or a less-than-significant impact determination for all six of the thresholds of significance (Section 3.2.4) of biological resources and/or the determination that the project is consistent with the WRC MSHCP. In this case, no further work shall be required, and if deemed necessary by the City, a summary report stating the basis for these findings, identifying each threshold of significance with a CEQA finding, shall be the only requirement.

Habitat Assessment Survey: If, during the preliminary review, it is determined that potential biological resources including any species covered under the MSHCP exist on the individual Opportunity Site that could be affected, then a habitat assessment survey shall be required unless a qualified biologist determines that a field review/habitat assessment is not needed. If needed, and/or the project is in a WRC MSHCP designated survey area, this survey shall consist of a site visit conducted by a qualified biologist, where the proposed individual development project and adjacent buffer (as appropriate for the target species relative to the potential project direct and indirect impacts) shall be assessed for WRC MSHCP covered species and habitats; candidate, sensitive, or special-status plants and/or wildlife; aquatic resources; sensitive natural communities; and wildlife corridors or nurseries while identifying and mapping all vegetation communities and land-cover types. If suitable habitat is present for candidate, sensitive, or special-status plants or animals and cannot be avoided, then focused protocol surveys may be required, as determined by the qualified biologist, with appropriate reporting. If aquatic resources are present and cannot be avoided, a jurisdictional delineation may be required. Mitigation shall include an analysis of all the biological resources identified in the thresholds of significance, with a determination made regarding significance for each threshold. Reporting shall include regulatory assessment, impact analyses, and identification and implementation of appropriate measures based on the presence of biological resources.

Reduce and Avoid Impacts: If, following the literature review and surveys for Opportunity Sites, it is determined that the site would not directly or indirectly affect any WRC MSHCP covered species or habitats; candidate, sensitive, or special-status plants and/or wildlife; aquatic resources; sensitive natural communities; or wildlife corridors or nurseries, then no further action or WRC MSHCP consistency analysis shall be required. If, however, it is determined that impacts on WRC MSHCP covered species or habitats; candidate, sensitive, or special-status plants and/or wildlife; aquatic resources; sensitive natural communities; or wildlife corridors or nurseries would occur and therefore would be considered significant, then additional mitigation measures as recommended by the qualified biologist and approved by the Planning Division shall be implemented to avoid or reduce impacts to the maximum extent feasible.

Conclusion

Based on the above, the Project's potential environmental impacts to biological resources would be within the scope of the Certified PEIR and would not result in any of the conditions set forth in PRC Section 21166(c) or CEQA Guidelines Sections 15162 or 15163 that would require the preparation of a Supplemental or Subsequent EIR.

5.5 Cultural Resources

Thresholds	Impact Determination in the Certified PEIR	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Mitigation Measures Addressing Impacts
CULTURAL RESOURCES: Would the Project:			
a) Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?	Less Than Significant with Mitigation Incorporated	No	Yes
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines §15064.5?	Less Than Significant with Mitigation Incorporated	No	Yes
c) Disturb any human remains, including those interred outside of formal cemeteries?	Less Than Significant	No	N/A

Impact Determination in the Certified PEIR

Impacts regarding cultural resources under Thresholds (a) and (b) were discussed in Section 3.3, Cultural Resources, of the Certified PEIR (the City of Riverside Housing and Public Safety Element Updates and Environmental Justice Policies Project Final Environmental Impact Report). Threshold (c) was discussed in Section 3.15, Effects Not Found to be Significant, of the Certified PEIR.

Regarding Threshold (a), the Certified PEIR determined that the potential significance of much of the City’s remaining built environment and designed landscapes remains unknown. Therefore, a potential historical resource could be present on an Opportunity Site outside of a previously surveyed area. To mitigate the potential impact to previously unknown Cultural Resources, the Certified PEIR includes MM-CUL-1 as follows:

MM-CUL-1: Conduct a historical resource assessment. The individual applicants shall hire a Secretary of the Interior qualified historic preservation professional to conduct a historical resource assessment if a structure to be affected by a subsequent development project, at the time of application, is not in a previously surveyed area, is not a historical resource for the purposes of CEQA, and is at least 50 years old. The assessment shall formally evaluate the potential resource’s eligibility for listing to the CRHR, its potential eligibility as a Landmark or Structure of Merit, and its potential eligibility as a Contributor to a Historic District or Neighborhood Conservation Area. If the resource is found eligible for any of those designations, it shall be considered a resource that qualifies as a historical resource under CEQA and is therefore subject to the provisions of the Cultural Resources Ordinance. This includes obtaining the pertinent Certificates of Appropriateness and ensuring that the project plans adhere to the SOI

Standards. For resources found ineligible for any of those designations, no additional mitigation would be necessary.

With implementation of Mitigation Measure MM-CUL-1, impacts on historical resources would be identified allowing for adequate CEQA review at the time of the project review. In 2012, the building in the Project Site was determined ineligible for listing in the California Register of Historical Resources (CRHR). Following this determination, the City of Riverside considered the building's potential eligibility for local listing or designation through both the local government process and through local planning, and made the determination that the building was ineligible for local listing or designation. Additional details regarding prior inventory and evaluations conducted for the building can be found below and within Attachment C of this Memorandum.

Regarding Threshold (b), most of the Opportunity Sites associated with the Housing Element Update are in areas of unknown archaeological sensitivity, while a smaller number of these sites are in areas of low to high archaeological sensitivity. Implementation of Mitigation Measure MM-CUL-2 would reduce impacts to less than significant levels. If archaeological resources are discovered during an archaeological study (Mitigation Measure MM-CUL-2), or if archaeological resources are identified as inadvertent discoveries during ground-disturbing activities, then Mitigation Measures MM-CUL-3 through MM-CUL-8 would reduce this impact to less-than-significant levels. Not all projects would require Mitigation Measures MM-CUL-3 through MM-CUL-8, as these mitigation measures are only applicable if archaeological resources are discovered during an archaeological study (Mitigation Measure MM-CUL-2) or as unanticipated discoveries.

Regarding Threshold (c), State law, including Health and Safety Code Section 7050.5 and PRC Section 5097.98, provides guidance regarding how sites containing human remains must be treated. PRC Section 5097 specifies the procedures to be followed in the event of the unexpected discovery of human remains on nonfederal public lands. While development associated with the Housing Element Update has the potential to disturb human remains, including those outside dedicated cemeteries, if human remains should be discovered on vacant lands or other Opportunity Sites, however unlikely, their treatment would be subject to applicable codes and regulations, notably PRC Section 5097 and Health and Safety Code Section 7050.5, which would ensure that impacts would be less than significant.

Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?

Regarding Threshold (a), as shown in **Attachment C** of this Memorandum, the Project Site is not located within a Historic District, potential Historic District, Historic Landmark, on a site with a Structure of Merit, or on the NRHP Site. Therefore, a historical resources assessment (Certified PEIR Mitigation Measure MM-CUL-1) was not required as part of the Project. However, a summary report outlining prior inventory and evaluation efforts conducted for the building within the Project Site was prepared and included in Attachment C of this Memorandum. As further detailed in **Attachment C** of this Memorandum, the building was recorded and evaluated for significance in 2012 as part of the planning efforts for the University Avenue Specific Plan. The study's compilation of permit data and

advertisements showed that the building changed owner/operators several times between the 1940s and 1960s, and again in the mid-1990s, and that the overall appearance of the building was heavily altered over time. The study concluded that the building no longer retained architectural integrity due to the successive alterations over the years, and as such, was not recommended eligible for any local registers or the CRHR. The building was subsequently provided the CRHR Status Code 6L, which notes the building was “determined ineligible for local listing or designation through local government review processes”. CRHR Status Code 6L also notes that a property, though determined ineligible for local listing or designation, may still warrant special consideration in local planning. However, upon review of the building’s status and consideration of the resource within the planning process, the City of Riverside determined the building to be ineligible for local listing or designation. The City then approved modifications to the building in 2015, which included additional substantial alterations to the exterior and façade of the building. Therefore, none of the original historic exterior remains on the existing building, and the property retains none of its original historic integrity. Consequently, the building is not a historical resource as defined by CEQA, and its removal would not result in a significant impact. The Project would result in no impacts on historical resources.

Regarding Threshold (b), as described in **Attachment A** of this Memorandum, pursuant to Certified PEIR Mitigation Measure MM-CUL-2, an archaeological study was prepared for the Project Site. This study identified two built environment resources consisting of concrete foundations that are ineligible for consideration as potential historical resources under any CRHR criteria 1, 2, 3, or 4. Therefore, the Project would not have a significant impact on these resources. The Project has low to moderate potential for encountering subsurface prehistoric archaeological resources. Because Project construction would include ground disturbance, mitigation measures would be required to reduce potential impacts to previously unknown archaeological resources and human remains to less than significant levels under CEQA. Full time monitoring is not required. However, if unanticipated archaeological resources are encountered, a qualified archaeologist shall be retained, and Certified PEIR Mitigation Measures MM-CUL-4 (Archaeological Treatment Plant), MM-CUL-5 (data recovery), and MM-CUL-8 (treatment and disposition) would be implemented. Certified PEIR Mitigation Measure MM-CUL-9 (cultural sensitivity training) is also recommended prior to commencement of construction activities. With implementation of the aforementioned Mitigation Measures, impacts would be reduced to less than significant.

Regarding Threshold (c), the Project would be required to comply with PRC Section 5097 and Health and Safety Code Section 7050.5, which would ensure that impacts would be less than significant. As such, the proposed Project would not result in new significant impacts or substantially more severe impacts than disclosed in the Certified PEIR.

Mitigation Measures Addressing Impact

The following mitigation measures set forth in the Certified PEIR and the associated MMRP to address cultural resources impacts were implemented as part of the Project. No additional mitigation measures are required.

MM-CUL-2: Conduct an archaeological study.

For Opportunity Site development projects that require CEQA analysis (non-ministerial projects), prior to construction, and if it is determined that the development project will involve ground disturbance of some type, the applicant shall conduct an archaeological study. This study will be conducted during project-specific CEQA analyses at Opportunity Sites that have not been studied in such a manner in the previous 5 years. The archaeological study shall follow the guidelines set forth by the City of Riverside Community & Economic Development Department in the document titled Consultant Requirements for Cultural Resources Survey, Studies and Reports Information Sheet (City of Riverside Community & Economic Development Department 2011) or successor document.

The cultural resources archaeological recommendations shall be valid for 5 years after the date of the record search. After 5 years, the applicant shall retain an archaeologist who shall acquire an updated record search from the Eastern Information Center and review the cultural resources technical report recommendations.

For proposed development locations where only a record search and/or a site visit have already been conducted prior to this EIR, the project applicant shall retain an archaeologist to:

- Review record search results, site visit results, and any recommendations.
- Obtain an updated record search from the Eastern Information Center if the record search is older than 5 years.
- Review available historic maps, historic aerials, and other archival materials.
- Prepare a cultural resources memo with existing or updated record search results; a summary of background research of historic maps, aerials, etc.; and potential for historic and prehistoric archaeological resources to be present at the proposed development location. Additionally, the memo shall identify potential impacts and provide recommendations.

The City shall review these findings and make a determination regarding the significance of project-level impacts prior to approval of any future development. Should the archaeological study result in the identification of archaeological resources on the proposed development site, or should unanticipated discoveries of previously unknown archaeological resources be made during ground-disturbing activities at an Opportunity Site, Mitigation Measures MM-CUL-3 through MM-CUL-6 would be applicable.

MM-CUL-4: Develop and implement an Archaeological Treatment Plan (ATP) for evaluation of newly discovered and/or unevaluated archaeological resources.

Mitigation Measure MM-CUL-4 shall apply as follows:

- The results of an archaeological study conducted under Mitigation Measure MM-CUL-2 are unable to determine the eligibility of newly identified archaeological sites for inclusion to the CRHR and it is determined by the consulting archaeologist that additional study through Phase II testing is required;
- It is not possible to avoid impacts through the establishment of ESAs; or

- Unanticipated archaeological resources are discovered during construction on Opportunity Sites.

If it is necessary to properly evaluate such properties in such a manner, an ATP shall be developed that describes methods and procedures for conducting subsurface excavations to determine the vertical and horizontal extents of an archaeological site. The ATP shall define the parameters of archaeological testing at the site and the extent of excavation and analysis of any materials recovered. The ATP shall also include guidelines for treatment and curation of any materials recovered during the testing process. Subsequent to implementation of the ATP, a technical report describing the methods and results of archaeological testing and formal evaluations of the archaeological sites and recommendations for further treatment shall be completed. The ATP shall be approved by the City and should involve consultation and review by Native American tribes consulting on the proposed development project. An ATP shall only be necessary for newly discovered archaeological sites that require additional information to make determinations of eligibility.

MM-CUL-5: Implement data recovery for CRHR-eligible sites that cannot be avoided.

If archaeological studies identify a cultural resource as being potentially eligible for listing in the CRHR and ESAs cannot be established or project design cannot be altered, resulting in impacts on the site, then a Phase III data recovery program shall be developed, when mutually agreed upon by Native American representatives (for prehistoric or historic-period Native American sites) and the City. The data recovery program shall be outlined in a Data Recovery Treatment Plan that details the procedures and objectives for mitigation of impacts on the archaeological site. The Data Recovery Treatment Plan shall include a research design with testable hypotheses and data requirements necessary to address these hypotheses. Additionally, the Data Recovery Treatment Plan shall identify methods of excavation, analysis, and curation of any archaeological materials recovered. The Data Recovery Treatment Plan shall also identify the treatment of any human remains discovered during data recovery procedures. If the archaeological resource is Native American (prehistoric or historic-period in age), then the City, the applicant, and the archaeologist shall engage in consultation so that Native American representatives can be involved in the development of the data recovery plan.

Data recovery shall involve analysis of a representative sample of the materials recovered during excavation. For prehistoric archaeological sites, all excavations should be monitored by a representative from a geographically appropriate Native American group. At the conclusion of the data recovery program, a data recovery technical report shall be completed detailing the results of the excavations and analysis. Curation of recovered archaeological materials shall be conducted per the guidance in the Data Recovery Treatment Plan and with consultation between the City and appropriate Native American tribes. Other forms of mitigation could include additional research with archival sources, landscape studies, designation of open space, public outreach programs, and public education/public displays.

MM-CUL-8: Employ procedures for treatment and disposition of cultural resources.

If cultural resources are inadvertently discovered during the course of grading for individual Opportunity Sites, the following procedures shall be carried out for treatment and disposition of the discoveries:

1. Consulting Tribe(s) Notified: Within 24 hours of discovery, and if the resources are Native American in origin, the consulting tribe(s) shall be notified via email and phone. The applicant shall provide the City evidence of notification to consulting tribes. Consulting tribe(s) shall be allowed access to the discovery in order to assist with the significance evaluation.
2. Temporary Curation and Storage: During the course of construction, all discovered resources shall be temporarily curated in a secure location on site or at the offices of the project archaeologist. The removal of any artifacts from a development site shall be thoroughly inventoried with tribal monitor oversight of the process.
3. 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 on cultural resources. The applicant shall relinquish the artifacts through one or more of the following methods and provide the City of Riverside Community & 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. Execute a curation agreement with an appropriate qualified repository within Riverside County that meets federal standards per 36 CFR Part 79 and therefore will ensure professional curation and availability 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 subsequent development project and cannot come to a consensus as to the disposition of cultural materials, curate the discovered items at the Western Science Center or Museum of Riverside by default.
 - d. At the completion of grading, excavation, and ground-disturbing activities on the site, provide to the City a Phase IV Monitoring Report documenting monitoring activities conducted by the project archaeologist and Native American tribal monitors within 60 days of completion of grading. This report shall document the impacts on 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 shall be submitted to the City, the Eastern Information Center, and consulting tribes.

MM-CUL-9: Conduct cultural sensitivity training.

Prior to the commencement of construction activities, the SOI Standards–certified archaeologist and Native American monitors shall attend the pre-grading meeting with the applicant/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 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.

Conclusion

Based on the above, the Project’s potential environmental impacts to cultural resources would be within the scope of the Certified PEIR and would not result in any of the conditions set forth in PRC Section 21166(c) or CEQA Guidelines Sections 15162 or 15163 that would require the preparation of a Supplemental or Subsequent EIR.

5.6 Energy

Thresholds	Impact Determination in the Certified PEIR	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Mitigation Measures Addressing Impacts
ENERGY: Would the Project:			
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	Less Than Significant	No	No
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	Less Than Significant	No	No

Impact Determination in the Certified PEIR

Impacts regarding energy were discussed in Section 3.15, Effects Not Found to be Significant, of the Certified PEIR.

Regarding Threshold (a), the Certified PEIR determined that the development associated with the Housing Element Update could result in increased consumption of energy resources. Future developments associated with the Housing Element Update would be required to comply with applicable State, regional, and local plans, ordinances, and regulations related to energy efficiency. None of these future developments would be expected to require an unprecedented amount of energy consumption during construction. Because construction activities are considered to be relatively short term and would cease

once construction of an individual development is complete, they would represent a relatively short demand on local and regional fuel supplies that would be easily accommodated. Overall, construction activities associated with future development in the City would not be any more inefficient, wasteful, or unnecessary than other similar land use development projects of this nature. During operation, future development associated with the Housing Element Update would adhere to applicable federal, state, and local requirements for energy efficiency, including Title 24 standards, and would not result in a substantial increase in demand or transmission service or the need for new or expanded sources of energy supply, new or expanded energy delivery systems, or infrastructure. Residential and mixed-use development associated with the Housing Element Update would not result in a significant environmental impact due to a wasteful, inefficient, or unnecessary consumption of energy resources during Project construction or operation. Impacts would be less than significant.

Regarding Threshold (b), all future residential and mixed-use development associated with the Housing Element Update would be required to comply with the latest requirements of the California Building Code (CBC), which contains the mandatory California Green Building Standards (CALGreen) Code, along with the Building Energy-Efficiency Standards. As proposed, all future development projects would be required to obtain appropriate building permits and meet current applicable building standards, including, but not limited to, the CBC, California Electrical Code, and California Energy Code (Title 24). Impacts would be less than significant.

Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?

Regarding Threshold (a) and Threshold (b), the Project would be required to comply with the latest applicable requirements of the California Building Code (CBC), which contains the mandatory California Green Building Standards (CALGreen) Code, along with the Building Energy-Efficiency Standards. The Project would be required to obtain appropriate building permits and meet current applicable building standards, including, but not limited to, the CBC, California Electrical Code, and California Energy Code (Title 24). The Project would also be located on an Opportunity Site and would be located near public transit and essential services like neighborhood-serving shopping and amenities. The Project would develop a mixed-use building and increase density on an underutilized site within a developed, urban area. The Project's location and mix of uses would reduce overall vehicle trips and VMT, and thus transportation energy. The Project will not result in the wasteful, inefficient, or unnecessary consumption of energy, and impacts would be less than significant. As such, the proposed Project would not result in new significant impacts or substantially more severe impacts than disclosed in the Certified PEIR.

Mitigation Measures Addressing Impact

No mitigation measures from the Certified PEIR would be applicable to the Project. No additional mitigation measures are required for the Project.

Conclusion

Based on the above, the Project’s potential environmental impacts to energy would be within the scope of the Certified PEIR and would not result in any of the conditions set forth in PRC Section 21166(c) or CEQA Guidelines Sections 15162 or 15163 that would require the preparation of a Supplemental or Subsequent EIR.

5.7 Geology and Soils

Thresholds	Impact Determination in the Certified PEIR	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Mitigation Measures Addressing Impacts
GEOLOGY AND SOILS: Would the Project:			
a) Directly or indirectly cause potential substantial adverse effects, including the risk or 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?	Less Than Significant	No	N/A
(ii) Strong seismic ground shaking?	Less Than Significant	No	N/A
(iii) Seismic-related ground failure, including liquefaction?	Less Than Significant	No	N/A
(iv) Landslides?	Less Than Significant	No	N/A
b) Result in substantial soil erosion or the loss of topsoil?	Less Than Significant	No	N/A
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	Less Than Significant	No	N/A
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	Less Than Significant	No	N/A
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water	Less Than Significant	No	N/A

disposal systems where sewers are not available for the disposal of waste water?			
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	Less Than Significant with Mitigation Incorporated	No	Yes

Impact Determination in the Certified PEIR

Impacts regarding geology and soils under Thresholds (a) through (e) were discussed in Section 3.15, Effects Not Found to be Significant, of the Certified PEIR. Threshold (f) was discussed in Section 3.4, Paleontological Resources, of the Certified PEIR.

Regarding Threshold (a), the Certified PEIR determined that all new residential and mixed-use development in the City would be required to comply with General Plan 2025 Policy PS-1.1, which requires that the developments abide by the most recently adopted City and State seismic and geotechnical requirements. As such, any future development associated with the Housing Element Update would require a geotechnical investigation and/or compliance with the CBC, to address the risk of fault rupture. Development associated with the Housing Element Update would be required to prepare a geotechnical investigation prior to issuance of permits pursuant to RMC Section 16.08.185 for any property identified as being subject to the potential of liquefaction or within a seismic hazard zone disclosing the site-specific risk of fault rupture at a future development site. Regarding liquefaction, future development associated with the Housing Element Update would be required to comply with General Plan 2025 policies, such as Policy PS-1.6, which requires the City building official to explore and implement, where feasible, best practices and latest technologies to minimize damage to structures in areas determined to have a high liquefaction potential during seismic activities. Regarding landslides, General Plan 2025 includes policies that limit development on steep or unstable slopes, and none of the Opportunity Sites are in these areas, which have been specifically identified to avoid hillsides, arroyos, and canyons as well as areas within the RC – Residential Conservation Zone. Therefore, with compliance with General Plan 2025 policies, RMC standards, CBC standards, and the California Building Standards Code (CBSC) requirements, impacts would be less than significant.

Regarding Threshold (b), the Certified PEIR determined that projects associated with the Housing Element Update with construction activities that are one acre or larger would require a Stormwater Pollution Prevention Plan (SWPPP) in compliance with the Construction General Permit, local stormwater ordinances, and other related requirements. The SWPPP would require best management practices (BMPs) for earthmoving and clearing activities to minimize any mobilization of sediment, stabilize disturbed areas, and control sediment. With implementation of a SWPPP with the inclusion of erosion control BMPs, impacts would be less than significant.

Regarding Threshold (c), the Certified PEIR determined that the risk of lateral spreading is highest near the Santa Ana River and along arroyos and watercourses, areas where the risk for liquefaction is higher

than it is in the rest of the City. Any development associated with the Housing Element Update would be required to comply with CBSC requirements, which require submission of a preliminary soils report and a soils engineering analysis to identify unstable geologic units and/or soils. Future developments would also be subject to General Plan 2025 Policy PS-1.1, which would ensure that all new development in the City would abide by the most recently adopted State seismic and geotechnical requirements. Therefore, with compliance with General Plan 2025 policies, RMC standards, CBC standards, and the CBSC requirements, impacts would be less than significant.

Regarding Threshold (d), future development associated with the Housing Element Update would comply with CBSC requirements, which require the submission of a preliminary soils report and a soils engineering analysis. With compliance with the recommendations in the applicable soils report, as well as standard regulations required by the CBSC, impacts would be less than significant.

Regarding Threshold (e), the Opportunity Sites identified in the Housing Element Update are located near existing wastewater infrastructure, and development would connect predominantly to existing water and wastewater disposal lines maintained by the City of Riverside Public Works Department and would not rely on septic tanks or alternative wastewater disposal systems. Impacts would be less than significant.

Regarding Threshold (f), the Certified PEIR determined that depending on the depth of disturbance and how far below ground surface the paleontological resources may be located, these ground disturbances have the potential to damage or destroy such resources. However, in identifying Opportunity Sites, attempts have been made to eliminate locations with high paleontological sensitivity. General Plan 2025 Policy HP-1.3 protects paleontological resources. The policy states that 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. However, despite compliance with General Plan Policy HP-1.3, impacts would remain potentially significant. Implementation of Mitigation Measures MM-PAL-1, MM-PAL-2, and MMPAL-3 would reduce impacts to less-than-significant levels by requiring the project applicant and/or private developer and the City to identify whether future development sites are in areas of high or undetermined paleontological sensitivity and could have a substantial adverse effect on the significance of unique paleontological resources. If so, a Paleontological Mitigation Plan would be developed that would provide for salvage, curation, and reporting of any paleontological resources uncovered during ground disturbance. With implementation of Mitigation Measures MM-PAL-1, MM-PAL-2, and MM-PAL-3, impacts would be reduced to less than significant.

Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?

Regarding Threshold (a), a Geotechnical Engineering Exploration Report was prepared in February 21, 2022. As stated therein, the Project Site is not located within an Alquist-Priolo Earthquake Fault Zone, and no active faults cross the Project Site. The Project Site is also not located on soils that are considered susceptible to liquefaction. The Project would be required to comply with applicable General Plan 2025

policies, RMC standards, CBC standards, and the CBSC requirements. Impacts would be less than significant.

Regarding Threshold (b), the Project would implement a SWPPP, which would include a Water Quality Management Plan (WQMP) and erosion control BMPs. Impacts would be less than significant.

Regarding Threshold (c), the Geotechnical Engineering Exploration Report determined that the settlement conditions for the Project Site are minor. The Project Site is also not located on soils that are considered susceptible to liquefaction. Therefore, with compliance with General Plan 2025 policies, RMC standards, CBC standards, and the CBSC requirements, impacts would be less than significant.

Regarding Threshold (d), the Geotechnical Engineering Exploration Report recommended bearing material would be future compacted fill with conventional foundations to support the building. The soils at the finished grade would have a very low expansion potential. With compliance with the recommendations in the Geotechnical Engineering Exploration Report, as well as standard regulations required by the CBSC, impacts would be less than significant.

Regarding Threshold (e), the Project would not utilize septic tanks or alternative wastewater disposal systems. There would be no impacts.

Regarding Threshold (f), as described in Attachment A of this Memorandum, pursuant to Certified PEIR Mitigation Measure MM-PAL-1, a paleontological resources investigation was prepared. While no paleontological resources were identified within the Project Site, geologic map review, literature review, and the paleontological resources record search revealed that the Project Site is underlain by potentially fossiliferous Older (Pleistocene) silt and clay alluvium, which has produced significant fossils elsewhere in western Riverside County. Because Project construction would include ground disturbance, mitigation measures would be required to reduce potential impacts to paleontological resources to less than significant levels under CEQA. Certified PEIR Mitigation Measure MM-PAL-2 requires retention of a qualified paleontologist, paleontological monitoring of excavations exceeding 10 feet or when older Quaternary alluvial silts and clays are encountered, salvage and curation of significant fossil discoveries, and final reporting. Certified PEIR Mitigation Measure MM-PAL-3 would also apply to the Project if paleontological resources and sensitive deposits remain or become exposed, then an avoidance and minimization plan would be prepared. With implementation of the Certified PEIR Mitigation Measures MM-PAL-1, MM-PAL-2, and MM-PAL-3, impacts to paleontological resources would be reduced to less than significant. As such, the proposed Project would not result in new significant impacts or substantially more severe impacts than disclosed in the Certified PEIR.

Mitigation Measures Addressing Impact

The following mitigation measures set forth in the Certified PEIR and the associated MMRP to address paleontological resources impacts were implemented as part of the Project. No additional mitigation measures are required.

MM-PAL-1: Conduct paleontological resources investigations.

During the development review process and prior to construction on Opportunity Sites that are located on geologic units with Undetermined, High A, or High B paleontological sensitivity, the project applicant shall conduct paleontological resource investigations consistent with SVP guidelines. This process shall include:

- Conducting a paleontological records search through the Los Angeles County Natural History Museum to identify previously recorded paleontological localities and the presence of sensitive deposits in the City
- Reviewing Opportunity Site design and maximum depths and extents of Project ground disturbance components
- Reviewing publicly available geotechnical reports for information concerning subsurface deposits and deposit depths across the City
- Identifying the potential for sensitive paleontological deposits underlying the Opportunity Site that project implementation could affect
- Determining whether impacts on sensitive deposits, if present, would be significant.

If no sensitive deposits are identified or if they are sufficiently deeper than the Opportunity Site excavations and would not be encountered during construction, no further steps shall be required. If sensitive deposits are identified and could be affected by development of the Opportunity Sites, implement Mitigation Measure MM-PAL-2.

Opportunity Site projects that propose accessory dwelling units are not expected to have paleontological resource impacts and no additional assessment is necessary.

MM-PAL-2: Avoid paleontological resources or conduct monitoring.

The applicant shall redesign the Opportunity Site development to avoid sensitive paleontological resources and deposits that could potentially contain these resources. If avoidance and/or Opportunity Site redesign is infeasible, then paleontological monitoring shall be implemented and shall include the following implementation steps:

- The applicant shall retain a qualified paleontologist, who shall attend the preconstruction meeting(s) to consult with the grading and excavation contractors or subcontractors concerning excavation schedules, paleontological field techniques, and safety issues. A qualified paleontologist is defined as an individual who (1) has an MS or PhD in paleontology or geology and/or a publication record in peer-reviewed journals; (2) also has demonstrated familiarity with paleontological procedures and techniques; (3) is knowledgeable in the geology and paleontology of the county; (4) has proficiency in recognizing fossils in the field, determining their significance, and collecting vertebrate fossils in the field; and (5) has worked as a paleontological mitigation project supervisor in the county for at least 1 year.
- A paleontological monitor or a qualified paleontologist shall be on site on a full-time basis during excavation and ground-disturbing activities that occur in any undisturbed deposits below ground surface, to inspect exposures for contained fossils. The paleontological monitor shall work under the direction of the Project's qualified paleontologist. A

paleontological monitor is defined as an individual selected by the qualified paleontologist who has experience in the collection and salvage of fossil materials. If fossils that have significance for the scientific record are discovered on a development site, the qualified paleontologist shall recover them and temporarily direct, divert, or halt grading to allow recovery of fossil remains.

- The qualified paleontologist shall be responsible for the cleaning, repairing, sorting, and cataloguing of fossil remains collected during the monitoring and salvage portion of the mitigation program.
- Prepared fossils, along with copies of all pertinent field notes, photos, and maps, shall be deposited (as a donation) at a scientific institution with permanent paleontological collections, such as the Los Angeles County Natural History Museum.
- Within 30 days after the completion of excavation and ground-disturbing activities, the qualified paleontologist shall prepare and submit to the City of Riverside Community & Economic Development Department, Planning Division a paleontological resource recovery report that documents the results of the mitigation program. This report shall include discussions of the methods used, stratigraphic section(s) exposed, fossils collected, and significance of recovered fossils.

Opportunity Site projects that propose accessory dwelling units are not expected to have paleontological resource impacts and no additional assessment is necessary.

MM-PAL-3: Avoid/minimize impacts on paleontological resources during operations.

If significant paleontological resources and sensitive deposits with the potential to contain significant paleontological resources are identified within an Opportunity Site area during design/planning (Mitigation Measures MM-PAL-1 and MM-PAL-2), and deposits that are sensitive for significant paleontological resources remain exposed at or near the ground surface or become exposed during project operations, then an avoidance and minimization plan shall be prepared to avoid/minimize potential impacts during operations. This plan may include, but not be limited to:

- Securing sensitive deposits from accessibility through the development of exclusion zones
- Preparing an operations and maintenance plan to minimize degradation and exposure of sensitive deposits
- Designing and developing interpretive exhibits to provide education and understanding of the importance of avoiding and protecting sensitive deposits and paleontological resources.

If significant impacts on a newly exposed or existing significant paleontological resource cannot be avoided, then Mitigation Measure MM-PAL-2 shall be implemented.

Conclusion

Based on the above, the Project's potential environmental impacts to geology and soils would be within the scope of the Certified PEIR and would not result in any of the conditions set forth in PRC Section

21166(c) or CEQA Guidelines Sections 15162 or 15163 that would require the preparation of a Supplemental or Subsequent EIR.

5.8 Greenhouse Gas Emissions

Thresholds	Impact Determination in the Certified PEIR	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Mitigation Measures Addressing Impacts
GREENHOUSE GAS EMISSIONS: Would the Project:			
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Significant and Unavoidable	No	Yes
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	Significant and Unavoidable	No	Yes

Impact Determination in the Certified PEIR

Impacts regarding greenhouse gas (GHG) emissions were discussed in Section 3.5, Greenhouse Gas Emissions, of the Certified PEIR.

Regarding Threshold (a), the Certified PEIR determined that construction of new residential and nonresidential development associated with the Housing Element Update would occur intermittently throughout the City over the course of the build-out period (through horizon year 2029). Construction would result in direct GHG emissions generated by vehicle trips (i.e., trips by construction workers and haul trucks) and operation of construction equipment. While the details of future development within the City are currently unknown because development would be driven by market forces and private applicants, it is known that implementation of the Project ultimately would result in more development than previously assumed in the City’s General Plan 2025. Construction of a multitude of individual development projects throughout the buildout period could generate GHG emissions that could have a significant impact on the environment. Implementation of Mitigation Measure MM-GHG-1 would help reduce GHG emissions from construction-related activities to the extent feasible. However, construction time frames and equipment for site-specific development projects are not available at this time, and there is potential for implementation of the Project to result in significant construction-related GHG emissions. Despite implementation of Mitigation Measure MM-GHG-1, construction impacts of the Housing Element Update would remain significant and unavoidable.

Regarding operation, the Certified PEIR calculated the operational (e.g., area, energy, mobile, waste, and water) emissions related to the development associated with the Housing Element Update would not exceed the efficiency threshold developed using the best available data from the City’s 2016 Climate

Action Plan (CAP) and SCAG population data, in the absence of an appropriate reduction target for 2030. However, because the CAP does not contain sufficient strategies to meet the Statewide GHG goal established by SB 32 for 2030 and the Statewide goal for carbon neutrality in Executive Order B-55-18 for 2045, mitigation measures are required to ensure that emissions are reduced to the extent feasible. As most operational emissions result from mobile sources, development associated with the Housing Element Update would be required to implement transportation demand management (TDM) strategies to mitigate impacts related to increased vehicle miles traveled (VMT) through Mitigation Measure MM-TRA-1. Energy use emissions, the second largest source of GHG emissions during operation, would be reduced through implementation of Mitigation Measure MM-GHG-2 to ensure that new developments would not include any onsite fuel combustion, and new buildings would be installed with electrical lighting and heating to the extent feasible. Mitigation Measure MM-GHG-3 requires implementation of all feasible CALGreen Tier 1 and Tier 2 voluntary measures to further reduce emissions from operational energy use, water use, and solid waste. Because implementation to these measures is not guaranteed to reduce emissions to a level that aligns with Statewide GHG goals, operational impacts of the Housing Element Update would remain significant and unavoidable.

Regarding Threshold (b), the Certified PEIR qualitatively discussed the Housing Element Update's consistency with relevant plans, including the City's General Plan 2025, the 2016 CAP, the CARB 2017 Scoping Plan, and other plans, policies, and regulatory programs adopted, drafted, or recommended by CARB and other agencies. While the Housing Element Update would be consistent with the various plans mentioned above, even with implementation of Mitigation Measures MM-GHG-1 through MM-GHG-3, impacts would remain significant and unavoidable.

Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?

Regarding Threshold (a), as shown in Attachment B of this Memorandum, Project construction would result in approximately 767 metric tons of carbon dioxide equivalent (MTCO₂e) per year without accounting for emission reductions from implementation of Certified PEIR Mitigation Measure MM-GHG-1. Project operation would result in approximately 2,243 MTCO₂e per year without accounting for emission reductions from implementation of Certified PEIR Mitigation Measures MM-TRA-1, MM-GHG-2, and MM-GHG-3. The Project's 843 residents and 15 employees⁸, or service population (SP) of 858, would result in approximately 2.6 MTCO₂e per SP, which would not exceed the efficiency threshold of 2.7 MTCO₂e per SP as determined in the Certified PEIR. Therefore, impacts would be less than significant, and no mitigation would be required.

Regarding Threshold (b), the Project would be required to demonstrate consistency with relevant plans, including the City's General Plan 2025, the 2016 CAP, the CARB 2022 Scoping Plan, and SCAG's 2020-2045 RTP/SCS objectives.

⁸ The number of employees is based on an employment generation factor (2.71 employees per 1,000 square feet) from the Los Angeles Unified School District's Developer Fee Justification Study.

General Plan 2025

The Project would be consistent with the following General Plan 2025 objectives:

Air Quality Element

- Policy AQ-1.5: The Project would be infill development in an urbanized area consisting of job centers and transportation nodes.
- Policy AQ-1.6: The Project would also be a mixed-use development that allows the integration of retail and residential uses for the purpose of reducing costs of infrastructure construction and maximizing the use of land.
- Policy AQ-1.15: The Project would establish land use patterns that reduce the number and length of motor vehicle trips and promote alternative modes of travel.
- Policy AQ-5.7: The Project would meet the energy use guidelines in Title 24 of the California Administrative Code.

Land Use Element

- Objective LU-8: Emphasize smart growth principles through all steps of the land development process.
 - The Project would construct a well-planned infill development in an area that is allowed for increased density (e.g., Opportunity Site) along an established transportation corridor. The Project would also develop a mixed-use building in an area that is urban and developed with compatible uses.
- Objective LU-9: Provide for continuing growth within the General Plan Area, with land uses and intensities appropriately designated to meet the needs of anticipated growth and to achieve the community’s objectives.
 - The Project would assist the City in meeting the Housing Element objectives to expand housing and services for the City’s population, facilitate and encourage new housing types, and provide opportunities for residents to have access to public transit and neighborhood-serving amenities. The Project would also focus development in already urbanized parts of the City to capitalize on existing and planned public facilities, rather than spreading growth to the urban fringes.
- Objective LU-10: Provide for appropriate timing of development in accordance with the future land uses designated in this Land Use Element.
 - The Project would be developed on an Opportunity Site and would facilitate redevelopment of a site that is underutilized.
- Objective LU-28: Preserve and enhance the quality and character of Riverside by ensuring compliance with all relevant codes and regulations.
 - The Project would be developed on an Opportunity Site and would facilitate redevelopment of a site that is underutilized.

2016 Climate Action Plan

The City adopted its CAP in January 2016. While the CAP is not a qualified reduction plan as defined by the CEQA Guidelines, it does propose measures and policies on community-wide and government levels that will support the City's GHG reduction goals.

- SR-2: Mandatory energy efficiency standards for buildings.
 - The Project would meet the energy use guidelines in Title 24 of the California Administrative Code.
- T-6: Improve jobs-housing balance and reduce vehicle miles traveled by increasing household and employment densities.
 - The Project would be a mixed-use development that would reduce VMT by allowing residents and employees to be co-located on the Project Site.

The Project would support, and not conflict with, the goals of the 2016 CAP.

SCAG 2020-2045 RTP/SCS

Under SB 375, each Metropolitan Planning Organization (MPO) is required to adopt and then update a Sustainable Community Strategy (SCS) to encourage compact development that reduces passenger vehicle miles traveled and trips so that its region will meet a target, set by CARB, for reducing GHG emissions. The purpose of SB 375 is to implement the State's GHG emissions reduction goals by integrating land use planning with the goal of reducing car and light-duty truck travel.

Reflecting that purpose, the primary goal of SCAG's 2020–2045 RTP/SCS is to provide a framework for achieving the CARB-assigned per capita reduction targets for GHG emissions from cars and light-duty trucks through land use planning and transportation options, while taking into account anticipated future growth within the region. To accomplish this target, the 2020–2045 RTP/SCS identifies various strategies for reducing per capita VMT. New GHG reduction targets are assigned by CARB, and thus, SCAG's long-range planning document is updated, every four years.

In addition to demonstrating the region's ability to attain and exceed the GHG emission-reduction targets set forth by CARB, the 2020–2045 RTP/SCS outlines a series of actions and strategies for integrating the transportation network with an overall land use pattern that responds to projected growth, housing needs, changing demographics, and transportation demands. 2020–2045 RTP/SCS can be grouped into the following three categories: (1) reduction of vehicle trips and VMT; (2) increased use of alternative fuel vehicles; and (3) improved energy efficiency. As previously discussed, the Project's consistency with applicable growth forecasts is assessed because the development of the RTP/SCS involved compilation of local land use and growth trends to form the basis for projections and strategies of the RTP/SCS. The Project would also be in a very efficient VMT area and on an Opportunity Site near public transit and essential services like neighborhood-serving shopping and amenities, which would make the Project to be consistent with VMT reduction strategies and policies. The Project would be consistent with the CALGreen Code, which would encourage reduction of energy and water usage and waste, thereby reducing associated GHG emissions and helping minimize impacts on natural resources and infrastructure. Therefore, as the Project would be consistent with the provisions and general policies of the 2020-2045

RTP/SCS, which incorporated policies to meet CARB's targets, the Project would support, and not conflict with, the goals of the 2020-2045 RTP/SCS.

CARB 2022 Scoping Plan

Included in the 2022 Scoping Plan is a set of Local Actions (2022 Scoping Plan Appendix D) aimed at providing local jurisdictions with tools to reduce GHGs and assist the state in meeting the ambitious targets set forth in the 2022 Scoping Plan. 2022 Scoping Plan Appendix D includes a section on evaluating plan-level and project-level alignment with the State's Climate Goals in CEQA GHG analyses. In this section, CARB identifies several recommendations and strategies that should be considered for new development in order to determine consistency with the 2022 Scoping Plan. Notably, this section is focused on Residential and Mixed-Use Projects. CARB specifically states that Appendix D does not address other land uses (e.g., industrial). However, CARB plans to explore new approaches for other land use types in the future.

Appendix D notes that residential and mixed-use projects that meet the following three priority areas are "clearly" consistent with the State's goals and projects that have these key project attributes should accommodate growth in a manner consistent with State GHG reduction and equity prioritization goals. Appendix D also notes that lead agencies may determine, with adequate additional supporting evidence, that projects that incorporate some, but not all, of the key project attributes are consistent with the State's climate goals.

1. **Transportation Electrification:** The Project would not affect local government fleets, and therefore, would not convert local government fleets to electric vehicles (EV). This goal is not applicable to the Project. However, the Project would provide parking spaces for EV and clean air vehicles.
2. **VMT Reduction:** The Project would be located on an Opportunity Site and would be located near public transit and essential services like neighborhood-serving shopping and amenities. The Project would also increase density on an underutilized site and would be located in a developed, urban area. Therefore, the Project would be consistent with this goal.
3. **Building Decarbonization:** The Project would be required to comply with the latest Title 24 and CALGreen Code requirements. The Project would also construct a modern building with updated equipment and appliances, which would be more energy-efficient than the existing building. Therefore, the Project would be consistent with this goal.

The Project would support, and not conflict with, the goals of CARB's 2022 Scoping Plan.

Based on the analysis above, the Project would be consistent with the relevant plans and policies listed above. Impacts would be less than significant. As such, the proposed Project would not result in new significant impacts or substantially more severe impacts than disclosed in the Certified PEIR.

Mitigation Measures Addressing Impact

No mitigation measures from the Certified PEIR would be applicable to the Project. No additional mitigation measures are required for the Project.

Conclusion

Based on the above, the Project’s potential environmental impacts to GHG emissions would be within the scope of the Certified PEIR and would not result in any of the conditions set forth in PRC Section 21166(c) or CEQA Guidelines Sections 15162 or 15163 that would require the preparation of a Supplemental or Subsequent EIR.

5.9 Hazards and Hazardous Materials

Thresholds	Impact Determination in the Certified PEIR	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Mitigation Measures Addressing Impacts
HAZARDS AND HAZARDOUS MATERIALS: Would the Project:			
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	Less Than Significant	No	N/A
b) Create a significant hazard to the public or the environment through the reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment?	Less Than Significant with Mitigation Incorporated	No	Yes
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	Less Than Significant with Mitigation Incorporated	No	Yes
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5 and, as a result, would it create a significant hazard to the public or the environment?	Less Than Significant with Mitigation Incorporated	No	Yes
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or	Less Than Significant	No	N/A

excessive noise for people residing or working in the project area?			
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	Less Than Significant	No	N/A
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	Less Than Significant	No	N/A

Impact Determination in the Certified PEIR

Impacts regarding hazards and hazardous materials under Thresholds (b), (c), and (d) were discussed in Section 3.6, Hazards and Hazardous Materials, of the Certified PEIR. Thresholds (a), (e), (f), and (g) were discussed in Section 3.15, Effects Not Found to be Significant, of the Certified PEIR.

Regarding Threshold (a), the Certified PEIR determined that materials typically used in construction projects, such as fuel, paint products, lubricants, solvents, cleaning products, and fertilizers, would not represent the transport, use, and disposal of hazardous materials. The transport, use, and disposal of hazardous materials must comply with applicable federal and State regulations, such as the Resource Conservation and Recovery Act and Department of Transportation Hazardous Materials Regulations. For facilities that handle hazardous materials during operations, California Health and Safety Code Section 25507 requires businesses to establish and implement a Hazardous Materials Business Plan for emergency response to a release or threatened release of a hazardous material. This requirement applies to businesses that handle a hazardous material or a mixture above the thresholds described in California Health and Safety Code Section 25507. Therefore, impacts would be less than significant.

Regarding Threshold (b), the Certified PEIR determined that construction of a new residential or mixed-use development would involve ground-disturbing activities such as, but not limited to, grading and excavation. Ground-disturbing activities have the potential to encounter and release contaminated soils or groundwater and could potentially expose people or the environment to these hazardous materials. The potential to expose hazardous materials during ground disturbance would exacerbate the conditions on site by releasing hazardous materials to the environment (in the form of contaminated media), and therefore would result in impacts related to accidental conditions. Prior to the commencement of a construction project, Mitigation Measure MM-HAZ-1 would be implemented, which would require a project-level hazardous material site assessment for construction of the specific project, which would verify the presence or absence of hazardous materials on any Opportunity Site and require subsequent measures, if necessary, based on the conditions on the site. With implementation of Mitigation Measure MM-HAZ-1, impacts would be reduced to less than significant.

Regarding Threshold (c), the Certified PEIR determined that there are several locations, including Opportunity Sites, where ground-disturbing construction could occur within or immediately adjacent to a hazardous material site that are within 0.25 mile of a school site. Therefore, soil-disturbance activities could encounter contaminated groundwater and/or contaminated soil within 0.25 mile of a school, and impacts are potentially significant. Implementation of the proposed policies and Mitigation Measure MM-HAZ-1 would reduce impacts to less than significant.

Regarding Threshold (d), construction could occur within or immediately adjacent to a site fitting the Cortese List site criteria as a result of buildout of the Housing Element Update, and impacts would be potentially significant. Implementation of the proposed policies and Mitigation Measure MM-HAZ-1 would reduce impacts to less than significant.

Regarding Threshold (e), the Housing Element Update would not propose future residential and/or mixed-use development on Opportunity Sites within a restricted Airport Influence Areas (AIA) for any of the airports within or adjacent to the City. The Opportunity Sites were identified based on compatible land use criteria and established Land Use Compatibility Zones of the Riverside County Airport Land Use Compatibility Plan Policy Document. The Housing Element Update would not result in a change in air traffic patterns or result in a safety hazard for people residing or working in the City, and impacts would be less than significant.

Regarding Threshold (f), the developments associated with the Housing Element Update would be required to comply with the Riverside County Operational Area Multi-Jurisdictional Local Hazard Mitigation Plan, General Plan 2025 policies, and the updates to the City's Public Safety Element. With continued use of the Standardized Emergency Management System (SEMS) and the Riverside County Operational Area Multi-Jurisdictional Local Hazard Mitigation Plan, as well as implementation of General Plan 2025 policies and Public Safety Element principles, impacts would be less than significant.

Regarding Threshold (g), the Certified PEIR determined that portions of the City are in areas classified as Very High Fire Hazard Severity Zones (VHFHSZ). The Certified PEIR determined that development associated with the Housing Element Update would not include housing and mixed-use development within wildfire hazard areas. Impacts would be less than significant.

Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?

Regarding Threshold (a), construction and operation of the Project would use fuel, paint products, lubricants, solvents, cleaning products, and fertilizers that would be transported, used, and disposed of. These materials are typically used in construction projects and would not represent the transport, use, and disposal of hazardous materials. Project operation would transport, use, and dispose of potential hazardous materials in compliance with applicable State and federal regulations. Impacts would be less than significant.

Regarding Threshold (b), the Project Site is not an existing hazardous materials site and is not a Cortese List site. While the building was constructed prior to 1980 and would be demolished as part of the Project,

an asbestos survey will be conducted in accordance with Cal/OSHA (CCR Title 8, Section 1529) and the National Emission Standards for Hazardous Air Pollutants for Asbestos Surveys (40 CFR 61, Subpart M). CCR Title 8, Section 1532.1, “Lead,” and Cal/OSHA requirements will be followed when handling materials containing lead. With compliance with regulatory standards, impacts would be less than significant.

Regarding Threshold (c), the Project Site is not within 0.25 mile of a school. Impacts would be less than significant.

Regarding Threshold (d), the Project Site is not on the Cortese List. The Project Site is also not listed on the California Department of Toxic Substances Control (DTSC) EnviroStor database and State Water Resources Control Board GeoTracker database. Impacts would be less than significant.

Regarding Threshold (e), the Project would not be located within two miles of a public airport or public use airport. There would be no impact.

Regarding Threshold (f), the Project would be required to comply with the Riverside County Operational Area Multi-Jurisdictional Local Hazard Mitigation Plan, General Plan 2025 policies, and the updates to the Public Safety Element. The Project would be developed in an urban area with existing roadways that service emergency vehicles. Therefore, impacts would be less than significant.

Regarding Threshold (g), according to the California Department of Forestry and Fire Protection (CAL FIRE), the Project Site is not within a State Responsibility Area (SRA) or Local Responsibility Area (LRA) VHFHSZ. There would be no impact.

As such, the proposed Project would not result in new significant impacts or substantially more severe impacts than disclosed in the Certified PEIR.

Mitigation Measures Addressing Impact

No mitigation measures from the Certified PEIR would be applicable to the Project. No additional mitigation measures are required for the Project.

Conclusion

Based on the above, the Project’s potential environmental impacts to hazards and hazardous materials would be within the scope of the Certified PEIR and would not result in any of the conditions set forth in PRC Section 21166(c) or CEQA Guidelines Sections 15162 or 15163 that would require the preparation of a Supplemental or Subsequent EIR.

5.10 Hydrology and Water Quality

Thresholds	Impact Determination in the Certified PEIR	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Mitigation Measures Addressing Impacts
HYDROLOGY AND WATER QUALITY: Would the Project:			

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	Less Than Significant	No	N/A
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	Less Than Significant	No	N/A
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would?			
(i) result in substantial erosion or siltation on- or off site;	Less Than Significant	No	N/A
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	Less Than Significant	No	N/A
(iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	Less Than Significant	No	N/A
(iv) impede or redirect flood flows?	Less Than Significant	No	N/A
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	Less Than Significant	No	N/A
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	Less Than Significant	No	N/A

Impact Determination in the Certified PEIR

Impacts regarding hydrology and water quality were discussed in Section 3.15, Effects Not Found to be Significant, of the Certified PEIR.

Regarding Threshold (a), the Certified PEIR determined that construction and development associated with the Housing Element Update would have the potential to temporarily increase sediment loads and affect surface water quality during ground disturbance and other construction activities. Individual

development projects involving land disturbance of one acre or more would be subject to NPDES requirements and be required to develop and implement a project-specific SWPPP in compliance with the Construction General Permit, local stormwater ordinances, and other related requirements. Also, individual development projects would generally require grading permits and erosion control plans to be submitted prior to construction. Construction BMPs would control or prevent the discharge of pollutants, including concrete, waste from pavement cutting, petroleum products, chemicals, wastewater, sediments, and non-stormwater discharges, to storm drains and watercourses. In addition, construction materials and wastes would be stored, handled, and disposed of in compliance with applicable regulations to prevent contact with stormwater. Earthmoving and clearing activities would be performed during dry weather only to minimize any mobilization of sediment. Temporary erosion controls, as applicable, would be implemented to stabilize disturbed areas until permanent erosion controls can be established. Project-specific WQMPs would also be prepared that would outline the low-impact development (LID) BMPs required to meet water quality standards and reduce stormwater runoff. Impacts would be less than significant.

Regarding Threshold (b), implementation of development projects associated with the Housing Element Update may increase the impervious surface area and potentially decrease groundwater recharge. However, some of the individual development could decrease the impervious surface area through the addition of pervious surfaces and landscaping compared to existing conditions and potentially increase groundwater recharge. Stormwater infiltration measures would be implemented to allow runoff to infiltrate the soil media and percolate into the ground, which would allow groundwater recharge and increase recharge potential within individual project areas. No Opportunity Sites are located in the immediate vicinity of the Western Municipal Water District recharge basin. Impacts would be less than significant.

Regarding Threshold (c.i), construction activities would temporarily alter existing drainage patterns and could result in temporary onsite erosion and siltation. New development would be subject to NPDES requirements, and projects with one acre or more of disturbance would prepare and implement a SWPPP. Project-specific WQMPs would outline the LID BMPs required to adequately reduce stormwater runoff and erosion. Runoff from impervious areas would be directed to permeable surfaces, landscaping, or other LID areas. In addition, storm drain infrastructure would be designed and maintained in compliance with the City's MS4 permit and applicable General Plan 2025 policies and ordinances. Impacts would be less than significant.

Regarding Threshold (c.ii), some of the future development associated with the Housing Element Update could increase the amount of impervious surface area compared with existing conditions, likely resulting in a net increase in the volume of runoff and floodwater leaving some of the individual Opportunity Sites. Project-specific WQMPs, as applicable, would be prepared, outlining the LID BMPs required to reduce stormwater runoff. Future development must implement the BMPs identified in the project-specific SWPPP prior to the commencement of construction to reduce on- or offsite flooding. Onsite stormwater runoff and flooding would be minimized through site development using citywide landscape and irrigation

and mixed-use design guidelines provided in the Riverside Citywide Design Guidelines and Sign Guidelines. Impacts would be less than significant.

Regarding Threshold (c.iii), BMPs would be implemented to reduce adverse water quality impacts resulting from development. Development would also be required to comply with water quality measures pursuant to the City's MS4 permit. The WQMP would outline the BMPs required to adequately reduce stormwater runoff; these would be approved prior to development approvals and issuance of grading permits. The City has developed a 5-year Capital Improvement Program (CIP), which includes a Storm Drain Program. The City would continue to fund and undertake storm drain improvement projects identified in the CIP. Impacts would be less than significant.

Regarding Threshold (c.iv), the City would review all development proposals to determine if an individual development project is proposed in a flood hazard area. Runoff from new development would be evaluated and attenuated on site if located within a Federal Emergency Management Agency (FEMA) 100-year flood zone. Stormwater infiltration measures such as infiltration beds, swales, basins, and other landscape features encouraged by the Citywide Water Efficient Landscaping and Irrigation Design Guidelines would be implemented on future development where feasible. These features would increase onsite infiltration and minimize the potential for overland floodflows. Impacts would be less than significant.

Regarding Threshold (d), the Certified PEIR determined that the City is not prone to inundation due to tsunamis or seiches. In the event of a flood hazard, to reduce the risk of a pollutant release, individual projects associated with the Housing Element Update would comply with the requirements of local water quality programs and associated municipal stormwater-related NPDES permits (e.g., MS4 permit, project-specific WQMP) as well as GP 2025 policies and the Public Safety Element Update to manage flood risk and water quality. Compliance with these requirements would minimize risks related to a release of pollutants due to any potential inundation in a flood hazard, tsunami, or seiche zone. Impacts would be less than significant.

Regarding Threshold (e), the Certified PEIR determined that implementation of the Housing Element Update would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Commonly practiced BMPs would be implemented to control construction site runoff and reduce discharges of pollutants (i.e., stormwater and other nonpoint-source runoff) to storm drain systems. As part of compliance with permit requirements during ground-disturbing or construction activities, implementation of water quality control measures and BMPs would ensure that water quality standards would be achieved. The NPDES Construction General Permit also requires stormwater discharges not to contain pollutants that cause or contribute to an exceedance of any applicable water quality objectives or water quality standards, including designated beneficial uses. Impacts would be less than significant.

Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?

Regarding Threshold (a), the Project would involve land disturbance of more than one acre and would be subject to NPDES requirements. A project-specific SWPPP would be developed and implemented in compliance with the Construction General Permit, local stormwater ordinances, and other related requirements. A Project-specific WQMP would also be prepared that would outline the LID BMPs required to meet water quality standards and reduce stormwater runoff. Impacts would be less than significant.

Regarding Threshold (b), the Project would not utilize groundwater supplies and would include landscaping features on-site to increase groundwater recharge. Impacts would be less than significant.

Regarding Threshold (c), the Project would implement a SWPPP and develop a WQMP to outline LID BMPs to reduce stormwater runoff and erosion. The Project is not located within a FEMA 100-year floodplain and would be designed to minimize on-site stormwater runoff and flooding. Impacts would be less than significant.

Regarding Threshold (d), the Project is not located in a flood hazard area and would not be prone to flood, seiche, tsunami, or other inundation hazards. Therefore, the Project would not result in a release of pollutants due to inundation within a flood, tsunami, or seiche hazard zone. Impacts would be less than significant.

Regarding Threshold (e), the Project would comply with NPDES requirements and would implement water quality control measures and BMPs to ensure that water quality standards are achieved. Impacts would be less than significant. As such, the proposed Project would not result in new significant impacts or substantially more severe impacts than disclosed in the Certified PEIR.

Mitigation Measures Addressing Impact

No mitigation measures from the Certified PEIR would be applicable to the Project. No additional mitigation measures are required for the Project.

Conclusion

Based on the above, the Project’s potential environmental impacts to hydrology and water quality would be within the scope of the Certified PEIR and would not result in any of the conditions set forth in PRC Section 21166(c) or CEQA Guidelines Sections 15162 or 15163 that would require the preparation of a Supplemental or Subsequent EIR.

5.11 Land Use and Planning

Thresholds	Impact Determination in the Certified PEIR	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Mitigation Measures Addressing Impacts
LAND USE AND PLANNING: Would the Project:			

a) Physically divide an established community?	Less Than Significant	No	N/A
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	Less Than Significant	No	N/A

Impact Determination in the Certified PEIR

Impacts regarding land use and planning were discussed in Section 3.7, Land Use and Planning, of the Certified PEIR.

Regarding Threshold (a), the Certified PEIR determined that implementation of the Housing Element Update would not divide, disrupt, or isolate an existing community or neighborhood. The physical division of an established community could occur if a major road (expressway or freeway, for example) were built through an existing community or neighborhood, or if a major development was built that was inconsistent with the land uses in the community such that it divided the community. The environmental effects caused by such a facility or land use could include obstruction or disruption of access to services, schools, or shopping areas. Development associated with the Housing Element Update would largely be in infill development, redevelopment, and/or adaptive reuse, and the development would be focused in already urbanized parts of the City near existing infrastructure. No major roadways that would traverse an existing community or neighborhood would be proposed. Impacts would be less than significant.

Regarding Threshold (b), the Certified PEIR evaluated consistency with regional land use plans and local land use plans, including the City’s General Plan 2025 and SCAG’s 2020-2045 RTP/SCS. As discussed in the Certified PEIR, the Housing Element Update would be substantially consistent with objectives and policies that aim to provide housing of types, sizes, densities, and affordability levels required to satisfy the varying needs and desires of all segments of the community’s population. The Housing Element Update would be consistent with SCAG’s 2020-2045 RPT/SCS goals and adopted growth forecasts. Impacts would be less than significant.

Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?

Regarding Threshold (a), the Project would be developed in a developed, urban area. The Project would not develop a major road through the Project Site or a major development inconsistent with the land uses in the community. The Project would be consistent with the General Plan and zoning designation for the Project Site. Impacts would be less than significant.

Regarding Threshold (b), the Project would be located on an Opportunity Site and would be located near public transit and essential services like neighborhood-serving shopping and amenities. Therefore, the Project would be an infill development consistent with the growth projections of the Housing Element Update, SCAG’s 6th RHNA Cycle, and SCAG’s 2020-2045 RTP/SCS. The Project would also be consistent with

the General Plan 2025 objectives and policies that were intended to assist the City in achieving SCAG’s goals, such as Objective LU-8 related to smart growth principles for infill development and increased density in selected areas along established transportation corridors; Objective LU-9 related to continuing growth in areas designed to meet the needs of anticipated growth; and Policy LU-28.2 related to redeveloping an underutilized site to prevent further deterioration. For more details, see Section 5.8, Greenhouse Gas Emissions, above. Therefore, impacts would be less than significant. As such, the proposed Project would not result in new significant impacts or substantially more severe impacts than disclosed in the Certified PEIR.

Mitigation Measures Addressing Impact

No mitigation measures from the Certified PEIR would be applicable to the Project. No additional mitigation measures are required for the Project.

Conclusion

Based on the above, the Project’s potential environmental impacts to land use and planning would be within the scope of the Certified PEIR and would not result in any of the conditions set forth in PRC Section 21166(c) or CEQA Guidelines Sections 15162 or 15163 that would require the preparation of a Supplemental or Subsequent EIR.

5.12 Mineral Resources

Thresholds	Impact Determination in the Certified PEIR	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Mitigation Measures Addressing Impacts
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?	No Impact	No	N/A
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?	No Impact	No	N/A

Impact Determination in the Certified PEIR

Impacts regarding mineral resources were discussed in Section 3.15, Effects Not Found to be Significant, of the Certified PEIR.

Regarding Threshold (a), the Certified PEIR determined that mineral extraction does not play a major role in the City’s economy, and there are no known substantial mineral deposits. Development on Opportunity

Sites within areas classified as mineral resource zones would not result in a loss of known mineral resources that would be of value to the region and residents of the State. There would be no impacts.

Regarding Threshold (b), the Housing Element Update would not result in the loss of availability of a locally important mineral resource recovery site delineated in the General Plan 2025, a Specific Plan, or any other land use plan. There would be no impact.

Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?

Regarding Threshold (a) and (b), the Project Site would not be located in areas designated as a mineral resource zone. Development of the Project would not result in the loss of availability of a locally important mineral resource recovery site. There would be no impact. As such, the proposed Project would not result in new significant impacts or substantially more severe impacts than disclosed in the Certified PEIR.

Mitigation Measures Addressing Impact

No mitigation measures from the Certified PEIR would be applicable to the Project. No additional mitigation measures are required for the Project.

Conclusion

Based on the above, the Project’s potential environmental impacts to mineral resources would be within the scope of the Certified PEIR and would not result in any of the conditions set forth in PRC Section 21166(c) or CEQA Guidelines Sections 15162 or 15163 that would require the preparation of a Supplemental or Subsequent EIR.

5.13 Noise

Thresholds	Impact Determination in the Certified PEIR	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Mitigation Measures Addressing Impacts
NOISE: Would the Project:			
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	Significant and Unavoidable	No	Yes
b) Generation of excessive groundborne vibration or groundborne noise levels?	Significant and Unavoidable	No	Yes
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a	Less Than Significant	No	N/A

<p>public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?</p>			
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Impact Determination in the Certified PEIR

Impacts regarding noise were discussed in Section 3.8, Noise, of the Certified PEIR.

Regarding Threshold (a), the Certified PEIR determined that the construction vehicles would incrementally increase noise levels on access roads and on future development sites. This would include construction worker vehicles and haul trucks traveling to and from proposed development sites. Although there would be a relatively high single-event noise level, which could cause an intermittent noise nuisance (e.g., passing trucks at 50 feet would generate up to 77 dBA), the effect on longer-term ambient noise levels would be transitory and minimal. RMC Section 7.35.020 requires construction to be limited to 7:00 a.m. through 7:00 p.m. on weekdays and 8:00 a.m. through 5:00 p.m. on Saturdays, and all construction activities to be prohibited on Sundays and federal holidays. With implementation of construction BMPs detailed in the Certified PEIR, such as utilizing quietest available construction equipment or equipping mufflers or silencers on construction equipment, and compliance with the RMC, construction noise impacts would be less than significant.

The Certified PEIR determined that future operational traffic noise by the Opportunity Sites would exceed the relevant thresholds outlined by General Plan 2025. Mitigation Measure MM-NOI-1 would be required to reduce the impacts to the greatest extent practical. However, even with implementation of Mitigation Measure MM-NOI-1, impacts from operational traffic noise would remain significant and unavoidable. The potential for operational stationary noise (e.g., from HVAC systems) may exceed both the daytime and/or nighttime sound level limits from the RMC. Even with implementation of Mitigation Measure MM-NOI-2, impacts from operational stationary noise would remain significant and unavoidable.

Regarding Threshold (b), the Certified PEIR determined that heavy construction equipment has the potential to produce groundborne vibration levels that are perceptible to people in the surrounding area and that would be intermittent sources for damage to buildings. As the location of construction is not known at this time, construction vibration levels cannot be calculated at specific vibration-sensitive land uses. Therefore, impacts from vibration would be potentially significant. Even with the implementation of Mitigation Measure MM-NOI-3, impacts could remain significant and unavoidable.

The Certified PEIR determined that truck pass-by vibration would not result in potential damage to nearby structures. Vibration would not be noticeable outside of 50 feet from the roadway. As the long-term operation of development projects associated with Housing Element Update, residential and mixed use projects, would not result in significant sources of vibration, impacts would be less than significant.

Regarding Threshold (c), the Certified PEIR determined that noise from aircraft on departure or approach to the Riverside Municipal Airport, Flabob Airport, and March Reserve Airforce Base would be audible at

many of the Opportunity Sites identified throughout the City. However, none of the Opportunity Sites identified would be within the 60 or 65 dBA CNEL contour from the surrounding airports. Impacts would be less than significant.

Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?

Regarding Threshold (a), as described in Attachment A of this Memorandum, with implementation of Certified PEIR Mitigation Measures MM-NOI-1 and MM-NOI-2, the Project's construction and operation-related noise impacts were estimated and were determined to not exceed the appropriate agency (e.g., Federal Transit Administration [FTA], Federal Highway Administration [FHWA], and RMC) thresholds. Construction and operational noise impacts would be less than significant.

Regarding Threshold (b), as described in Attachment A of this Memorandum, groundborne vibration levels were estimated based on the specific construction equipment needed to construct the Project. Based on this equipment list and the distance to off-site vibration-sensitive land uses, the vibration velocities from Project construction would be below the FTA's threshold for building damage and the California Department of Transportation's (Caltrans) threshold for human annoyance, without the need for mitigation measures. Further, once operational, the Project would not include vibration-generating uses or operations. Impacts would be less than significant.

Regarding Threshold (c), the Project would not be located within two miles of a public airport or public use airport. There would be no impact. As such, the proposed Project would not result in new significant impacts or substantially more severe impacts than disclosed in the Certified PEIR.

Mitigation Measures Addressing Impact

The following mitigation measures set forth in the Certified PEIR and the associated MMRP to address cultural resources impacts were implemented as part of the Project. No additional mitigation measures are required.

MM-NOI-1: Prepare a focused noise study and implement findings to reduce traffic noise.

For Opportunity Site projects that would exceed the 60 or 65 dBA CNEL threshold (based on the noise contour maps included in GP 2025), the applicant shall prepare a detailed analysis and implement mitigation to comply with the applicable City standards outlined in GP 2025. This could include but would not be limited to actions such as:

- Installation of soundwalls to break the line of sight from noise sources such as traffic noise
- Installation of noise-reducing insulation
- Installation of windows with sound transmission class (STC) ratings appropriate to reduce exterior-to-interior noise transmission
- Installation of HVAC systems

MM-NOI-2: For any development where stationary noise sources may exceed interior or exterior noise standards, prepare a focused noise study and implement findings to reduce HVAC noise.

The applicant shall design HVAC systems for Opportunity Sites to comply with the applicable City Municipal Code standards. This could include but would not be limited to actions such as:

- Preparation of a focused noise study to analyze HVAC noise, which shall identify a location for HVAC systems at appropriate distances so as to not exceed a noise level of 55 dBA L_{eq} (exterior) and 45 dBA L_{eq} (interior) between the hours of 7:00 a.m. and 10:00 p.m. and 45 dBA L_{eq} (exterior) and 35 dBA L_{eq} (interior) between the hours of 10:00 p.m. and 7:00 a.m. at the closest noise-sensitive land use. Design features that could be used to comply with the relevant threshold could include but are not limited to:
 - Locating HVAC systems far enough from residences so as to allow noise to attenuate to below the relevant standards
 - Installing housings or structural parapets around HVAC systems
 - Installing noise-reducing insulation
 - Installing windows with STC ratings appropriate to reduce exterior-to-interior noise transmission

Conclusion

Based on the above, the Project’s potential environmental impacts to noise would be within the scope of the Certified PEIR and would not result in any of the conditions set forth in PRC Section 21166(c) or CEQA Guidelines Sections 15162 or 15163 that would require the preparation of a Supplemental or Subsequent EIR.

5.14 Population and Housing

Thresholds	Impact Determination in the Certified PEIR	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Mitigation Measures Addressing Impacts
POPULATION AND HOUSING: Would the Project:			
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	Significant and Unavoidable	No	N/A
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	Less Than Significant	No	N/A

Impact Determination in the Certified PEIR

Impacts regarding population and housing were discussed in Section 3.9, Population and Housing, of the Certified PEIR. Threshold (b) is discussed in Section 3.15, Effects Not Found to be Significant, of the Certified PEIR.

Regarding Threshold (a), the Certified PEIR determined that the rezoning associated with the Housing Element Update would result in an increase in the number of new housing units between 2021 and 2029 of up to approximately 24,000 to fulfill the City's RHNA obligation. Rezoning that would occur as part of the Housing Element Update would allow for development of up to 31,564 housing units, if all sites were developed to the maximum proposed zoning capacity. According to SCAG, the population of the City is projected to increase to 395,800 by 2045, which represents an increase of 20.61 percent from the 2020 population of 328,155. Based on Department of Finance population and housing estimates, the City's current average household size is 3.28 persons. The increase in population that would potentially result by adding 31,564 new housing units would result in a population increase of 103,530 persons, which would be greater than the SCAG 2045 population projection of 67,645 new residents. Implementation of the Housing Element Update would result in additional housing beyond what is currently allowed under the existing General Plan 2025 and SCAG projections. This could result in an additional net increase of 47,175 in City population beyond what is currently anticipated at build-out under General Plan 2025 (increase of 56,355 persons). As the development associated with the Housing Element Update would result in projections beyond what was anticipated in the General Plan 2025 and no mitigation is available to reduce this impact to a less-than-significant level, impacts would be significant and unavoidable.

Regarding Threshold (b), the potential exists for an increase in the number of new dwelling units, up to approximately 31,564. Some redevelopment could result in the removal of existing housing (up to approximately 389 dwelling units), but this is anticipated to be minimal and would not displace a substantial number of people or existing housing units relative to the overall scale of the Housing Element Update. Any existing units removed through redevelopment would be replaced with new units per the requirements of SB 166 (No Net Loss). Impacts would be less than significant.

Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?

Regarding Threshold (a), based on the City's average household size of 3.28, the Project's 257 dwelling units would result in 843 new residents, which would represent approximately 1.2 percent of the estimated population growth (approximately 67,645 new residents) forecasted by SCAG's 2020-2045 RTP/SCS between 2020 and 2045. The Project's residents would be part of the Housing Element Update and within SCAG's projected population update. Impacts would be less than significant.

Regarding Threshold (b), the Project Site is currently developed with commercial uses. The Project would not displace people or housing. There would be no impact. As such, the proposed Project would not result in new significant impacts or substantially more severe impacts than disclosed in the Certified PEIR.

Mitigation Measures Addressing Impact

No mitigation measures from the Certified PEIR would be applicable to the Project. No additional mitigation measures are required for the Project.

Conclusion

Based on the above, the Project’s potential environmental impacts to population and housing would be within the scope of the Certified PEIR and would not result in any of the conditions set forth in PRC Section 21166(c) or CEQA Guidelines Sections 15162 or 15163 that would require the preparation of a Supplemental or Subsequent EIR.

5.15 Public Services

Thresholds	Impact Determination in the Certified PEIR	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Mitigation Measures Addressing Impacts
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?	Less Than Significant	No	N/A
b) Police protection?	Less Than Significant	No	N/A
c) Schools?	Less Than Significant	No	N/A
d) Other facilities, including libraries?	Less Than Significant	No	N/A

Impact Determination in the Certified PEIR

Impacts regarding public services were discussed in Section 3.10, Public Services, of the Certified PEIR.

Regarding Threshold (a), the Certified PEIR determined that the demand for fire protection services would increase as a result of future development associated with the Housing Element Update. Future residential and mixed-use development would increase the use of existing fire protection services, which could cause physical deterioration of existing facilities. State, county, and City jurisdictions have policies related to providing adequate fire services to the area. All development would be constructed in accordance with current building and fire/life/safety ordinances and codes, including all applicable County of Riverside and City jurisdiction code requirements related to construction, access, water mains, fire flows, and hydrants. Future development within Riverside County would be required to comply with Riverside Fire Department (RFD) and fire safety regulations. Compliance with the above-mentioned State and local regulations would ensure that there would be sufficient fire protection service and facilities to

accommodate additional population resulting from residential and mixed-use development and resulting population growth associated with the Housing Element Update. Impacts would be less than significant.

Regarding Threshold (b), the increase in dwelling units would increase population and could result in a permanent increase in demand for police protection services in areas served by the Riverside Police Department (RPD). The RPD would evaluate its budget annually to provide adequate police services, including police staffing increases, to accommodate additional growth associated with development facilitated by the Housing Element Update. The City would continue to meet the recommended police response times. Compliance with the above-mentioned State and local regulations would ensure that there would be sufficient police protection service and facilities to accommodate additional population resulting from development and resulting population growth associated with the Housing Element Update. Impacts would be less than significant.

Regarding Threshold (c), the increase in dwelling units from the Housing Element Update would increase population and could result in a permanent increase in demand for public school services in areas served by Riverside Unified School District (RUSD) and Alvord Unified School District (AUSD). Some of the new residents may attend private schools or charter schools, or they may be home schooled. Future residential development would comply with RMC Chapter 16.56, School Development Fee, which establishes coordination between the City and the applicable school district to develop a school development fee for mitigating the impact of residential development on local school districts. In addition, legislation allows school districts to collect impact fees from developers of new residential and commercial uses. Pursuant to Government Code Section 65996, school fees imposed through the Education Code are deemed to be full mitigation for new development projects; the City cannot impose additional mitigation measures. Compliance with the above-mentioned state and local regulation would ensure that there would be sufficient facilities and service to accommodate additional students resulting from development and resulting population growth associated with the Housing Element Update. Impacts would be less than significant.

Regarding Threshold (d), potential impacts would include placing greater demands on public service facilities, potentially resulting in the need to provide new or expanded facilities in order to maintain an acceptable level of service. Additionally, use of existing public services facilities would increase, which could cause physical deterioration of the facility. Library service needs and standards are determined by the following methods: volumes by population, community need/service gaps (including services provided/not provided by other area departments and agencies), customer requests, and innovation/success of pilot projects. Compliance with General Plan 2025 would ensure that the Housing Element Update would not affect the City's ability to provide adequate libraries. Impacts would be less than significant.

Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?

Regarding Thresholds (a) and (b), the Project would result in 843 new residents and would be required to comply with all applicable state and City regulations. Compliance with the above-mentioned state and

local regulations would ensure that there would be sufficient fire protection and police protection service and facilities to accommodate additional population resulting from mixed-use development and associated population growth from the Project. Impacts on fire and police protection services would be less than significant.

Regarding Threshold (c), the Project's 257 dwelling units and 843 new residents could result in an increase in students attending RUSD and AUSD schools. The Project would be required to comply with RMC Chapter 16.56, which requires payment of a school development fee to mitigate the impact of residential development on local school districts. Pursuant to Government Code Section 65996, no additional mitigation would be required for new development projects related to public school services. Compliance with the above-mentioned state and local regulation would ensure that there would be sufficient facilities and service to accommodate additional students resulting from development and associated population growth from the Project. Impacts would be less than significant.

Regarding Threshold (d), the Project would comply with General Plan 2025 Education Element Objective ED-5 and Policy ED-5.1 to ensure that the Project would not affect the City's ability to provide adequate libraries. Impacts would be less than significant. As such, the proposed Project would not result in new significant impacts or substantially more severe impacts than disclosed in the Certified PEIR.

Mitigation Measures Addressing Impact

No mitigation measures from the Certified PEIR would be applicable to the Project. No additional mitigation measures are required for the Project.

Conclusion

Based on the above, the Project's potential environmental impacts to public services would be within the scope of the Certified PEIR and would not result in any of the conditions set forth in PRC Section 21166(c) or CEQA Guidelines Sections 15162 or 15163 that would require the preparation of a Supplemental or Subsequent EIR.

5.16 Recreation

Thresholds	Impact Determination in the Certified PEIR	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Mitigation Measures Addressing Impacts
RECREATION: Would the Project:			
a) 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??	Less Than Significant	No	N/A
b) Increase recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	Less Than Significant	No	N/A

Impact Determination in the Certified PEIR

Impacts regarding recreation were discussed in Section 3.11, Recreation, of the Certified PEIR.

Regarding Threshold (a), the Certified PEIR determined that the potential increase from the implementation of the Housing Element Update could result in increased use of park and recreational facilities in the City. The implementation of the Housing Element Update could result in an increased use of nearby existing neighborhood parks, regional parks, and community parks. Potential impacts would include greater demands on parkland and recreational facilities, potentially increasing the use of existing parks and other recreational facilities, which could cause physical deterioration of the facility. However, the impacts associated with park development and operation would be less than significant. New residential and mixed-use development within the City is required to adhere to minimum open space standards of the Zoning Code (Title 19 of the RMC), which could include pocket parks, tot lots, court facilities, barbecue facilities, jogging or walking trails, community gardens, accessible green roof space, and traditional neighborhood parks. The development of these parks would offset the Project’s increased demand and thereby minimize physical deterioration of existing parks and open space facilities.

To provide more local recreational resources for City residents, developers will adhere to RMC 16.60, Local Park Development Fees, from build-out of the Opportunity Sites and are encouraged to incorporate living roofs and/or rooftop greenspace on mixed-use and high-density residential and, wherever possible, to design pocket parks into development plans to provide more local recreational resources. Chapter 6 of the Parks Master Plan outlines additional funding sources for the creation of new parks, including state funding through the June 2018 Park Bond and through the California Department of Housing and Community Development’s Housing-Related Parks Program. The inclusion of public parks and green space would help offset the impacts on recreational resources in the City. New development of parks and

Opportunity Sites would require subsequent project-specific CEQA analysis on a case-by-case basis. Impacts would be less than significant.

Regarding Threshold (b), City parkland standards, RMC Chapter 16, and General Plan 2025 Policy PR-1.2 require a minimum of 3 acres of developed parkland per 1,000 residents and other requirements applicable to new residential development to accommodate demand for recreational facilities. The City requires that private developers proposing residential projects in the City include open space within their project as well as adhere to RMC 16.60 and pay park development impact fees. These dedications and fees are collected by the City as part of the development review process and are used for the purpose of supporting the City’s recreational budget for past and present facilities to serve the community. Impacts would be less than significant.

Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?

Regarding Threshold (a) and (b), the Project would include 37,063 square feet of residential common open space consisting of three main courtyards consisting of barbecue areas, dining and lounge areas, fire pits, a pet park, amenities, terraced decks, a business center, fitness room, and lounge. The Project’s provisions would comply with RMC Title 19. The Project would also be required to adhere to RMC 16.60 for local park development fees to offset impacts on recreational resources in the City. Impacts would be less than significant. As such, the proposed Project would not result in new significant impacts or substantially more severe impacts than disclosed in the Certified PEIR.

Mitigation Measures Addressing Impact

No mitigation measures from the Certified PEIR would be applicable to the Project. No additional mitigation measures are required for the Project.

Conclusion

Based on the above, the Project’s potential environmental impacts to recreation would be within the scope of the Certified PEIR and would not result in any of the conditions set forth in PRC Section 21166(c) or CEQA Guidelines Sections 15162 or 15163 that would require the preparation of a Supplemental or Subsequent EIR.

5.17 Transportation

Thresholds	Impact Determination in the Certified PEIR	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Mitigation Measures Addressing Impacts
TRANSPORTATION: Would the Project:			

a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	Less Than Significant	No	N/A
b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	Significant and Unavoidable	No	N/A
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	Less Than Significant	No	N/A
d) Result in inadequate emergency access?	Less Than Significant	No	N/A

Impact Determination in the Certified PEIR

Impacts regarding transportation were discussed in Section 3.12, Transportation, of the Certified PEIR. Thresholds (c) and (d) were discussed in Section 3.15, Effects Not Found to be Significant, of the Certified PEIR.

Regarding Threshold (a), the Certified PEIR determined that as part of the standard development review process, the City would require all future development of identified Opportunity Sites to go through a review of pedestrian, bicycle, and transit facilities in the area surrounding the individual development project to ensure that future developments do not conflict with existing or planned facilities supporting those travel modes. All pedestrian, bicycle, and transit facilities proposed would be designed using the appropriate design standards. Impacts would be less than significant.

Regarding Threshold (b), the Certified PEIR determined that because the Housing Element Update would increase population and employment within the City, VMT would increase. However, as shown in the Certified PEIR, the VMT per service population would decrease within the City, showing that travel on a per-person basis would be more efficient with the addition of the developments associated with the Housing Element Update. The Housing Element Update would result in an increase in the Housing Element Update’s VMT from No Project baseline conditions, which is considered a significant impact for all VMT metrics presented. Mitigation Measure MM-TRA-1 would be required to reduce impacts; however, given the uncertainty in some components of the measure that influence VMT (such as the cost of fuel) combined with the City’s inability to influence other measures that would have the largest effect on VMT (such as implementation of a VMT tax or an increase in the fuel tax), the effectiveness of these TDM measures cannot be guaranteed to reduce impacts. Impacts would be significant and unavoidable.

Regarding Threshold (c), the Certified PEIR determined that the Housing Element Update would not directly result in any activities that would substantially increase hazards because of a geometric design feature through implementation of policy changes and updates, rezoning, and Specific Plan amendments.

Future roadways would be designed in compliance with City codes and standards (Chapter 19.102), which would be verified in design review and plan check on a project-by-project basis. The General Plan 2025 policies would help reduce potential hazards due to design features. Impacts would be less than significant.

Regarding Threshold (d), the Certified PEIR determined that the Housing Element Update would not directly result in any activities that would result in inadequate emergency access because Opportunity Sites are proposed near essential services and transportation routes. General Plan 2025 contains policies to encourage development of safe transportation systems and ensure that development does not conflict with emergency response or access during operations. The City continues to implement adopted road standards and, as a result, new roadways would be designed to avoid unsafe design and provide adequate emergency access. The City has an Emergency Operations Plan and RFD provides response management through activation of SEMS. Impacts would be less than significant.

Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?

Regarding Threshold (a), the Project would develop a mixed-use development in an urban area. The Project Site would be located in proximity to pedestrian, bicycle, and transit facilities. The Project would not conflict with existing or planned facilities supporting those travel nodes. Impacts would be less than significant.

Regarding Threshold (b), a Traffic Study was prepared for the Project in April 2023. VMT analyses were conducted as part of the Housing Element Update. Based on the Certified PEIR, the Project Site would be in a very efficient area (VMT more than 15 percent below the City average). Therefore, it can be presumed that the Project would not have significant VMT impacts and would not need any VMT mitigation due to its location efficiency. Impacts would be less than significant.

Regarding Threshold (c), the Project would not substantially increase hazards by developing geometric design features or incompatible uses on the Project Site. The Project design would be verified in design review and plan check, and would be required to comply with General Plan 2025 policies to reduce potential hazards due to design features. Impacts would be less than significant.

Regarding Threshold (d), the Project would be located in an area with established roadway networks that provide adequate emergency access. The Project would not include improvements that would affect emergency access. Impacts would be less than significant. As such, the proposed Project would not result in new significant impacts or substantially more severe impacts than disclosed in the Certified PEIR.

Mitigation Measures Addressing Impact

No mitigation measures from the Certified PEIR would be applicable to the Project. No additional mitigation measures are required for the Project.

Conclusion

Based on the above, the Project’s potential environmental impacts to transportation would be within the scope of the Certified PEIR and would not result in any of the conditions set forth in PRC Section 21166(c) or CEQA Guidelines Sections 15162 or 15163 that would require the preparation of a Supplemental or Subsequent EIR.

5.18 Tribal Cultural Resources

Thresholds	Impact Determination in the Certified PEIR	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Mitigation Measures Addressing Impacts
TRIBAL CULTURAL RESOURCES: Would the Project:			
a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:			
(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), or?	Less Than Significant with Mitigation Incorporated	No	Yes
(ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	Less Than Significant with Mitigation Incorporated	No	Yes

Impact Determination in the Certified PEIR

Impacts regarding tribal cultural resources impacts were discussed in Section 3.13, Tribal Cultural Resources, of the Certified PEIR.

Regarding Thresholds (a) and (b), the Certified PEIR determined that because the Opportunity Sites under the proposed Housing Element Update are situated throughout the City in mostly urban and developed areas and in mostly unsurveyed areas, the potential for Opportunity Sites to encounter archaeological resources is unknown. Some prehistoric resources may be considered tribal cultural resources (TCRs) and can include sites, features, and objects that are listed in the CRHR, eligible to be listed in the CRHR, locally listed as defined in PRC Section 5020.1(k), or be determined by the lead agency to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1. Future cultural resource studies at Opportunity Site locations (see Mitigation Measure MM-CUL-2) could identify both archaeological resources and/or TCRs through survey and consultation with Native American tribes. Through continued consultation with tribes on a project-specific basis and implementation of Mitigation Measure MM-CUL-2, it is possible that the City will be able to determine whether specific Opportunity Sites overlap with known locations of TCRs. Because ground-disturbing activities could result in disturbance or destruction of TCRs, impacts would be potentially significant. For Opportunity Site projects that are not eligible for the ministerial approval process (and not projects per CEQA), and with continued consultation with Native American tribes, implementation of Mitigation Measures MM-CUL-2 through MM-CUL-9, MM-TCR-1, and MM-TCR-2 would reduce this impact to less-than-significant levels.

Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?

Regarding Thresholds (a) and (b), the Project would involve grading and excavation. While not anticipated, previously unknown resources could be covered. However, the Project would implement the applicable mitigation measures as set forth in the Certified PEIR to reduce potential impacts to archaeological resources and human remains, including TCRs, to less-than-significant levels. Thus, with implementation of Mitigation Measures MM-CUL-2, MM-CUL-4, MM-CUL-5, MM-CUL-8, and MM-CUL-9, impacts would be reduced to less than significant levels. As such, the proposed Project would not result in new significant impacts or substantially more severe impacts than disclosed in the Certified PEIR.

Mitigation Measures Addressing Impact

The following mitigation measures set forth in the Certified PEIR and the associated MMRP to address tribal cultural resources impacts were implemented as part of the Project. No additional mitigation measures are required.

MM-CUL-2

MM-CUL-4

MM-CUL-5

MM-CUL-8

MM-CUL-9

See Section 5.5, Cultural Resources, above for more detail. As such, the proposed Project would not result in new significant impacts or substantially more severe impacts.

Conclusion

Based on the above, the Project’s potential environmental impacts to TCRs would be within the scope of the Certified PEIR and would not result in any of the conditions set forth in PRC Section 21166(c) or CEQA Guidelines Sections 15162 or 15163 that would require the preparation of a Supplemental or Subsequent EIR.

5.19 Utilities and Service Systems

Thresholds	Impact Determination in the Certified PEIR	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Mitigation Measures Addressing Impacts
UTILITIES AND SERVICE SYSTEMS: Would the Project:			
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	Less Than Significant	No	N/A
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	Less Than Significant	No	N/A
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project’s projected demand in addition to the provider’s existing commitments?	Less Than Significant	No	N/A
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	Less Than Significant	No	N/A
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	Less Than Significant	No	N/A

Impact Determination in the Certified PEIR

Impacts regarding utilities and service systems were discussed in Section 3.14, Utilities and Service Systems, of the Certified PEIR. Threshold (e) was discussed in Section 3.15, Effects Not Found to be Significant, of the Certified PEIR.

Regarding Threshold (a) for water, the Certified PEIR determined that the implementation of the Housing Element Update would increase water demands by approximately 28 million gallons per day (30,848 acre-feet per year [afy]) over existing conditions. This increased demand would not be accommodated in accordance with the 2015 Riverside Public Utilities Urban Water Management Plan (RPU UWMP). Future development associated with the Housing Element Update would be built using new building standards for water efficiency and would be designed to use less water than existing development. Future development would also occur incrementally over time, based on market conditions and other factors, such that existing water services are not overburdened by substantially increased demands at any single point in time. In compliance with SB 221 and SB 610 requirements, future development satisfying certain criteria would require preparation of a water supply assessment in order to verify sufficient water supply is available to meet future development's water demand. Future development would also be required to coordinate demands with the capacity of the water system and work with RPU and the Western Municipal Water District (WMWD) to coordinate water services. Future development would also be required to fund fair-share costs associated with the provision of water and to ensure that the provision of water is consistent with the growth planned for the City. Compliance with the abovementioned existing regulatory framework and implementation of existing General Plan 2025 Final Programmatic EIR Mitigation Measure UTL-1 would ensure adequate water facilities are available to serve future development associated with the Project within the City. Therefore, impacts due to the extension, relocation, and expansion of new water facilities would be less than significant.

Regarding Threshold (a) for wastewater treatment, the Certified PEIR determined that the implementation of the Housing Element Update would generate an estimated 10 million gallons per day (mgd) within the City's wastewater service area. The additional 10 mgd of wastewater would be adequately treated by the Riverside Water Quality Control Plant (RWQCP) which has a treatment capacity of 46 mgd. Future sewer line upgrades and developments within the City would assume their full fair-share costs (General Plan 2025 Policy PF-3.2) by implementing sewer service charges, which would be deposited with the City (RMC Chapter 14.04, Sewer Service Charge). While development of the Housing Element Update would require extension, relocation, and expansion of new sewer lines within the City, construction activities associated with future development would be subject to compliance with the local, State, and federal laws, ordinances, and regulations, as well as any project-specific mitigation measures necessary to ensure impacts would be less than significant.

Regarding Threshold (a) for stormwater drainage, future development would also be subject to compliance with General Plan 2025, which requires the City to continue to fund and undertake storm drain improvement projects as identified in the City of Riverside's Capital Improvement Plan. General Plan

2025 also requires continued cooperation between the City and regional programs to implement the NPDES, and requires the City to continually monitor and evaluate the effectiveness of its storm drain system and make adjustments as needed. Compliance with the existing regulatory framework would ensure adequate stormwater drainage facilities are available to serve development associated with the Housing Element Update, and impacts would be less than significant. Payment of applicable fees established by the City would also ensure that stormwater drainage facilities would serve the drainage needs of any future development allowed under the Housing Element Update. Impacts would be less than significant.

Regarding Threshold (a) for electric power, natural gas, and telecommunication facilities, existing services are available throughout the City, and no additional upgrades or new facilities would be required. Construction activities associated with future development would be subject to compliance with the local, State, and federal laws, ordinances, and regulations, as well as any project-specific mitigation measures necessary to ensure impacts would be less than significant.

Regarding Threshold (b), the Certified PEIR determined that the increased water demand from the Housing Element Update of 30,858 afy would not be accommodated by the 2015 RPU UWMP under normal, dry, or multiple-dry years. However, future development would occur incrementally over time, based on market conditions and other factors, such that existing water services are not overburdened by substantially increased demands at any single point in time. In addition, compliance with the existing regulatory framework discussed under Threshold (a) and implementation of existing General Plan 2025 Final Programmatic EIR Mitigation Measure UTL-1 would ensure adequate water supplies are available to serve future development associated with the Housing Element Update under normal, dry, and multiple-dry years. Therefore, impacts would be less than significant.

Regarding Threshold (c), as discussed under Threshold (a), the increase in wastewater generation from the Housing Element Update would not exceed the treatment capacity of the wastewater treatment facilities that serve the City. Impacts would be less than significant.

Regarding Threshold (d), development associated with the Housing Element Update would comply with all sustainability goals as dictated by State and local standards, such as the California Integrated Waste Management Act, AB 341, Riverside County Waste Management Department's Design Guidelines and its Construction and Demolition Recycling Plan, and Riverside's Countywide Integrated Waste Management Plan (CIWMP). Additionally, build-out of the Housing Element Update would be incremental as to not overwhelm solid waste collectors and landfills with a substantial increase in solid waste at one point in time. Development would also be required to comply with General Plan 2025 policies and Final Programmatic EIR Mitigation Measures to increase solid waste diversion efforts and ensure that operational impacts on solid waste disposal are less than significant. Impacts would be less than significant.

Regarding Threshold (e), the Certified PEIR determined that the City implemented numerous waste reduction and recycling programs, including AB 341 and AB 1862, to oversee the implementation of waste

management and recycling/reuse programs. Additionally, the City has partnered with the haulers to send out non-compliance notifications to businesses and multi-family residences to encourage them to subscribe to the services. In addition, CALGreen required all developments to divert 50 percent of nonhazardous construction and demolition debris and 100 percent of excavated soil and debris from land clearing associated with all nonresidential projects beginning January 1, 2011. Development and redevelopment associated with the Housing Element Update would comply with City waste disposal requirements as well as CALGreen requirements. The impact would be less than significant.

Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?

Regarding Threshold (a) for water, the Project would be located on an Opportunity Site and would be consistent with the General Plan land use designation and zoning for the Project Site, so the Project's estimated water supply demand would be accounted for as part of the Certified PEIR. While the Certified PEIR, which relied on the 2015 RPU UWMP, determined that the 28 mgd (30,848 afy) would not be accommodated at that time, the 2020 RPU UWMP, adopted July 1, 2021, utilized population projections for the City through 2045 from the SCAG 2020-2045 RTP/SCS and projected an actual water supply volume in 2020 of 86,324 afy. Therefore, because the 2020 UWMP would take into account the updated population projections and the increased supply from various improvement projects throughout the RPU service area, the Housing Element Update and the Project's water use would be accommodated as part of the updated 2020 UWMP. Additionally, the Project would be required to fund fair-share costs associated with the provision of water and to ensure that the provision of water is consistent with the growth planned for the City. Compliance with the abovementioned existing regulatory framework would ensure adequate water facilities are available to serve the Project within the City. Impacts on the relocation or construction of new or expanded water facilities would be less than significant.

Regarding Threshold (a) for wastewater treatment, the Project would be consistent with the General Plan land use designation and zoning for the Project Site, so the Project's estimated wastewater generation would be accounted for as part of the Certified PEIR. The Project's estimated wastewater generation would be accommodated by the RWQCP. Impacts would be less than significant.

Regarding Threshold (a) for stormwater drainage, the City would continue to fund and undertake storm drain improvement projects identified in the City's Capital Improvement Plan. The Project would be required to comply with existing regulatory framework and pay applicable fees to ensure that adequate stormwater drainage facilities are available to serve the Project. Impacts would be less than significant.

Regarding Threshold (a) for electric power, natural gas, and telecommunication facilities, the Project would be developed in areas with existing services and facilities. Impacts would be less than significant.

Regarding Threshold (b), see Threshold (a) for water. Impacts would be less than significant.

Regarding Threshold (c), see Threshold (a) for wastewater treatment. Impacts would be less than significant.

Regarding Threshold (d) and (e), the Project would be required to comply with General Plan 2025 policies, Final Programmatic EIR Mitigation Measures to increase solid waste diversion efforts, comply with the City’s AB 341 and AB 1862 programs to implement waste management and recycling/reuse programs, and CALGreen requirements for diversion of nonhazardous construction and demolition debris. Impacts would be less than significant. As such, the proposed Project would not result in new significant impacts or substantially more severe impacts than disclosed in the Certified PEIR.

Mitigation Measures Addressing Impact

No mitigation measures from the Certified PEIR would be applicable to the Project. No additional mitigation measures are required for the Project.

Conclusion

Based on the above, the Project’s potential environmental impacts to utilities and service systems would be within the scope of the Certified PEIR and would not result in any of the conditions set forth in PRC Section 21166(c) or CEQA Guidelines Sections 15162 or 15163 that would require the preparation of a Supplemental or Subsequent EIR.

5.20 Wildfire

Thresholds	Impact Determination in the Certified PEIR	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Mitigation Measures Addressing Impacts
WILDFIRE: If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project:			
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	Less Than Significant	No	N/A
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	Less Than Significant	No	N/A
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	Less Than Significant	No	N/A
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	Less Than Significant	No	N/A

Impact Determination in the Certified PEIR

Impacts regarding wildfire were discussed in Section 3.15, Effects Not Found to be Significant, of the Certified PEIR.

Regarding Threshold (a), the Certified PEIR determined that portions of the City are in areas classified as VHFHSZ. According to the General Plan 2025 Public Safety Element, the major urban/rural interface areas with a high-fire risk are Mount Rubidoux, the Santa Ana River Basin, Lake Hills, Mockingbird Canyon/Monroe Hills, Sycamore Canyon, Box Springs Mountain, and La Sierra/Norco Hills. The introduction of residential and mixed-use development into these natural landscapes would increase potential risks related to fire for people and property. The RFD ensures multi-jurisdictional cooperation and communication for emergency planning and response management through activation of the SEMS. Also, the City and County of Riverside prepared the Riverside County Operational Area Multi-Jurisdictional Local Hazard Mitigation Plan to identify Riverside County's hazards (including those within the City), review and assess past disaster occurrences, estimate the probability of future occurrences, and set goals to mitigate potential risks and reduce or eliminate long-term risks for people and property from natural and human-made hazards. Future development within the City associated with the Housing Element Update would be required to comply with local regulations, including General Plan 2025 and the City's development code. Impacts would be less than significant.

Regarding Threshold (b), the Certified PEIR determined that development associated with the Housing Element Update would not include housing and mixed-use development within wildfire hazard areas. Future development would be required to comply with local regulations, including General Plan 2025 and the RMC. Impacts would be less than significant.

Regarding Threshold (c), the Certified PEIR determined that future development associated with the Housing Element Update may require new public infrastructure and utilities, which would be installed to meet fire service requirements. All improvements would be subject to City development standards and verified as part of either a building permit or construction approval process. During the standard development review process, the City's Development Review Committee, which includes the Fire Department and Building & Safety Division, evaluates developments in high fire-risk areas to ensure that improvements meet their requirements. With compliance with local regulations (e.g., RMC) and implementation of General Plan 2025 policies, impacts would be less than significant.

Regarding Threshold (d), all future development would be subject to City development standards and verified as part of either a building permit or construction approval process. Impacts related to downstream flooding and drainage changes would be less than significant. Regarding landslides, grading and construction would be completed in compliance with 2019 CBSC regulations, County of Riverside ordinances, and the RMC, the potential for slope instability would be reduced. The Opportunity Sites would not be on the steepest slopes. Impacts related to flooding would be lessened through compliance with the Local Hazard Mitigation Plan and Public Safety Element policies that address flood hazards and

conditions on individual development projects during development review. Compliance with CBSF regulations and applicable local codes and ordinances would ensure that impacts would be less than significant.

Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?

Regarding Thresholds (a), (b), (c), and (d), according to CAL FIRE, the Project Site is not within a SRA or LRA VHFHSZ. There would be no impact. As such, the proposed Project would not result in new significant impacts or substantially more severe impacts than disclosed in the Certified PEIR.

Mitigation Measures Addressing Impact

No mitigation measures from the Certified PEIR would be applicable to the Project. No additional mitigation measures are required for the Project.

Conclusion

Based on the above, the Project's potential environmental impacts to wildfire would be within the scope of the Certified PEIR and would not result in any of the conditions set forth in PRC Section 21166(c) or CEQA Guidelines Sections 15162 or 15163 that would require the preparation of a Supplemental or Subsequent EIR.

5.21 Cumulative Impacts

Impact Determination in the Certified PEIR

The Certified PEIR determined the following cumulative impacts would be less than significant: aesthetics, agriculture and forestry resources, biological resources, cultural resources, energy, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, public services, recreation tribal cultural resources, utilities and service systems, and wildfire. The Certified PEIR determined that the following cumulative impacts would be significant and unavoidable: air quality, GHG emissions, noise and vibration, population and housing, and transportation. Mitigation measures identified in the Certified PEIR would reduce some of these impacts, but not to less than significant levels.

Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?

As defined in CEQA Guidelines Section 15355, cumulative impacts refer to two or more individual effects, which, when considered together, are considerable or which compound or increase other environmental impacts.

As evaluated above, all of the Project's potential project-specific environmental impacts would be less than significant. The Project's contribution would not be cumulatively considerable with regard any of the cumulative impacts assessed in the PEIR as the Project's impacts regarding these environmental topics

would be less than significant or less than significant with incorporation of the mitigation measures included in the Certified PEIR.

Regarding aesthetics, agriculture and forestry resources, biological resources, cultural resources, energy, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, public services, recreation tribal cultural resources, utilities and service systems, and wildfire, the Certified PEIR found cumulative impacts to be less than significant. As the Project's impacts would also be less than significant, the Project would not make a cumulatively considerable contribution to these impacts.

Regarding air quality, the SCAQMD recommends utilizing project-specific air quality impacts to determine the project's potential cumulative impacts to regional air quality.⁹ The SCAQMD CEQA Air Quality Handbook also states that "[f]rom an air quality perspective, the impact of a project is determined by examining the types and levels of emissions generated by the project and its impact on factors that affect air quality. As such, projects should be evaluated in terms of air pollution thresholds established by the District."¹⁰ The City has determined to rely on thresholds established by the SCAQMD (refer to CEQA Guidelines Section 15064.7) to assess the Project's cumulative impacts. While it may be possible to add emissions from the list of related projects with the Project, it would not provide meaningful data for evaluating cumulative impacts under CEQA because neither the City nor the SCAQMD have established numerical thresholds applicable to the summation of multiple project emissions for comparison purposes. Additionally, regional emissions from a project have the potential to affect the South Coast Air Basin as a whole, and, unlike other environmental issues areas, such as aesthetics or noise, it is not possible to establish a geographical radius from a specific project site where potential cumulative impacts from regional emissions would be limited. Meteorological factors, such as wind, can disperse pollutants, often times tens of miles downwind from a project site. Therefore, consistent with accepted and established SCAQMD cumulative impact evaluation methodologies, the potential for the Project to result in cumulative impacts from regional emissions is assessed based on the SCAQMD thresholds. As described above in Section 5.3, Air Quality, the Project's construction and operations emissions would not exceed the SCAQMD thresholds; therefore, the Project's contribution to cumulative air quality impacts would also not be cumulatively considerable.

⁹ SCAQMD, Potential Control Strategies to Address Cumulative Impacts from Air Pollution White Paper, Appendix D, 1993, page D-3 ("As Lead Agency, the AQMD uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or EIR... Projects that exceed the Project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant.").

¹⁰ SCAQMD, Cumulative Impacts White Paper, Appendix D.

According to the California Air Pollution Control officers Association (CAPCOA), “GHG impacts are exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective.”¹¹ Therefore, as the Project’s GHG emissions impacts would be less than significant, the Project’s contribution to cumulative GHG emissions impacts would also not be cumulatively considerable.

Cumulative noise and vibration impacts could occur if the Project’s construction overlapped with that of nearby cumulative projects so as to affect the same off-site sensitive land use contemporaneously. Groundborne vibration attenuates very rapidly and is generally imperceptible 50 feet from the source. There are no sensitive land uses or related projects within 50 feet (the nearest potential related project, at 3770 Cranford Avenue, lies 370 feet to the east of the Project Site). As such, there would be no cumulative vibration impacts experienced at the nearby sensitive land uses. Noise impacts from construction activities vary depending on the nature or phase of construction. Sensitive Receptor 1 (SR-1) is located between the Project and the nearest related project (3770 Cranford Avenue). The timing of construction for any of the related projects listed would be highly speculative. As shown on Table 8 of the Noise Assessment, maximum Project construction noise levels reaching SR-1 is estimated at 74.9 dBA L_{eq} . Assuming that maximum construction activity at the nearest potential related project would be similar to that of the Project, and that the maximum noise levels from the Project and the related project would occur simultaneously, combined cumulative construction noise reaching SR-1 would be approximately 77.9 dBA L_{eq} .¹² This combined noise level would not exceed the FTA threshold of 80 dBA L_{eq} for construction noise at residential uses. Therefore, cumulative construction noise would be less than significant, and the Project’s contribution to cumulative construction noise would also not be cumulative considerable. Thus, it is unlikely that construction from any of the related projects (which are located at greater distances from the Project and other potential shared sensitive receptors) would overlap and combine with Project-generated noise to increase the impact to significant levels. Long-term operation of the Project, similar to the 14 related projects located 370 feet or more away, is not a source of substantive on-site noise, such as heavy manufacturing. As such, noise from the Project and the related projects is unlikely to combine to create cumulative impacts.

Regarding population and housing, the Project’s 257 dwelling units and resulting 843 new residents would be within the estimated population growth forecasted by SCAG in the 2020-2045 RPT/SCS between 2020 and 2045. The related projects would result in approximately 444 multi-family residential units, which could result in a potential impact on population and housing. Based on the City’s average household size of 3.28, these related projects would result in 1,456 new residents, not including any reductions of residents based on the removal of existing uses. These 1,456 new residents, in addition to the Project’s 843 residents, would result in a total of 2,299 residents, or approximately 3.4 percent of the estimated

¹¹ CAPCOA, CEQA & Climate change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act, 2008.

¹² Combining two noise sources of an approximate equal noise level results in a total noise increase of 3 dB. Caltrans, *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, page 2-14, September 2013

population growth forecasted by SCAG’s 2020-2045 RTP/SCS between 2020 and 2045. Additionally, some of these related projects would be located on Opportunity Sites and are designated by the City in the Housing Element Update as sites that are intended to utilized for housing development. As such, these related projects would not result in unplanned growth. Therefore, the Project’s contribution to cumulative population and housing impacts would not be cumulatively considerable.

Overall, in each of the analyses provided above, impacts associated with the Project would be within the scope of impacts evaluated in the Certified PEIR. Accordingly, the Project would not result in any new significant cumulative impacts, nor would it substantially increase the severity of any significant cumulative impacts previously identified in the Certified PEIR.

Mitigation Measures Addressing Impact

As described above, the Project would implement the previously adopted mitigation measures set forth in the Certified PEIR, as applicable. No additional mitigation measures are required for the Project.

Conclusion

Based on the above, the Project’s potential cumulative environmental impacts would be within the scope of the Certified PEIR and would not result in any of the conditions set forth in PRC Section 21166(c) or CEQA Guidelines Sections 15162 or 15163 that would require the preparation of a Supplemental or Subsequent EIR.

5.22 Mandatory Findings of Significance

Thresholds	Impact Determination in the Certified PEIR	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Mitigation Measures Addressing Impacts
MANDATORY FINDINGS OF SIGNIFICANCE: Does the Project:			
a) Have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	Less Than Significance with Mitigation Incorporated	No	Yes
b) Have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when view in connection	Significant and Unavoidable	No	Yes

with the effects of past projects, the effects of other current projects, and the effects of probable future projects)??			
c) Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	Less Than Significant	No	N/A

Impact Determination in the Certified PEIR

The environmental issues addressed in the Mandatory Findings of Significance were analyzed in a combination of the Initial Study (found in Appendix A of the Certified PEIR) and the Draft EIR of the Certified PEIR. As described above in Section 5.4, Biological Resources, development associated with the Housing Element Update would be required to implement Mitigation Measure MM-BIO-1 to reduce potential impacts to biological resources to less than significant levels. As summarized above, the Certified PEIR determined that implementation of the Housing Element Update would result in significant and unavoidable impacts with respect to air quality, GHG emissions, noise and vibration, population and housing, and transportation. Mitigation measures identified in the Certified PEIR would reduce some of these impacts, but not to less than significant levels. As such, the significant impacts of the Housing Element Update would have the potential to cause cumulatively considerable impacts and result in environmental effects which would cause substantial adverse effects on human beings.

Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?

Regarding Threshold (a), as described in Section 5.4, Biological Resources, pursuant to Certified PEIR Mitigation Measure MM-BIO-1, a literature review, habitat assessment, and survey were conducted for the Project Site. As determined above, the Project would have a less than significant impact on biological resources.

Regarding Threshold (b), see Section 5.21, Cumulative Impacts, above. As detailed therein, as analyzed in each section, impacts associated with the Project would be within the scope of impacts evaluated in the Certified PEIR. Accordingly, the Project would not result in any new significant cumulative impacts, nor would it substantially increase the severity of any significant cumulative impacts previously identified in the Certified PEIR.

Regarding Threshold (c), because the Project’s impacts would be less than significant in all resource areas analyzed above, the Project would not cause a substantial adverse effect on human beings, either directly or indirectly. Impacts would be less than significant.

The Project would not result in any new significant impacts or substantially increase the severity of impacts compared to the Certified PEIR analysis. As such, the Project’s impacts would be within the scope of impacts set forth in the Certified PEIR.

Mitigation Measures Addressing Impact

As described above, the Project would implement the previously adopted mitigation measures set forth in the Certified PEIR, as applicable. No additional mitigation measures are required for the Project.

Conclusion

Based on the above, the Project's potential environmental impacts would be within the scope of the Certified PEIR and would not result in any of the conditions set forth in PRC Section 21166(c) or CEQA Guidelines Sections 15162 or 15163 that would require the preparation of a Supplemental or Subsequent EIR.

6.0 CONCLUSION

There is no basis to find the criteria in CEQA Guidelines Section 15162 have been met such that a major revision to the Certified PEIR is required. The analysis in Section 5, Comparative Analysis of Project Impacts, provided above shows the Project would not result in a change to the Housing Element Update analyzed in the Certified PEIR that would result in any new significant impacts or more severe significant impacts than those identified in the Certified PEIR as the Project is within the scope of and is consistent with the City's Housing Element Update. Additionally, there have been no changes to the City's Housing and Public Safety Element Updates since its adoption that resulted in or will foreseeably result in new significant impacts or more severe significant impacts. Based on the number of projects that have been approved so far, the number of residential dwelling units, residential floor area, and non-residential floor area anticipated for the City have not met the previously-assessed buildout limitation in the Certified PEIR.

Moreover, there is no basis to find there has been a change to the development associated with the Housing Element Update analyzed in the Certified PEIR such that there will be new or more severe significant impacts. Additionally, there have been no changes to the circumstances with respect to the circumstances under which be expected to result in new or more severe significant impacts. Finally, there is no new information of substantial importance that was not known or could not have been known when the Certified PEIR was certified and the Housing and Public Safety Element Updates were adopted.

As analyzed herein and demonstrated above, the Project is "within the scope" of the Certified PEIR pursuant to CEQA Guidelines Section 15168(c)(2), and no further environmental analysis is required.



Attachment A

Responses to Planning Comment Summary Matrix
December 13, 2022

TECHNICAL MEMORANDUM

To: Haig Nazarian and Matthew Keenen, CGI Plus
From: Jessie Fan, Project Manager
Date: December 13, 2022
Subject: 1575 University Avenue Project – Responses to Planning Comment Summary Matrix

1.0 INTRODUCTION & PURPOSE

Kimley-Horn and Associates, Inc. has been retained to respond to the Environmental and Technical Studies Items on the Planning – Comment Summary Matrix dated March 2, 2022. Kimley-Horn understands that these Environmental and Technical Studies Items are requested by the City of Riverside (City) as part of the City’s comments on the 1575 University Avenue Project (Project) Planning Case PR-2021-001268 Conceptual Development Review. The purpose of this Technical Memorandum is to summarize the findings of the requested technical studies and to note the Project’s consistency with the City’s Housing and Public Safety Element Updates and Environmental Justice Policies Project Final Environmental Impact Report (Housing Element Final EIR) and the associated Mitigation Monitoring and Reporting Program (MMRP).

The Project’s CEQA compliance review relied on the following documentation:

- City’s Housing and Public Safety Element Updates and Environmental Justice Policies Final Environmental Impact Report, State Clearinghouse No. 2021040089, September 2021
- Conceptual Site Plans, see **Appendix A: Conceptual Site Plans**
- Kimley-Horn and Associates, Air Quality Summary, see **Appendix B: CalEEMod Modeling Results**
- Environmental Science Associates, Biological Assessment Report, see **Appendix C: Biological Assessment Report**
- Environmental Science Associates, Cultural Resources Assessment Report, see **Appendix D: Cultural Resources Assessment Report**
- Environmental Science Associates, Paleontological Resources Assessment, see **Appendix E: Paleontological Resources Study**
- Kimley-Horn and Associates, Noise and Vibration Analysis, see **Appendix F: Noise and Vibration Analysis**

2.0 PROJECT DESCRIPTION

The Project would be located on a 4.29-acre site (Assessor Parcel Number [APN] 250-170-036) (Project Site) bounded by Seventh Street to the north, University Avenue to the south, Cranford Avenue to the east, and Chicago Avenue to the west. The Project would demolish the existing 24,848-square-foot commercial building and surface parking lot and would construct a new mixed-use development with 257 dwelling units and 5,450 square feet of commercial uses. The Project would also provide a total of 499 vehicle parking spaces: 488 of which would be within a parking garage, and 11 would be provided on-grade. The Project would have a maximum height of 50 feet and would be approximately 225,000 square feet of gross building area.¹ Project construction activities (e.g., demolition, site preparation, grading, paving, building construction, and architectural coating) is anticipated to begin in January 2024 and end in January 2026. The Project would be operational in January 2026. The Project Site plans are provided in **Attachment A: Conceptual Site Plans**.

3.0 FINDINGS CONCERNING CEQA COMPLIANCE

Select technical studies have been prepared to respond to the City's comments on Planning Case PR-2021-001268 Conceptual Development Review.

Air Quality

In response to Item #56 in the Comment Summary Matrix, Kimley-Horn provided CalEEMod input/output files to quantify the Project's construction and operation-related emissions (see **Appendix B: CalEEMod Modeling Results**). As shown in Table 1: Project Construction Emissions, criteria pollutant emissions during Project construction would be below the respective South Coast Air Quality Management District (SCAQMD) thresholds. SCAQMD Rule 403 is included within the Housing Element Final EIR as Mitigation Measure AQ-1. Because SCAQMD Rule 403 is regulatory and required, the rule is applied as part of the calculations in Table 1. No further mitigation measures were required. Therefore, impacts during Project construction would be less than significant.

¹ The analysis provided within this document is based on a preliminary set of plans for 225,000 square feet of gross building area. Since then, the Project has been refined to be 216,171 square feet of gross building area. Because the quantitative calculations provided in this document are for a larger project, the analysis is considered conservative.

Table 1: Project Construction Emissions

Construction Year	Emissions (lb/day) ^a					
	ROG	NO _x	CO	SO _x	PM10	PM2.5
2024	5.04	49.32	39.50	0.09	27.33	15.27
2025	36.00	16.12	28.43	0.07	4.41	1.59
2026	33.74	1.23	3.33	<0.01	0.62	0.23
<i>SCAQMD Threshold</i>	<i>75</i>	<i>100</i>	<i>550</i>	<i>150</i>	<i>150</i>	<i>55</i>
<i>Thresholds Exceeded?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>
a CalEEMod modeling results are provided in Appendix B. SCAQMD Rule 403 Fugitive Dust is applied. No mitigation was applied.						

As shown in [Table 2: Project Operational Emissions](#), the Project’s operational emissions would not exceed the SCAQMD thresholds. No mitigation measures from the Housing Element Final EIR were required. Therefore, air quality impacts from regional operational emissions would be less than significant.

Table 2: Project Operational Emissions

Source	Emissions (lb/day) ^a					
	ROG	NO _x	CO	SO _x	PM10	PM2.5
Area	5.56	0.24	21.23	<0.01	0.12	0.12
Energy	0.11	0.94	0.40	<0.01	0.08	0.08
Mobile	4.15	5.54	40.37	0.10	10.52	2.86
Total	9.82	6.72	62.00	0.11	10.72	3.06
<i>SCAQMD Threshold</i>	<i>55</i>	<i>55</i>	<i>550</i>	<i>150</i>	<i>150</i>	<i>55</i>
<i>Thresholds Exceeded?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>
a CalEEMod modeling results are provided in Appendix B. Worst-case seasonal emissions for emissions are represented here.						

The Project would result in less than significant construction and operational air quality impacts. No further mitigation measures would be required.

Biological Resources

In response to Item #57 in the Comment Summary Matrix, Environmental Science Associates (ESA) conducted a literature review, habitat assessment, and survey for the Project Site (see **Appendix C: Biological Assessment Report**). As determined in the Biological Assessment Report, there are no natural communities on-site. The Project Site land cover types consist of developed and ruderal areas, the latter including non-native grasses and forbs. Of the eight special-status plant species considered to potentially occur within the Project Site, none were detected during the site survey. Of the 29 special-status wildlife species considered to potentially occur within the Project Site, none were observed during the site survey. There is no native habitat on-site to support the

special-status species. The removal of the ruderal vegetation would not threaten or endanger any regional wildlife populations, and the Project Site does not occur within or adjacent to designed critical habitat. Project construction would be subject to the federal Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code (CFG) Sections 3503, 3503.5, and 3501 to avoid disturbance of nesting birds.

The Project would be consistent with the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). The Project Site is not within any wildlife migration corridors identified in the MSHCP Schematic Cores and Linkages Map. The Project Site does not contain MSHCP riparian/riverine areas, and none of these areas would be impacted. The Project Site is not located within a Narrow Endemic Plant Species Survey Area, Amphibian Survey Area, Burrowing Owl Survey Area, or Mammal Survey Area as defined in the MSHCP. Therefore, impacts to narrow endemic plant species or wildlife habitat would be covered through payment of appropriate MSHCP development fees, as applicable. Therefore, biological resources impacts would be less than significant.

Archaeological Resources

In response to Item #58 in the Comment Summary Matrix, ESA provided an archaeological study pursuant to Housing Element Final EIR Mitigation Measure CUL-2 (see **Appendix D: Cultural Resources Assessment Report**). A record search was conducted on July 22, 2022 at the California Historic Resources Information System (CHRIS) Eastern Information Center (EIC) housed at the University of California, Riverside, and included a review of all recorded archaeological resources and previous studies within the Project Site and a 0.50-mile radius of the Project Site. The records search results indicate that 27 cultural resources studies have been conducted within a 0.50-mile radius of the Project Site. None of the assessments include the Project Site, and no archaeological resources have been previously recorded within a 0.50-mile radius of the Project Site.

A cultural resources survey of the Project Site identified two built environment resources consisting of concrete foundations that are ineligible for consideration as potential historical resources under any California Register of Historical Resources criteria 1, 2, 3, or 4. Therefore, the Project would not have a significant impact on these resources.

The Project has low to moderate potential for encountering subsurface prehistoric archaeological resources. Because Project construction would include ground disturbance, mitigation measures would be required to reduce potential impacts to previously unknown archaeological resources and human remains to less than significant levels under CEQA. Full time monitoring is not required. However, if unanticipated archaeological resources are encountered, a qualified archaeologist shall be retained, and Housing Element Final EIR Mitigation Measures CUL-4 (Archaeological Treatment Plant), CUL-5 (data recovery), and CUL-8 (treatment and disposition) would be implemented. Mitigation Measure CUL-9 (cultural sensitivity training) is also recommended prior

to commencement of construction activities. With implementation of the Housing Element Final EIR Mitigation Measures, impacts would be reduced to less than significant.

Paleontological Resources

As requested by the City and to demonstrate compliance with Housing Element Final EIR Mitigation Measure PAL-1, ESA conducted a paleontological resources investigation (see **Appendix E: Paleontological Resources Study**). While no paleontological resources were identified within the Project Site, geologic map review, literature review, and the paleontological resources record search revealed that the Project Site is underlain by potentially fossiliferous Older (Pleistocene) silt and clay alluvium, which has produced significant fossils elsewhere in western Riverside County. Because Project construction would include ground disturbance, mitigation measures would be required to reduce potential impacts to paleontological resources to less than significant levels under CEQA.

Housing Element Final EIR Mitigation Measure PAL-2 requires retention of a qualified paleontologist, paleontological monitoring of excavations exceeding 10 feet or when older Quaternary alluvial silts and clays are encountered, salvage and curation of significant fossil discoveries, and final reporting. Housing Element Final EIR Mitigation Measure PAL-3 would also apply to the Project if paleontological resources and sensitive deposits remain or become exposed, then an avoidance and minimization plan would be prepared. With implementation of the Housing Element Final EIR Mitigation Measures, impacts to paleontological resources would be reduced to less than significant.

Noise and Vibration

In response to Item #59 in the Comment Summary Matrix, Kimley-Horn prepared a Noise and Vibration analysis to quantify the Project's construction and operation-related noise and vibration impacts (see **Appendix F: Noise and Vibration Analysis**). Five noise-sensitive receptors were identified in proximity to the Project Site:

- SR-1: University Gardens Apartment Building approximately 50 feet east of the Project Site
- SR-2: Quality Inn Riverside and Courtyard Marriott approximately 98 feet south of the Project Site
- SR-3: John W. North High School approximately 730 feet north of the Project Site
- SR-4: Apartment complexes approximately 358 feet east of the Project Site
- SR-5: Rock Ridge Apartment Complex approximately 705 feet west of the Project Site

Noise measurements were taken in proximity to the noise-sensitive receptors to represent the ambient noise levels at those receptors. While the City does not administer noise level standards for construction activities, the analysis utilizes the Federal Transit Administration's (FTA) threshold of 80 dBA for residential uses to evaluate construction noise. Based on the analysis, Project construction noise would be below the FTA noise threshold for residential land uses, which are the most conservative ambient noise thresholds in the Federal Highway Administration's (FHWA)

Roadway Construction Noise Model (RCNM). In compliance with Riverside Municipal Code (RMC) Section 7.35.020, Project construction would be prohibited between the hours of 7:00 P.M. and 7:00 A.M. on weekdays, between the hours of 5:00 P.M. and 8:00 A.M. on Saturdays, or at any time on Sunday or a federal holiday. Construction noise impacts would be less than significant, and no mitigation measures are required.

During Project operation, pursuant to RMC Section 07.35.020, the Project's hours of operation would be restricted to 7:00 A.M. and 10:00 P.M. Per the analysis, the Project's stationary noise sources from mechanical equipment would be less than significant. The Project would also not generate enough traffic to result in a noticeable 3-dBA increase in ambient noise levels, and impacts from mobile traffic noise would be less than significant. Project operation would have a less than significant impact on noise.

Increases in groundborne vibration levels would be primarily associated with short-term construction-related activities, depending on the specific construction equipment used. Groundborne vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance. Based on the equipment that Project construction would require, the vibration velocities from Project construction would be below the FTA's threshold for building damage and the California Department of Transportation's (Caltrans) threshold for human annoyance. Further, once operational, the Project would not include vibratoin0generating uses or operations. Therefore, the Project would result in a less than significant impact on vibration, and no mitigation measures are required.

4.0 CONCLUSION

As is evidenced by the discussions presented above, the Project would not result in less than significant impacts, with implementation of Housing Element Final EIR Mitigation Measures where necessary, in air quality, biological resources, archaeological resources, paleontological resources, and noise and vibration. Therefore, in response to Item #60 in the Comment Summary Matrix, the Project would not be inconsistent with the Housing Element Final EIR.

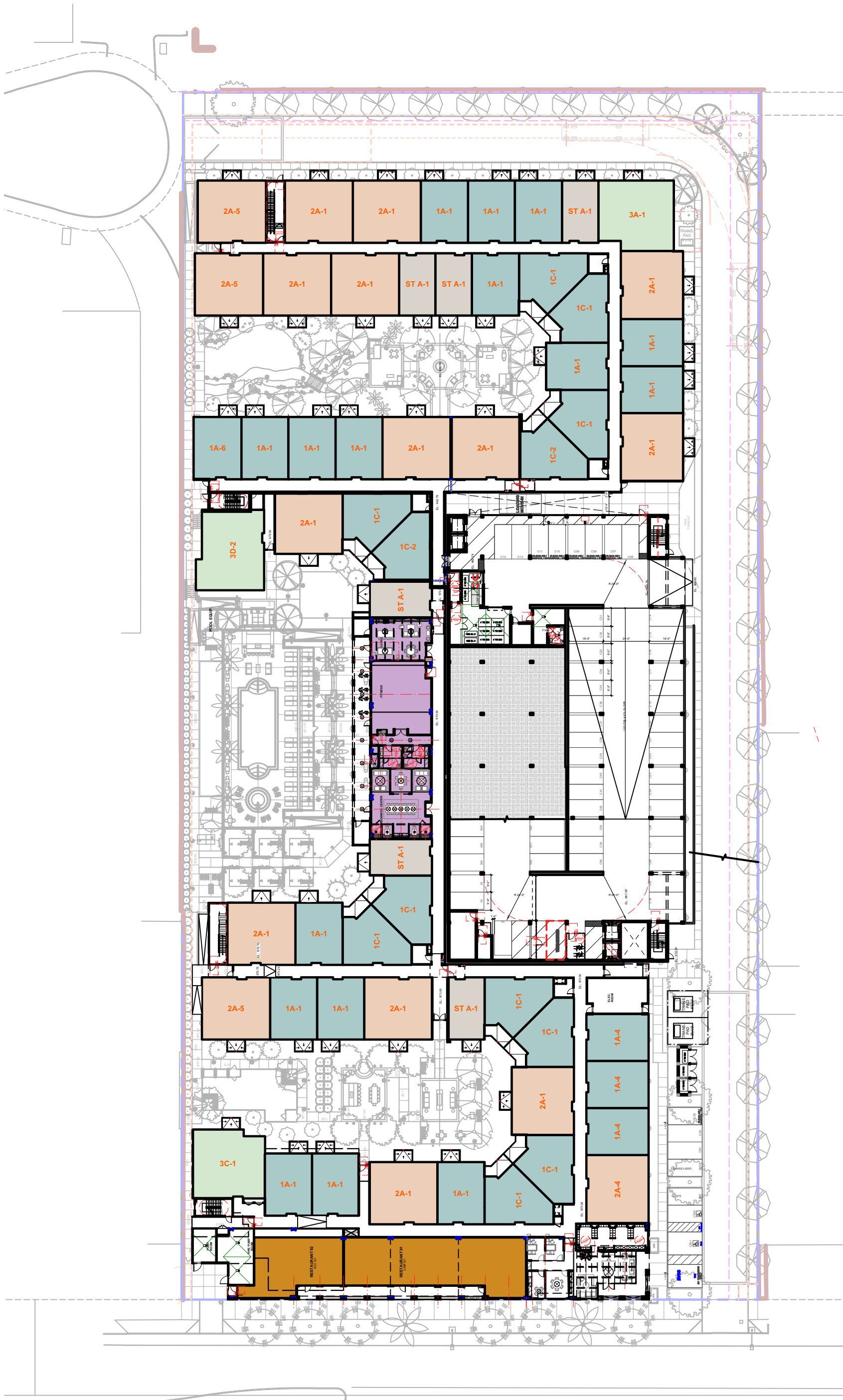


Appendix A

Conceptual Site Plans

RESIDENTIAL UNIT TABULATION					
Unit Type	Net Leasible Area	No. of Units		Unit Description	%
ST A-1	565 S.F.	27	15,255 S.F.	STUDIO	
TOTAL STUDIO		27			10.51 %
1A-1	741 S.F.	77	56,980 S.F.	1BR 1BA	
1A-2	741 S.F.	2	1,480 S.F.	1BR 1BA	
1A-3	741 S.F.	2	1,480 S.F.	1BR 1BA	
1A-4	741 S.F.	3	2,220 S.F.	1BR 1BA	
1A-5	738 S.F.	4	2,948 S.F.	1BR 1BA	
1A-6	747 S.F.	3	2,241 S.F.	1BR 1BA	
1A-7	751 S.F.	1	751 S.F.	1BR 1BA	
1B-1	741 S.F.	2	1,480 S.F.	1BR 1BA	
1C-1	783 S.F.	40	31,280 S.F.	1BR 1BA	
1C-2	769 S.F.	8	6,152 S.F.	1BR 1BA	
TOTAL 1BD		142			55.25 %
2A-1	1,084 S.F.	53	57,399 S.F.	2BR 2BA	
2A-2	1,084 S.F.	2	2,166 S.F.	1BR 1BA	
2A-3	1,084 S.F.	2	2,166 S.F.	1BR 1BA	
2A-4	1,084 S.F.	1	1,083 S.F.	1BR 1BA	
2A-5	1,087 S.F.	12	13,044 S.F.	1BR 1BA	
2B-1	1,277 S.F.	2	2,552 S.F.	2BR 2BA	
2C-1	1,243 S.F.	2	2,486 S.F.	2BR 2BA	
TOTAL 2BD		74			28.79 %
3A-1	1,315 S.F.	4	5,256 S.F.	3BR 2BA	
3B-1	1,415 S.F.	2	2,828 S.F.	3BR 2BA	
3C-1	1,231 S.F.	4	4,924 S.F.	3BR 2BA	
3D-1	1,332 S.F.	3	3,993 S.F.	3BR 2BA	
3D-2	1,332 S.F.	1	1,331 S.F.	3BR 2BA	
TOTAL 2BD		14			5.45 %
TOTAL		257	216,171 S.F.		
AVERAGE UNIT AREA			841 S.F.		

PARKING REQUIRED				
RESIDENTIAL UNIT	UNIT/FLOOR AREA	RATIO	NO. OF SPACES	CODE REF.
STUDIO	27	1.5/UNITS	41	RSMC 19.580.060
1BD	142	1.5/UNITS	214	
2BD-3BD	88	2/UNITS	176	
	TOTAL REQUIRED		431	
	15% REDUCTION		367	
RESTAURANT	4918 S.F.	1/100 S.F.	50	
	TOTAL REQUIRED		50	
	15% REDUCTION		43	
TOTAL REQUIRED FOR RESIDENTIAL & COMMERCIAL			481	
TOTAL REQUIRED AFTER 15% REDUCTION			414	RSMC 19.580.060.C.2
ACCESSIBLE PARKING REQUIRED				
ASSIGNED		0.02	8	CBC 1109A.3
UNASSIGNED		N/A	-	CBC 1109A.4
COMMERCIAL			2	CBC 11B-208.2
	TOTAL REQUIRED		10	
PARKING PROVIDED				
5.5 LEVEL				
PARKING GARAGE			411	
ON GRADE PARKING			7	
	TOTAL PROVIDED		418 *	*EXCLUDE 2 EV CHARGING STATIONS



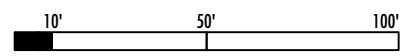
A 102
SITE PLAN

DESIGNARC

1575 University Avenue, Riverside, California

DEC 13 2022

SCALE: 1"=50'



CGI+ REAL ESTATE INVESTMENT STRATEGIES

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Appendix B

CalEEMod Modeling Results

MEMORANDUM

To: Haig Nazarian and Matthew Keenen, CGI Plus

From: Jessie Fan and Ryan Callahan, Kimley-Horn and Associates, Inc.

Date: August 16, 2022

Subject: 1575 University Avenue Development Project– Air Quality Summary

Purpose

The purpose of this memorandum is to identify the air quality emissions associated with construction and operations of the proposed 1575 University Avenue Development Project (Project), located in the City of Riverside, California (City).

Methodology

Construction and operational emissions associated with the proposed Project were calculated using the California Air Resources Board (CARB)-approved California Emissions Estimator Model version 2020.4.0 (CalEEMod), which is designed to model emissions for land use development projects, based on typical construction requirements. Emissions were calculated using one development program, assumptions regarding construction equipment and scheduling, and associated vehicle trips and compared to the South Coast Air Quality Management District (SCAQMD) regional thresholds of significance.

Air Quality Impacts

Construction Emissions

Construction associated with the Project would generate short-term emissions of criteria air pollutants. The criteria pollutants of primary concern within the Project area include ozone-precursor pollutants (i.e., reactive organic gases [ROG] and nitrogen oxides [NO_x]) and particulate matter (inhalable particles with diameters of 10 micrometers and smaller (PM₁₀) and with diameters of 2.5 microns or less (PM_{2.5}). Construction-generated emissions are short term and of temporary duration, lasting only as long as construction activities occur, but would be considered a significant air quality impact if the volume of pollutants generated exceeds the SCAQMD's thresholds of significance.

Construction results in the temporary generation of emissions resulting from demolition, site preparation, site grading, road paving, motor vehicle exhaust associated with construction equipment and worker trips, and the movement of construction equipment, especially on unpaved surfaces. Emissions of airborne particulate matter are largely dependent on the amount of ground disturbance

associated with site preparation activities as well as weather conditions and the appropriate application of water.

The duration of construction activities for the Project is estimated to be approximately 24 months, beginning in January 2024. See [Appendix A: Air Quality Data](#) for more information regarding the construction assumptions used in this analysis. Predicted maximum daily construction-generated emissions for the Project are identified in [Table 1: Project Construction Emissions](#).

Table 1: Project Construction Emissions						
Construction Year	Emissions (pounds per day)¹					
	ROG	NO_x	CO	SO₂	PM10	PM2.5
2024	5.04	49.32	39.50	0.09	27.33	15.27
2025	36.00	16.12	28.43	0.07	4.41	1.59
2026	33.74	1.23	3.33	<0.01	0.62	0.21
SCAQMD Threshold	75	100	550	150	150	55
SCAQMD Threshold Exceeded?	No	No	No	No	No	No
1. SCAQMD Rule 403 Fugitive Dust applied. The Rule 403 reduction/credits include the following: properly maintain mobile and other construction equipment; replace ground cover in disturbed areas quickly; water exposed surfaces three times daily; water all haul roads thrice daily; and limit speeds on unpaved roads to 15 miles per hour. Reductions percentages from the SCAQMD CEQA Handbook (Tables XI-A through XI-E) were applied. No mitigation was applied to construction equipment.						
Source: CalEEMod version 2020.4.0. Refer to Appendix A for model outputs.						

[Table 1](#) shows that construction pollutant emissions would remain below their respective thresholds with implementation of SCAQMD Rule 403 (required for all projects). The Project would also be required to comply with SCAQMD Rules 402 and 1113, which prohibit nuisances and limit VOC content in paints, respectively. Compliance with SCAQMD Rules 402 and 1113 would further reduce less-than-significant construction-related emissions. As shown above, all criteria pollutant emissions would be below their respective thresholds. Impacts would be less than significant.

Operational Emissions

Operational emissions are typically associated with mobile sources (i.e., motor vehicle use) and area sources (such as the use of landscape maintenance equipment, hearths, consumer products, and architectural coatings). Energy source emissions would be generated from electricity and natural gas (non-hearth) usage. Table 2: Operational Emissions summarizes the operational emissions attributable to the Project. As shown in Table 2, the Project’s emissions would not exceed SCAQMD thresholds. Therefore, regional operations emissions would result in a less than significant long-term regional air quality impact.

Table 2: Operational Emissions						
Source	Emissions (pounds per day)¹					
	ROG	NO_x	CO	SO₂	PM₁₀	PM_{2.5}
Area	5.56	0.24	21.23	<0.01	0.12	0.12
Energy	0.11	0.94	0.40	<0.01	0.08	0.08
Mobile	4.15	5.54	40.37	0.10	10.52	2.86
Total	9.82	6.72	62.00	0.11	10.72	3.06
SCAQMD Threshold	55	55	550	150	150	55
SCAQMD Threshold Exceeded?	No	No	No	No	No	No
1. Emissions were calculated using the California Emissions Estimator Model version 2020.4.0 (CalEEMod), as recommended by the SCAQMD. Worst-case seasonal maximum daily emissions are reported.						
Source: CalEEMod version 2020.4.0. Refer to <u>Appendix A</u> for model outputs.						

Conclusion

Project implementation would result in less than significant construction and operational air quality impacts. No mitigation measures would be required.

Appendix A

Air Quality Data

1575 University Avenue - Riverside-Mojave Desert SCAQMD County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

1575 University Avenue

Riverside-Mojave Desert SCAQMD County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	5.45	1000sqft	0.13	5,450.00	0
Enclosed Parking Structure	415.00	Space	3.73	166,000.00	0
Apartments Mid Rise	257.00	Dwelling Unit	0.43	219,550.00	735

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	28
Climate Zone	10			Operational Year	2026

Utility Company Southern California Edison

CO2 Intensity (lb/MW/hr)	390.98	CH4 Intensity (lb/MW/hr)	0.033	N2O Intensity (lb/MW/hr)	0.004
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1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Likely change Commercial Land use type, lot acreage and square feet based on provided gross information.

Construction Phase - Based on construction schedule

Trips and VMT - 2000 Market Street, Riverside CA 92501

Demolition - Based on construction questionnaire

Grading - All Demolished hardscape reused onsite (45,000 sf of pavement material * 12 inches deep, converted to yards = 1667 cy)

Woodstoves - Woodstoves and fireplaces would not be present in the mixed-use dwelling units

Construction Off-road Equipment Mitigation -

1575 University Avenue - Riverside-Mojave Desert SCAQMD County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	45.00
tblConstructionPhase	NumDays	5.00	22.00
tblConstructionPhase	NumDays	8.00	23.00
tblConstructionPhase	NumDays	18.00	23.00
tblConstructionPhase	NumDays	230.00	370.00
tblConstructionPhase	NumDays	18.00	44.00
tblFireplaces	NumberGas	141.35	0.00
tblFireplaces	NumberWood	89.95	0.00
tblGrading	AcresOfGrading	23.00	8.00
tblGrading	AcresOfGrading	33.00	7.50
tblGrading	MaterialExported	0.00	1,667.00
tblLandUse	LandUseSquareFeet	257,000.00	219,550.00
tblLandUse	LotAcreage	6.76	0.43
tblWoodstoves	NumberCatalytic	12.85	0.00
tblWoodstoves	NumberNoncatalytic	12.85	0.00

2.0 Emissions Summary

1575 University Avenue - Riverside-Mojave Desert SCAQMD County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

Year	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
lb/day																
2024	5.0431	49.3188	39.5038	0.0865	25.3637	2.2055	27.3305	13.4646	2.0384	15.2744	0.0000	8,443.5968	8,443.5968	2.2586	0.2111	8,534.6449
2025	35.9984	15.9846	28.4264	0.0677	3.8014	0.6095	4.4109	1.0163	0.5763	1.5926	0.0000	6,703.6809	6,703.6809	0.6854	0.2104	6,783.5210
2026	33.7428	1.2286	3.3287	7.5100e-003	0.5701	0.0538	0.6239	0.1512	0.0536	0.2048	0.0000	740.5690	740.5690	0.0240	9.7600e-003	744.0778
Maximum	35.9984	49.3188	39.5038	0.0865	25.3637	2.2055	27.3305	13.4646	2.0384	15.2744	0.0000	8,443.5968	8,443.5968	2.2586	0.2111	8,534.6449

Mitigated Construction

Year	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
lb/day																
2024	5.0431	49.3188	39.5038	0.0865	10.2178	2.2055	12.1845	5.3385	2.0384	7.1483	0.0000	8,443.5968	8,443.5968	2.2586	0.2111	8,534.6449
2025	35.9984	15.9846	28.4264	0.0677	3.8014	0.6095	4.4109	1.0163	0.5763	1.5926	0.0000	6,703.6809	6,703.6809	0.6854	0.2104	6,783.5210
2026	33.7428	1.2286	3.3287	7.5100e-003	0.5701	0.0538	0.6239	0.1512	0.0536	0.2048	0.0000	740.5690	740.5690	0.0240	9.7600e-003	744.0778
Maximum	35.9984	49.3188	39.5038	0.0865	10.2178	2.2055	12.1845	5.3385	2.0384	7.1483	0.0000	8,443.5968	8,443.5968	2.2586	0.2111	8,534.6449

1575 University Avenue - Riverside-Mojave Desert SCAQMD County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Unmitigated Operational

Category	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
lb/day																
Area	5.5566	0.2444	21.2256	1.1200e-003	0.1177	0.1177	0.1177	0.1177	0.1177	0.1177	0.0000	38.2700	38.2700	0.0368	0.0000	39.1899
Energy	0.1098	0.9383	0.4013	5.9900e-003	0.0758	0.0758	0.0758	0.0758	0.0758	0.0758		1,197.3928	1,197.3928	0.0230	0.0220	1,204.5083
Mobile	4.1512	5.2103	40.3714	0.0961	10.4524	0.0720	10.5244	2.7881	0.0675	2.8556		9,786.7790	9,786.7790	0.4576	0.4424	9,930.0457
Total	9.8176	6.3930	61.9983	0.1032	10.4524	0.2656	10.7179	2.7881	0.2610	3.0491	0.0000	11,022.4417	11,022.4417	0.5173	0.4643	11,173.7439

Mitigated Operational

Category	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
lb/day																
Area	5.5566	0.2444	21.2256	1.1200e-003	0.1177	0.1177	0.1177	0.1177	0.1177	0.1177	0.0000	38.2700	38.2700	0.0368	0.0000	39.1899
Energy	0.1098	0.9383	0.4013	5.9900e-003	0.0758	0.0758	0.0758	0.0758	0.0758	0.0758		1,197.3928	1,197.3928	0.0230	0.0220	1,204.5083
Mobile	4.1512	5.2103	40.3714	0.0961	10.4524	0.0720	10.5244	2.7881	0.0675	2.8556		9,786.7790	9,786.7790	0.4576	0.4424	9,930.0457
Total	9.8176	6.3930	61.9983	0.1032	10.4524	0.2656	10.7179	2.7881	0.2610	3.0491	0.0000	11,022.4417	11,022.4417	0.5173	0.4643	11,173.7439

1575 University Avenue - Riverside-Mojave Desert SCAQMD County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2024	3/1/2024	5	45	
2	Site Preparation	Site Preparation	3/1/2024	4/1/2024	5	22	
3	Grading	Grading	4/1/2024	5/1/2024	5	23	
4	Paving	Paving	5/1/2024	6/1/2024	5	23	
5	Building Construction	Building Construction	6/1/2024	11/1/2025	5	370	
6	Architectural Coating	Architectural Coating	11/1/2025	1/1/2026	5	44	

Acres of Grading (Site Preparation Phase): 7.5

Acres of Grading (Grading Phase): 8

Acres of Paving: 3.73

Residential Indoor: 444,589; Residential Outdoor: 148,196; Non-Residential Indoor: 8,175; Non-Residential Outdoor: 2,725; Striped Parking Area: 9,960 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37

1575 University Avenue - Riverside-Mojave Desert SCAQMD County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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
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
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	113.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	208.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	257.00	56.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	51.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

1575 University Avenue - Riverside-Mojave Desert SCAQMD County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2024

Unmitigated Construction On-Site

Category	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
	lb/day															
Fugitive Dust					0.5503	0.0000	0.5503	0.0833	0.0000	0.0833			0.0000			0.0000
Off-Road	2.2437	20.8781	19.7073	0.0388		0.9602	0.9602		0.8922	0.8922		3,747.4228	3,747.4228	1.0485		3,773.6345
Total	2.2437	20.8781	19.7073	0.0388	0.5503	0.9602	1.5105	0.0833	0.8922	0.9755		3,747.4228	3,747.4228	1.0485		3,773.6345

1575 University Avenue - Riverside-Mojave Desert SCAQMD County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2024

Unmitigated Construction Off-Site

Category	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
	lb/day															
Hauling	5.4800e-003	0.2515	0.0697	1.3600e-003	0.0440	3.0100e-003	0.0470	0.0121	2.8800e-003	0.0149		144.9437	144.9437	2.2100e-003	0.0228	151.8065
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
Worker	0.0510	0.0301	0.5130	1.4300e-003	0.1677	7.5000e-004	0.1684	0.0445	6.9000e-004	0.0452		144.3160	144.3160	3.1200e-003	3.2700e-003	145.3683
Total	0.0565	0.2816	0.5827	2.7900e-003	0.2116	3.7600e-003	0.2154	0.0565	3.5700e-003	0.0601		289.2597	289.2597	5.3300e-003	0.0261	297.1748

Mitigated Construction On-Site

Category	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
	lb/day															
Fugitive Dust					0.2146	0.0000	0.2146	0.0325	0.0000	0.0325			0.0000			0.0000
Off-Road	2.2437	20.8781	19.7073	0.0388		0.9602	0.9602	0.8922	0.8922	0.8922		3,747.4228	3,747.4228	1.0485		3,773.6345
Total	2.2437	20.8781	19.7073	0.0388	0.2146	0.9602	1.1748	0.0325	0.8922	0.9247	0.0000	3,747.4228	3,747.4228	1.0485		3,773.6345

1575 University Avenue - Riverside-Mojave Desert SCAQMD County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2024

Mitigated Construction Off-Site

Category	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
lb/day																
Hauling	5.4800e-003	0.2515	0.0697	1.3600e-003	0.0440	3.0100e-003	0.0470	0.0121	2.8800e-003	0.0149		144.9437	144.9437	2.2100e-003	0.0228	151.8065
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
Worker	0.0510	0.0301	0.5130	1.4300e-003	0.1677	7.5000e-004	0.1684	0.0445	6.9000e-004	0.0452		144.3160	144.3160	3.1200e-003	3.2700e-003	145.3683
Total	0.0565	0.2816	0.5827	2.7900e-003	0.2116	3.7600e-003	0.2154	0.0565	3.5700e-003	0.0601		289.2597	289.2597	5.3300e-003	0.0261	297.1748

3.3 Site Preparation - 2024

Unmitigated Construction On-Site

Category	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
lb/day																
Fugitive Dust					18.4384	0.0000	18.4384	9.9713	0.0000	9.9713			0.0000			0.0000
Off-Road	2.6609	27.1760	18.3356	0.0381		1.2294	1.2294		1.1310	1.1310			3.688.0100	1.1928		3,717.8294
Total	2.6609	27.1760	18.3356	0.0381	18.4384	1.2294	19.6678	9.9713	1.1310	11.1023		3,688.0100	3,688.0100	1.1928		3,717.8294

1575 University Avenue - Riverside-Mojave Desert SCAQMD County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Site Preparation - 2024

Unmitigated Construction Off-Site

lb/day																
Category	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
Hauling	0.0207	0.9468	0.2625	5.1100e-003	0.1655	0.0113	0.1768	0.0454	0.0108	0.0562		545.7252	545.7252	8.3100e-003	0.0860	571.5642
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
Worker	0.0613	0.0362	0.6156	1.7100e-003	0.2012	9.0000e-004	0.2021	0.0534	8.3000e-004	0.0542		173.1792	173.1792	3.7500e-003	3.9200e-003	174.4420
Total	0.0819	0.9830	0.8781	6.8200e-003	0.3667	0.0122	0.3789	0.0987	0.0117	0.1104		718.9044	718.9044	0.0121	0.0899	746.0062

Mitigated Construction On-Site

lb/day																
Category	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
Fugitive Dust					7.1910	0.0000	7.1910	3.8888	0.0000	3.8888			0.0000			0.0000
Off-Road	2.6609	27.1760	18.3356	0.0381		1.2294	1.2294	1.1310	1.1310	1.1310	0.0000	3.688.010	3.688.010	1.1928		3,717.8294
Total	2.6609	27.1760	18.3356	0.0381	7.1910	1.2294	8.4203	3.8888	1.1310	5.0198	0.0000	3,688.010	3,688.010	1.1928		3,717.8294

1575 University Avenue - Riverside-Mojave Desert SCAQMD County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Site Preparation - 2024

Mitigated Construction Off-Site

lb/day																
Category	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
Hauling	0.0207	0.9468	0.2625	5.1100e-003	0.1655	0.0113	0.1768	0.0454	0.0108	0.0562		545.7252	545.7252	8.3100e-003	0.0860	571.5642
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
Worker	0.0613	0.0362	0.6156	1.7100e-003	0.2012	9.0000e-004	0.2021	0.0534	8.3000e-004	0.0542		173.1792	173.1792	3.7500e-003	3.9200e-003	174.4420
Total	0.0819	0.9830	0.8781	6.8200e-003	0.3667	0.0122	0.3789	0.0987	0.0117	0.1104		718.9044	718.9044	0.0121	0.0899	746.0062

3.4 Grading - 2024

Unmitigated Construction On-Site

lb/day																
Category	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
Fugitive Dust					6.3910	0.0000	6.3910	3.3501	0.0000	3.3501			0.0000			0.0000
Off-Road	1.6617	17.0310	14.7594	0.0297		0.7244	0.7244		0.6665	0.6665		2.873.054 ₁	2.873.054 ₁	0.9292		2.896.284 ₂
Total	1.6617	17.0310	14.7594	0.0297	6.3910	0.7244	7.1154	3.3501	0.6665	4.0165		2.873.054₁	2.873.054₁	0.9292		2.896.284₂

1575 University Avenue - Riverside-Mojave Desert SCAQMD County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Grading - 2024

Unmitigated Construction Off-Site

Category	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
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	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	0.0510	0.0301	0.5130	1.4300e-003	0.1677	7.5000e-004	0.1684	0.0445	6.9000e-004	0.0452	144.3160	144.3160	144.3160	3.1200e-003	3.2700e-003	145.3683
Total	0.0510	0.0301	0.5130	1.4300e-003	0.1677	7.5000e-004	0.1684	0.0445	6.9000e-004	0.0452	144.3160	144.3160	144.3160	3.1200e-003	3.2700e-003	145.3683

Mitigated Construction On-Site

Category	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
lb/day																
Fugitive Dust					2.4925	0.0000	2.4925	1.3065	0.0000	1.3065			0.0000			0.0000
Off-Road	1.6617	17.0310	14.7594	0.0297		0.7244	0.7244		0.6665	0.6665	0.0000	2.873.054 ₁	2.873.054 ₁	0.9292		2.896.284 ₂
Total	1.6617	17.0310	14.7594	0.0297	2.4925	0.7244	3.2169	1.3065	0.6665	1.9730	0.0000	2,873.054₁	2,873.054₁	0.9292		2,896.284₂

1575 University Avenue - Riverside-Mojave Desert SCAQMD County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Grading - 2024

Mitigated Construction Off-Site

Category	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
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	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	0.0510	0.0301	0.5130	1.4300e-003	0.1677	7.5000e-004	0.1684	0.0445	6.9000e-004	0.0452	144.3160	144.3160	144.3160	3.1200e-003	3.2700e-003	145.3683
Total	0.0510	0.0301	0.5130	1.4300e-003	0.1677	7.5000e-004	0.1684	0.0445	6.9000e-004	0.0452	144.3160	144.3160	144.3160	3.1200e-003	3.2700e-003	145.3683

3.5 Paving - 2024

Unmitigated Construction On-Site

Category	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
lb/day																
Off-Road	0.8814	8.2730	12.2210	0.0189		0.3987	0.3987		0.3685	0.3685	1,805.6205	1,805.6205	1,805.6205	0.5673		1,819.8039
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.8814	8.2730	12.2210	0.0189		0.3987	0.3987		0.3685	0.3685	1,805.6205	1,805.6205	1,805.6205	0.5673		1,819.8039

1575 University Avenue - Riverside-Mojave Desert SCAQMD County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2024

Unmitigated Construction Off-Site

Category	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
	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	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	0.0681	0.0402	0.6840	1.9000e-003	0.2236	1.0000e-003	0.2246	0.0593	9.2000e-004	0.0602	192.4214	192.4214	4.1600e-003	4.1600e-003	4.3600e-003	193.8244
Total	0.0681	0.0402	0.6840	1.9000e-003	0.2236	1.0000e-003	0.2246	0.0593	9.2000e-004	0.0602	192.4214	192.4214	4.1600e-003	4.1600e-003	4.3600e-003	193.8244

Mitigated Construction On-Site

Category	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
	lb/day															
Off-Road	0.8814	8.2730	12.2210	0.0189		0.3987	0.3987		0.3685	0.3685	0.0000	1,805.6205	1,805.6205	0.5673		1,819.8039
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.8814	8.2730	12.2210	0.0189		0.3987	0.3987		0.3685	0.3685	0.0000	1,805.6205	1,805.6205	0.5673		1,819.8039

1575 University Avenue - Riverside-Mojave Desert SCAQMD County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2024

Mitigated Construction Off-Site

Category	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
	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	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	0.0681	0.0402	0.6840	1.9000e-003	0.2236	1.0000e-003	0.2246	0.0593	9.2000e-004	0.0602	192.4214	192.4214	4.1600e-003	4.1600e-003	4.3600e-003	193.8244
Total	0.0681	0.0402	0.6840	1.9000e-003	0.2236	1.0000e-003	0.2246	0.0593	9.2000e-004	0.0602	192.4214	192.4214	4.1600e-003	4.1600e-003	4.3600e-003	193.8244

3.6 Building Construction - 2024

Unmitigated Construction On-Site

Category	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
	lb/day															
Off-Road	1.4716	13.4438	16.1668	0.0270	0.6133	0.6133	0.6133	0.5769	0.5769	0.5769	2,555.6989	2,555.6989	0.6044	0.6044		2,570.8077
Total	1.4716	13.4438	16.1668	0.0270	0.6133	0.6133	0.6133	0.5769	0.5769	0.5769	2,555.6989	2,555.6989	0.6044	0.6044		2,570.8077

1575 University Avenue - Riverside-Mojave Desert SCAQMD County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Building Construction - 2024
Unmitigated Construction Off-Site

Category	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
	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	0.0000	0.0000
Vendor	0.0621	1.8297	0.7447	9.6300e-003	0.3587	0.0158	0.3745	0.1033	0.0151	0.1184	1,021.5272	1,021.5272	1,021.5272	0.0110	0.1507	1,066.7167
Worker	0.8745	0.5165	8.7896	0.0245	2.8727	0.0128	2.8855	0.7618	0.0118	0.7736	2,472.6145	2,472.6145	2,472.6145	0.0535	0.0560	2,490.6438
Total	0.9366	2.3462	9.5343	0.0341	3.2313	0.0287	3.2600	0.8651	0.0269	0.8921	3,494.1417	3,494.1417	3,494.1417	0.0644	0.2067	3,557.3605

Mitigated Construction On-Site

Category	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
	lb/day															
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077

1575 University Avenue - Riverside-Mojave Desert SCAQMD County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Building Construction - 2024

Mitigated Construction Off-Site

Category	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
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	0.0000	0.0000
Vendor	0.0621	1.8297	0.7447	9.6300e-003	0.3587	0.0158	0.3745	0.1033	0.0151	0.1184	1,021.5272	1,021.5272	1,021.5272	0.0110	0.1507	1,066.7167
Worker	0.8745	0.5165	8.7896	0.0245	2.8727	0.0128	2.8855	0.7618	0.0118	0.7736	2,472.6145	2,472.6145	2,472.6145	0.0535	0.0560	2,490.6438
Total	0.9366	2.3462	9.5343	0.0341	3.2313	0.0287	3.2600	0.8651	0.0269	0.8921	3,494.1417	3,494.1417	3,494.1417	0.0644	0.2067	3,557.3605

3.6 Building Construction - 2025

Unmitigated Construction On-Site

Category	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
lb/day																
Off-Road	1.3674	12.4697	16.0847	0.0270	0.5276	0.5276	0.5276	0.4963	0.4963	0.4963	2,556.4744	2,556.4744	2,556.4744	0.6010	0.6010	2,571.4981
Total	1.3674	12.4697	16.0847	0.0270	0.5276	0.5276	0.5276	0.4963	0.4963	0.4963	2,556.4744	2,556.4744	2,556.4744	0.6010	0.6010	2,571.4981

1575 University Avenue - Riverside-Mojave Desert SCAQMD County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Building Construction - 2025

Unmitigated Construction Off-Site

Category	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
	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	0.0000	0.0000
Vendor	0.0613	1.8147	0.7363	9.4600e-003	0.3587	0.0158	0.3745	0.1033	0.0152	0.1184	1,003.5205	1,003.5205	0.0114	0.1478	1,047.8402	
Worker	0.8170	0.4629	8.1742	0.0236	2.8727	0.0122	2.8848	0.7618	0.0112	0.7730	2,388.2960	2,388.2960	0.0482	0.0523	2,405.0785	
Total	0.8784	2.2776	8.9105	0.0331	3.2313	0.0280	3.2593	0.8651	0.0263	0.8915	3,391.8165	3,391.8165	0.0596	0.2000	3,452.9187	

Mitigated Construction On-Site

Category	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
	lb/day															
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276	0.4963	0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276	0.4963	0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981

1575 University Avenue - Riverside-Mojave Desert SCAQMD County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Building Construction - 2025

Mitigated Construction Off-Site

Category	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
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	0.0000	0.0000
Vendor	0.0613	1.8147	0.7363	9.4600e-003	0.3587	0.0158	0.3745	0.1033	0.0152	0.1184	1,003.5205	1,003.5205	1,003.5205	0.0114	0.1478	1,047.8402
Worker	0.8170	0.4629	8.1742	0.0236	2.8727	0.0122	2.8848	0.7618	0.0112	0.7730	2,388.2960	2,388.2960	2,388.2960	0.0482	0.0523	2,405.0785
Total	0.8784	2.2776	8.9105	0.0331	3.2313	0.0280	3.2593	0.8651	0.0263	0.8915	3,391.8165	3,391.8165	3,391.8165	0.0596	0.2000	3,452.9187

3.7 Architectural Coating - 2025

Unmitigated Construction On-Site

Category	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
lb/day																
Archit. Coating	33.4197					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003	0.0515	0.0515	0.0515	0.0515	0.0515	0.0515	281.4481	281.4481	281.4481	0.0154		281.8319
Total	33.5905	1.1455	1.8091	2.9700e-003	0.0515	0.0515	0.0515	0.0515	0.0515	0.0515	281.4481	281.4481	281.4481	0.0154		281.8319

1575 University Avenue - Riverside-Mojave Desert SCAQMD County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Architectural Coating - 2025
Unmitigated Construction Off-Site

Category	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
	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	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	0.1621	0.0919	1.6221	4.6900e-003	0.5701	2.4100e-003	0.5725	0.1512	2.2200e-003	0.1534	473.9420	473.9420	473.9420	9.5700e-003	0.0104	477.2724
Total	0.1621	0.0919	1.6221	4.6900e-003	0.5701	2.4100e-003	0.5725	0.1512	2.2200e-003	0.1534	473.9420	473.9420	473.9420	9.5700e-003	0.0104	477.2724

Mitigated Construction On-Site

Category	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
	lb/day															
Archit. Coating	33.4197					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515	0.0515	0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
Total	33.5905	1.1455	1.8091	2.9700e-003		0.0515	0.0515	0.0515	0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319

1575 University Avenue - Riverside-Mojave Desert SCAQMD County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Architectural Coating - 2025

Mitigated Construction Off-Site

Category	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
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	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	0.1621	0.0919	1.6221	4.6900e-003	0.5701	2.4100e-003	0.5725	0.1512	2.2200e-003	0.1534	473.9420	473.9420	473.9420	9.5700e-003	0.0104	477.2724
Total	0.1621	0.0919	1.6221	4.6900e-003	0.5701	2.4100e-003	0.5725	0.1512	2.2200e-003	0.1534	473.9420	473.9420	473.9420	9.5700e-003	0.0104	477.2724

3.7 Architectural Coating - 2026

Unmitigated Construction On-Site

Category	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
lb/day																
Archit. Coating	33.4197					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003	0.0515	0.0515	0.0515	0.0515	0.0515	0.0515	281.4481	281.4481	281.4481	0.0154		281.8319
Total	33.5905	1.1455	1.8091	2.9700e-003	0.0515	0.0515	0.0515	0.0515	0.0515	0.0515	281.4481	281.4481	281.4481	0.0154		281.8319

1575 University Avenue - Riverside-Mojave Desert SCAQMD County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

**3.7 Architectural Coating - 2026
Unmitigated Construction Off-Site**

Category	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
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	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	0.1522	0.0831	1.5196	4.5400e-003	0.5701	2.2800e-003	0.5723	0.1512	2.1000e-003	0.1533	459.1209	459.1209	8.6700e-003	9.7600e-003	9.7600e-003	462.2460
Total	0.1522	0.0831	1.5196	4.5400e-003	0.5701	2.2800e-003	0.5723	0.1512	2.1000e-003	0.1533	459.1209	459.1209	8.6700e-003	9.7600e-003	9.7600e-003	462.2460

Mitigated Construction On-Site

Category	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
lb/day																
Archit. Coating	33.4197					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003	0.0515	0.0515	0.0515	0.0515	0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
Total	33.5905	1.1455	1.8091	2.9700e-003	0.0515	0.0515	0.0515	0.0515	0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319

1575 University Avenue - Riverside-Mojave Desert SCAQMD County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Architectural Coating - 2026

Mitigated Construction Off-Site

Category	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
	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	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	0.1522	0.0831	1.5196	4.5400e-003	0.5701	2.2800e-003	0.5723	0.1512	2.1000e-003	0.1533	459.1209	459.1209	459.1209	8.6700e-003	9.7600e-003	462.2460
Total	0.1522	0.0831	1.5196	4.5400e-003	0.5701	2.2800e-003	0.5723	0.1512	2.1000e-003	0.1533	459.1209	459.1209	459.1209	8.6700e-003	9.7600e-003	462.2460

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

1575 University Avenue - Riverside-Mojave Desert SCAQMD County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Category	lb/day															
	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
Mitigated	4.1512	5.2103	40.3714	0.0961	10.4524	0.0720	10.5244	2.7881	0.0675	2.8556	9,786.779	0	9,786.779	0.4576	0.4424	9,930.0457
Unmitigated	4.1512	5.2103	40.3714	0.0961	10.4524	0.0720	10.5244	2.7881	0.0675	2.8556	9,786.779	0	9,786.779	0.4576	0.4424	9,930.0457

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated Annual VMT	Mitigated Annual VMT
	Weekday	Saturday	Sunday		
Apartments Mid Rise	1,398.08	1,261.87	1,051.13	4,541,590	4,541,590
Enclosed Parking Structure	0.00	0.00	0.00	129,445	129,445
General Office Building	53.08	12.04	3.82	129,445	129,445
Total	1,451.16	1,273.91	1,054.95	4,671,035	4,671,035

4.3 Trip Type Information

Land Use	Miles										Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-C	H-O or C-NW	Primary	Diverted	Pass-by		
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	86	11	3		
Enclosed Parking Structure	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0	0	0		
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	77	19	4		

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.542916	0.056689	0.174450	0.134041	0.024680	0.006960	0.011589	0.018600	0.000608	0.000298	0.023389	0.001091	0.004689
Enclosed Parking Structure	0.542916	0.056689	0.174450	0.134041	0.024680	0.006960	0.011589	0.018600	0.000608	0.000298	0.023389	0.001091	0.004689

1575 University Avenue - Riverside-Mojave Desert SCAQMD County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

General Office Building	0.542916	0.056689	0.174450	0.134041	0.024680	0.006960	0.011589	0.018600	0.000608	0.000298	0.023389	0.001091	0.004689
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5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Category	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
	lb/day															
NaturalGas Mitigated	0.1098	0.9383	0.4013	5.9900e-003		0.0758	0.0758		0.0758	0.0758		1,197,392.8	1,197,392.8	0.0230	0.0220	1,204,508.3
NaturalGas Unmitigated	0.1098	0.9383	0.4013	5.9900e-003		0.0758	0.0758		0.0758	0.0758		1,197,392.8	1,197,392.8	0.0230	0.0220	1,204,508.3

1575 University Avenue - Riverside-Mojave Desert SCAQMD County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

Land Use	NaturalGas Use kBTU/yr	lb/day										lb/day					
		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
Apartments Mid Rise	10126.6	0.1092	0.9332	0.3971	5.9600e-003		0.0755	0.0755		0.0755		0.0755	1,191.3675	1,191.3675	0.0228	0.0218	1,198.4472
Enclosed Parking Structure	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
General Office Building	51.2151	5.5000e-004	5.0200e-003	4.2200e-003	3.0000e-005		3.8000e-004	3.8000e-004		3.8000e-004		3.8000e-004	6.0253	6.0253	1.2000e-004	1.1000e-004	6.0611
Total		0.1098	0.9383	0.4013	5.9900e-003		0.0758	0.0758		0.0758		0.0758	1,197.3928	1,197.3928	0.0230	0.0220	1,204.5083

1575 University Avenue - Riverside-Mojave Desert SCAQMD County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

Land Use	NaturalGas Use kBTU/yr	lb/day											CO2e				
		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
Apartments Mid Rise	10.1266	0.1092	0.9332	0.3971	5.9600e-003		0.0755	0.0755	0.0755	0.0755	0.0755	1,191.3675	1,191.3675	0.0228	0.0218	0.0000	1,198.4472
Enclosed Parking Structure	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	0.0000
General Office Building	0.0512151	5.5000e-004	5.0200e-003	4.2200e-003	3.0000e-005		3.8000e-004	3.8000e-004	3.8000e-004	3.8000e-004	3.8000e-004	6.0253	6.0253	1.2000e-004	1.1000e-004	0.0000	6.0611
Total		0.1098	0.9383	0.4013	5.9900e-003		0.0758	0.0758	0.0758	0.0758	0.0758	1,197.3928	1,197.3928	0.0230	0.0220	0.0000	1,204.5083

6.0 Area Detail

6.1 Mitigation Measures Area

- Use Low VOC Paint - Residential Interior
- Use Low VOC Paint - Residential Exterior
- Use Low VOC Paint - Non-Residential Interior
- Use Low VOC Paint - Non-Residential Exterior
- No Hearths Installed

1575 University Avenue - Riverside-Mojave Desert SCAQMD County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Category	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
lb/day																
Mitigated	5.5566	0.2444	21.2256	1.1200e-003	0.1177	0.1177	0.1177	0.1177	0.1177	0.1177	0.0000	38.2700	38.2700	0.0368	0.0000	39.1899
Unmitigated	5.5566	0.2444	21.2256	1.1200e-003	0.1177	0.1177	0.1177	0.1177	0.1177	0.1177	0.0000	38.2700	38.2700	0.0368	0.0000	39.1899

6.2 Area by SubCategory

Unmitigated

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Architectural Coating	0.4029					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.5138					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Landscaping	0.6400	0.2444	21.2256	1.1200e-003		0.1177	0.1177		0.1177	0.1177		38.2700	38.2700	0.0368		39.1899
Total	5.5566	0.2444	21.2256	1.1200e-003		0.1177	0.1177		0.1177	0.1177	0.0000	38.2700	38.2700	0.0368	0.0000	39.1899

1575 University Avenue - Riverside-Mojave Desert SCAQMD County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Architectural Coating	0.4029					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.5138					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.6400	0.2444	21.2256	1.1200e-003		0.1177	0.1177		0.1177	0.1177		38.2700	38.2700	0.0368		39.1899
Total	5.5566	0.2444	21.2256	1.1200e-003		0.1177	0.1177		0.1177	0.1177	0.0000	38.2700	38.2700	0.0368	0.0000	39.1899

7.0 Water Detail

7.1 Mitigation Measures Water

1575 University Avenue - Riverside-Mojave Desert SCAQMD County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

1575 University Avenue - Riverside-Mojave Desert SCAQMD County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

1575 University Avenue
Riverside-Mojave Desert SCAQMD County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	5.45	1000sqft	0.13	5,450.00	0
Enclosed Parking Structure	415.00	Space	3.73	166,000.00	0
Apartments Mid Rise	257.00	Dwelling Unit	0.43	219,550.00	735

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	28
Climate Zone	10			Operational Year	2026

Utility Company Southern California Edison

CO2 Intensity (lb/MW/hr)	390.98	CH4 Intensity (lb/MW/hr)	0.033	N2O Intensity (lb/MW/hr)	0.004
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1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Likely change Commercial Land use type, lot acreage and square feet based on provided gross information.

Construction Phase - Based on construction schedule

Trips and VMT - 2000 Market Street, Riverside CA 92501

Demolition - Based on construction questionnaire

Grading - All Demolished hardscape reused onsite (45,000 sf of pavement material * 12 inches deep, converted to yards = 1667 cy)

Woodstoves - Woodstoves and fireplaces would not be present in the mixed-use dwelling units

Construction Off-road Equipment Mitigation -

1575 University Avenue - Riverside-Mojave Desert SCAQMD County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	45.00
tblConstructionPhase	NumDays	5.00	22.00
tblConstructionPhase	NumDays	8.00	23.00
tblConstructionPhase	NumDays	18.00	23.00
tblConstructionPhase	NumDays	230.00	370.00
tblConstructionPhase	NumDays	18.00	44.00
tblFireplaces	NumberGas	141.35	0.00
tblFireplaces	NumberWood	89.95	0.00
tblGrading	AcresOfGrading	23.00	8.00
tblGrading	AcresOfGrading	33.00	7.50
tblGrading	MaterialExported	0.00	1,667.00
tblLandUse	LandUseSquareFeet	257,000.00	219,550.00
tblLandUse	LotAcreage	6.76	0.43
tblWoodstoves	NumberCatalytic	12.85	0.00
tblWoodstoves	NumberNoncatalytic	12.85	0.00

2.0 Emissions Summary

1575 University Avenue - Riverside-Mojave Desert SCAQMD County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

lb/day																
Year	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
2024	5.0342	49.3927	39.2990	0.0862	25.3637	2.2055	27.3305	13.4646	2.0385	15.2744	0.0000	8,414.9215	8,414.9215	2.2585	0.2130	8,506.0675
2025	35.9378	16.1151	26.6241	0.0651	3.8014	0.6095	4.4109	1.0163	0.5764	1.5927	0.0000	6,438.6091	6,438.6091	0.6853	0.2123	6,519.0200
2026	33.7345	1.2317	3.0464	7.0900e-003	0.5701	0.0538	0.6239	0.1512	0.0536	0.2048	0.0000	697.7319	697.7319	0.0241	9.9800e-003	701.3079
Maximum	35.9378	49.3927	39.2990	0.0862	25.3637	2.2055	27.3305	13.4646	2.0385	15.2744	0.0000	8,414.9215	8,414.9215	2.2585	0.2130	8,506.0675

Mitigated Construction

lb/day																
Year	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
2024	5.0342	49.3927	39.2990	0.0862	10.2178	2.2055	12.1846	5.3385	2.0385	7.1484	0.0000	8,414.9215	8,414.9215	2.2585	0.2130	8,506.0675
2025	35.9378	16.1151	26.6241	0.0651	3.8014	0.6095	4.4109	1.0163	0.5764	1.5927	0.0000	6,438.6091	6,438.6091	0.6853	0.2123	6,519.0200
2026	33.7345	1.2317	3.0464	7.0900e-003	0.5701	0.0538	0.6239	0.1512	0.0536	0.2048	0.0000	697.7319	697.7319	0.0241	9.9800e-003	701.3079
Maximum	35.9378	49.3927	39.2990	0.0862	10.2178	2.2055	12.1846	5.3385	2.0385	7.1484	0.0000	8,414.9215	8,414.9215	2.2585	0.2130	8,506.0675

1575 University Avenue - Riverside-Mojave Desert SCAQMD County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Unmitigated Operational

Category	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
lb/day																
Area	5.5566	0.2444	21.2256	1.1200e-003	0.1177	0.1177	0.1177	0.1177	0.1177	0.1177	0.0000	38.2700	38.2700	0.0368	0.0000	39.1899
Energy	0.1098	0.9383	0.4013	5.9900e-003	0.0758	0.0758	0.0758	0.0758	0.0758	0.0758		1,197.3928	1,197.3928	0.0230	0.0220	1,204.5083
Mobile	3.5299	5.5353	35.7941	0.0892	10.4524	0.0721	10.5245	2.7881	0.0676	2.8556		9,093.9128	9,093.9128	0.4676	0.4516	9,240.1721
Total	9.1962	6.7180	57.4210	0.0963	10.4524	0.2656	10.7180	2.7881	0.2611	3.0492	0.0000	10,329.5756	10,329.5756	0.5273	0.4735	10,483.8704

Mitigated Operational

Category	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
lb/day																
Area	5.5566	0.2444	21.2256	1.1200e-003	0.1177	0.1177	0.1177	0.1177	0.1177	0.1177	0.0000	38.2700	38.2700	0.0368	0.0000	39.1899
Energy	0.1098	0.9383	0.4013	5.9900e-003	0.0758	0.0758	0.0758	0.0758	0.0758	0.0758		1,197.3928	1,197.3928	0.0230	0.0220	1,204.5083
Mobile	3.5299	5.5353	35.7941	0.0892	10.4524	0.0721	10.5245	2.7881	0.0676	2.8556		9,093.9128	9,093.9128	0.4676	0.4516	9,240.1721
Total	9.1962	6.7180	57.4210	0.0963	10.4524	0.2656	10.7180	2.7881	0.2611	3.0492	0.0000	10,329.5756	10,329.5756	0.5273	0.4735	10,483.8704

1575 University Avenue - Riverside-Mojave Desert SCAQMD County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2024	3/1/2024	5	45	
2	Site Preparation	Site Preparation	3/1/2024	4/1/2024	5	22	
3	Grading	Grading	4/1/2024	5/1/2024	5	23	
4	Paving	Paving	5/1/2024	6/1/2024	5	23	
5	Building Construction	Building Construction	6/1/2024	11/1/2025	5	370	
6	Architectural Coating	Architectural Coating	11/1/2025	1/1/2026	5	44	

Acres of Grading (Site Preparation Phase): 7.5

Acres of Grading (Grading Phase): 8

Acres of Paving: 3.73

Residential Indoor: 444,589; Residential Outdoor: 148,196; Non-Residential Indoor: 8,175; Non-Residential Outdoor: 2,725; Striped Parking Area: 9,960 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37

1575 University Avenue - Riverside-Mojave Desert SCAQMD County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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
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
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	113.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	208.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	257.00	56.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	51.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

1575 University Avenue - Riverside-Mojave Desert SCAQMD County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2024

Unmitigated Construction On-Site

Category	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
lb/day																
Fugitive Dust					0.5503	0.0000	0.5503	0.0833	0.0000	0.0833			0.0000			0.0000
Off-Road	2.2437	20.8781	19.7073	0.0388		0.9602	0.9602		0.8922	0.8922		3,747.4228	3,747.4228	1.0485		3,773.6345
Total	2.2437	20.8781	19.7073	0.0388	0.5503	0.9602	1.5105	0.0833	0.8922	0.9755		3,747.4228	3,747.4228	1.0485		3,773.6345

1575 University Avenue - Riverside-Mojave Desert SCAQMD County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2024

Unmitigated Construction Off-Site

Category	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
lb/day																
Hauling	5.0400e-003	0.2665	0.0712	1.3600e-003	0.0440	3.0100e-003	0.0470	0.0121	2.8800e-003	0.0149		145.1712	145.1712	2.1800e-003	0.0229	152.0442
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
Worker	0.0480	0.0313	0.4168	1.2900e-003	0.1677	7.5000e-004	0.1684	0.0445	6.9000e-004	0.0452		130.7890	130.7890	3.1200e-003	3.3500e-003	131.8638
Total	0.0530	0.2977	0.4879	2.6500e-003	0.2116	3.7600e-003	0.2154	0.0565	3.5700e-003	0.0601		275.9602	275.9602	5.3000e-003	0.0262	283.9079

Mitigated Construction On-Site

Category	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
lb/day																
Fugitive Dust					0.2146	0.0000	0.2146	0.0325	0.0000	0.0325			0.0000			0.0000
Off-Road	2.2437	20.8781	19.7073	0.0388		0.9602	0.9602		0.8922	0.8922		3,747.4228	3,747.4228	1.0485		3,773.6345
Total	2.2437	20.8781	19.7073	0.0388	0.2146	0.9602	1.1748	0.0325	0.8922	0.9247	0.0000	3,747.4228	3,747.4228	1.0485		3,773.6345

1575 University Avenue - Riverside-Mojave Desert SCAQMD County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2024

Mitigated Construction Off-Site

Category	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
lb/day																
Hauling	5.0400e-003	0.2665	0.0712	1.3600e-003	0.0440	3.0100e-003	0.0470	0.0121	2.8800e-003	0.0149		145.1712	145.1712	2.1800e-003	0.0229	152.0442
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
Worker	0.0480	0.0313	0.4168	1.2900e-003	0.1677	7.5000e-004	0.1684	0.0445	6.9000e-004	0.0452		130.7890	130.7890	3.1200e-003	3.3500e-003	131.8638
Total	0.0530	0.2977	0.4879	2.6500e-003	0.2116	3.7600e-003	0.2154	0.0565	3.5700e-003	0.0601		275.9602	275.9602	5.3000e-003	0.0262	283.9079

3.3 Site Preparation - 2024

Unmitigated Construction On-Site

Category	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
lb/day																
Fugitive Dust					18.4384	0.0000	18.4384	9.9713	0.0000	9.9713			0.0000			0.0000
Off-Road	2.6609	27.1760	18.3356	0.0381		1.2294	1.2294	1.1310	1.1310	1.1310		3.688.010	3.688.010	1.1928		3,717.8294
Total	2.6609	27.1760	18.3356	0.0381	18.4384	1.2294	19.6678	9.9713	1.1310	11.1023		3,688.010	3,688.010	1.1928		3,717.8294

1575 University Avenue - Riverside-Mojave Desert SCAQMD County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Site Preparation - 2024

Unmitigated Construction Off-Site

lb/day																
Category	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
Hauling	0.0190	1.0033	0.2680	5.1100e-003	0.1655	0.0113	0.1768	0.0454	0.0109	0.0562		546.5818	546.5818	8.2300e-003	0.0862	572.4592
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
Worker	0.0576	0.0375	0.5001	1.5500e-003	0.2012	9.0000e-004	0.2021	0.0534	8.3000e-004	0.0542		156.9468	156.9468	3.7400e-003	4.0100e-003	158.2365
Total	0.0766	1.0408	0.7681	6.6600e-003	0.3667	0.0122	0.3789	0.0987	0.0117	0.1104		703.5286	703.5286	0.0120	0.0902	730.6957

Mitigated Construction On-Site

lb/day																
Category	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
Fugitive Dust					7.1910	0.0000	7.1910	3.8888	0.0000	3.8888			0.0000			0.0000
Off-Road	2.6609	27.1760	18.3356	0.0381		1.2294	1.2294	1.1310	1.1310	1.1310	0.0000	3.688.010	3.688.010	1.1928		3,717.8294
Total	2.6609	27.1760	18.3356	0.0381	7.1910	1.2294	8.4203	3.8888	1.1310	5.0198	0.0000	3,688.010	3,688.010	1.1928		3,717.8294

1575 University Avenue - Riverside-Mojave Desert SCAQMD County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Site Preparation - 2024

Mitigated Construction Off-Site

Category	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
	lb/day															
Hauling	0.0190	1.0033	0.2680	5.1100e-003	0.1655	0.0113	0.1768	0.0454	0.0109	0.0562	546.5818	546.5818	546.5818	8.2300e-003	0.0862	572.4592
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	0.0576	0.0375	0.5001	1.5500e-003	0.2012	9.0000e-004	0.2021	0.0534	8.3000e-004	0.0542	156.9468	156.9468	156.9468	3.7400e-003	4.0100e-003	158.2365
Total	0.0766	1.0408	0.7681	6.6600e-003	0.3667	0.0122	0.3789	0.0987	0.0117	0.1104	703.5286	703.5286	703.5286	0.0120	0.0902	730.6957

3.4 Grading - 2024

Unmitigated Construction On-Site

Category	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
	lb/day															
Fugitive Dust					6.3910	0.0000	6.3910	3.3501	0.0000	3.3501			0.0000			0.0000
Off-Road	1.6617	17.0310	14.7594	0.0297		0.7244	0.7244		0.6665	0.6665	2.873.054 ₁	2.873.054 ₁	2.873.054 ₁	0.9292		2.896.284 ₂
Total	1.6617	17.0310	14.7594	0.0297	6.3910	0.7244	7.1154	3.3501	0.6665	4.0165	2.873.054₁	2.873.054₁	2.873.054₁	0.9292		2.896.284₂

1575 University Avenue - Riverside-Mojave Desert SCAQMD County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Grading - 2024

Unmitigated Construction Off-Site

Category	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
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	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	0.0480	0.0313	0.4168	1.2900e-003	0.1677	7.5000e-004	0.1684	0.0445	6.9000e-004	0.0452		130.7890	130.7890	3.1200e-003	3.3500e-003	131.8638
Total	0.0480	0.0313	0.4168	1.2900e-003	0.1677	7.5000e-004	0.1684	0.0445	6.9000e-004	0.0452		130.7890	130.7890	3.1200e-003	3.3500e-003	131.8638

Mitigated Construction On-Site

Category	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
lb/day																
Fugitive Dust					2.4925	0.0000	2.4925	1.3065	0.0000	1.3065			0.0000			0.0000
Off-Road	1.6617	17.0310	14.7594	0.0297		0.7244	0.7244		0.6665	0.6665	0.0000	2.873.054 ₁	2.873.054 ₁	0.9292		2.896.284 ₂
Total	1.6617	17.0310	14.7594	0.0297	2.4925	0.7244	3.2169	1.3065	0.6665	1.9730	0.0000	2,873.054₁	2,873.054₁	0.9292		2,896.284₂

1575 University Avenue - Riverside-Mojave Desert SCAQMD County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Grading - 2024

Mitigated Construction Off-Site

Category	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
	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	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	0.0480	0.0313	0.4168	1.2900e-003	0.1677	7.5000e-004	0.1684	0.0445	6.9000e-004	0.0452	130.7890	130.7890	130.7890	3.1200e-003	3.3500e-003	131.8638
Total	0.0480	0.0313	0.4168	1.2900e-003	0.1677	7.5000e-004	0.1684	0.0445	6.9000e-004	0.0452	130.7890	130.7890	130.7890	3.1200e-003	3.3500e-003	131.8638

3.5 Paving - 2024

Unmitigated Construction On-Site

Category	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
	lb/day															
Off-Road	0.8814	8.2730	12.2210	0.0189		0.3987	0.3987		0.3685	0.3685	1,805.6205	1,805.6205	1,805.6205	0.5673		1,819.8039
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.8814	8.2730	12.2210	0.0189		0.3987	0.3987		0.3685	0.3685	1,805.6205	1,805.6205	1,805.6205	0.5673		1,819.8039

1575 University Avenue - Riverside-Mojave Desert SCAQMD County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2024

Unmitigated Construction Off-Site

Category	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
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	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	0.0640	0.0417	0.5557	1.7300e-003	0.2236	1.0000e-003	0.2246	0.0593	9.2000e-004	0.0602	174.3853	174.3853	174.3853	4.1600e-003	4.4600e-003	175.8183
Total	0.0640	0.0417	0.5557	1.7300e-003	0.2236	1.0000e-003	0.2246	0.0593	9.2000e-004	0.0602	174.3853	174.3853	174.3853	4.1600e-003	4.4600e-003	175.8183

Mitigated Construction On-Site

Category	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
lb/day																
Off-Road	0.8814	8.2730	12.2210	0.0189		0.3987	0.3987		0.3685	0.3685	0.0000	1,805.6205	1,805.6205	0.5673		1,819.8039
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.8814	8.2730	12.2210	0.0189		0.3987	0.3987		0.3685	0.3685	0.0000	1,805.6205	1,805.6205	0.5673		1,819.8039

1575 University Avenue - Riverside-Mojave Desert SCAQMD County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2024

Mitigated Construction Off-Site

Category	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
	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	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	0.0640	0.0417	0.5557	1.7300e-003	0.2236	1.0000e-003	0.2246	0.0593	9.2000e-004	0.0602	174.3853	174.3853	174.3853	4.1600e-003	4.4600e-003	175.8183
Total	0.0640	0.0417	0.5557	1.7300e-003	0.2236	1.0000e-003	0.2246	0.0593	9.2000e-004	0.0602	174.3853	174.3853	174.3853	4.1600e-003	4.4600e-003	175.8183

3.6 Building Construction - 2024

Unmitigated Construction On-Site

Category	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
	lb/day															
Off-Road	1.4716	13.4438	16.1668	0.0270	0.6133	0.6133	0.6133	0.5769	0.5769	0.5769	2,555.6989	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	1.4716	13.4438	16.1668	0.0270	0.6133	0.6133	0.6133	0.5769	0.5769	0.5769	2,555.6989	2,555.6989	2,555.6989	0.6044		2,570.8077

1575 University Avenue - Riverside-Mojave Desert SCAQMD County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Building Construction - 2024
Unmitigated Construction Off-Site

Category	lb/day															
	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
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	0.0575	1.9406	0.7700	9.6500e-003	0.3587	0.0159	0.3746	0.1033	0.0152	0.1185	1,024.0802	1,024.0802	0.0107	0.1512	1,069.4130	
Worker	0.8222	0.5356	7.1407	0.0222	2.8727	0.0128	2.8855	0.7618	0.0118	0.7736	2,240.8514	2,240.8514	0.0534	0.0573	2,259.2656	
Total	0.8796	2.4762	7.9107	0.0318	3.2313	0.0287	3.2600	0.8651	0.0270	0.8921	3,264.9315	3,264.9315	0.0641	0.2085	3,328.6786	

Mitigated Construction On-Site

Category	lb/day															
	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
Off-Road	1.4716	13.4438	16.1668	0.0270	0.6133	0.6133	0.6133	0.5769	0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044	0.0000	2,570.8077
Total	1.4716	13.4438	16.1668	0.0270	0.6133	0.6133	0.6133	0.5769	0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044	0.0000	2,570.8077

1575 University Avenue - Riverside-Mojave Desert SCAQMD County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Building Construction - 2024

Mitigated Construction Off-Site

Category	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
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	0.0000	0.0000
Vendor	0.0575	1.9406	0.7700	9.6500e-003	0.3587	0.0159	0.3746	0.1033	0.0152	0.1185	1,024.0802	1,024.0802	0.0107	0.1512	1,069.4130	
Worker	0.8222	0.5356	7.1407	0.0222	2.8727	0.0128	2.8855	0.7618	0.0118	0.7736	2,240.8514	2,240.8514	0.0534	0.0573	2,259.2656	
Total	0.8796	2.4762	7.9107	0.0318	3.2313	0.0287	3.2600	0.8651	0.0270	0.8921	3,264.9315	3,264.9315	0.0641	0.2085	3,328.6786	

3.6 Building Construction - 2025

Unmitigated Construction On-Site

Category	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
lb/day																
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276	0.4963	0.4963	0.4963	2,556.4744	2,556.4744	0.6010	0.6010		2,571.4981
Total	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276	0.4963	0.4963	0.4963	2,556.4744	2,556.4744	0.6010	0.6010		2,571.4981

1575 University Avenue - Riverside-Mojave Desert SCAQMD County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Building Construction - 2025
Unmitigated Construction Off-Site

Category	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
	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	0.0000	0.0000
Vendor	0.0567	1.9247	0.7615	9.4800e-003	0.3587	0.0159	0.3746	0.1033	0.0152	0.1185	1,006.0429	1,006.0429	0.0112	0.1483	1,050.5026	
Worker	0.7703	0.4800	6.6492	0.0214	2.8727	0.0122	2.8848	0.7618	0.0112	0.7730	2,165.0112	2,165.0112	0.0483	0.0535	2,182.1532	
Total	0.8270	2.4046	7.4108	0.0309	3.2313	0.0281	3.2594	0.8651	0.0264	0.8915	3,171.0541	3,171.0541	0.0594	0.2017	3,232.6558	

Mitigated Construction On-Site

Category	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
	lb/day															
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276	0.4963	0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276	0.4963	0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981

1575 University Avenue - Riverside-Mojave Desert SCAQMD County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Building Construction - 2025

Mitigated Construction Off-Site

Category	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
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	0.0000	0.0000
Vendor	0.0567	1.9247	0.7615	9.4800e-003	0.3587	0.0159	0.3746	0.1033	0.0152	0.1185	1,006.0429	1,006.0429	0.0112	0.1483	1,050.5026	
Worker	0.7703	0.4800	6.6492	0.0214	2.8727	0.0122	2.8848	0.7618	0.0112	0.7730	2,165.0112	2,165.0112	0.0483	0.0535	2,182.1532	
Total	0.8270	2.4046	7.4108	0.0309	3.2313	0.0281	3.2594	0.8651	0.0264	0.8915	3,171.0541	3,171.0541	0.0594	0.2017	3,232.6558	

3.7 Architectural Coating - 2025

Unmitigated Construction On-Site

Category	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
lb/day																
Archit. Coating	33.4197					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003	0.0515	0.0515	0.0515	0.0515	0.0515	0.0515	281.4481	281.4481	0.0154	0.0154	281.8319	
Total	33.5905	1.1455	1.8091	2.9700e-003	0.0515	0.0515	0.0515	0.0515	0.0515	0.0515	281.4481	281.4481	0.0154	0.0154	281.8319	

1575 University Avenue - Riverside-Mojave Desert SCAQMD County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Architectural Coating - 2025
Unmitigated Construction Off-Site

Category	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
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	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	0.1529	0.0953	1.3195	4.2500e-003	0.5701	2.4100e-003	0.5725	0.1512	2.2200e-003	0.1534	429.6326	429.6326	429.6326	9.5800e-003	0.0106	433.0343
Total	0.1529	0.0953	1.3195	4.2500e-003	0.5701	2.4100e-003	0.5725	0.1512	2.2200e-003	0.1534	429.6326	429.6326	429.6326	9.5800e-003	0.0106	433.0343

Mitigated Construction On-Site

Category	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
lb/day																
Archit. Coating	33.4197					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003	0.0515	0.0515	0.0515	0.0515	0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
Total	33.5905	1.1455	1.8091	2.9700e-003	0.0515	0.0515	0.0515	0.0515	0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319

1575 University Avenue - Riverside-Mojave Desert SCAQMD County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Architectural Coating - 2025

Mitigated Construction Off-Site

Category	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
	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	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	0.1529	0.0953	1.3195	4.2500e-003	0.5701	2.4100e-003	0.5725	0.1512	2.2200e-003	0.1534	429.6326	429.6326	9.5800e-003	0.0106	0.0106	433.0343
Total	0.1529	0.0953	1.3195	4.2500e-003	0.5701	2.4100e-003	0.5725	0.1512	2.2200e-003	0.1534	429.6326	429.6326	9.5800e-003	0.0106	0.0106	433.0343

3.7 Architectural Coating - 2026

Unmitigated Construction On-Site

Category	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
	lb/day															
Archit. Coating	33.4197					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003	0.0515	0.0515	0.0515	0.0515	0.0515	0.0515	281.4481	281.4481	0.0154	0.0154		281.8319
Total	33.5905	1.1455	1.8091	2.9700e-003	0.0515	0.0515	0.0515	0.0515	0.0515	0.0515	281.4481	281.4481	0.0154	0.0154		281.8319

1575 University Avenue - Riverside-Mojave Desert SCAQMD County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Architectural Coating - 2026

Unmitigated Construction Off-Site

Category	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
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	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	0.1440	0.0862	1.2373	4.1200e-003	0.5701	2.2800e-003	0.5723	0.1512	2.1000e-003	0.1533	416.2839	416.2839	8.7000e-003	9.9800e-003	9.9800e-003	419.4760
Total	0.1440	0.0862	1.2373	4.1200e-003	0.5701	2.2800e-003	0.5723	0.1512	2.1000e-003	0.1533	416.2839	416.2839	8.7000e-003	9.9800e-003	9.9800e-003	419.4760

Mitigated Construction On-Site

Category	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
lb/day																
Archit. Coating	33.4197					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003	0.0515	0.0515	0.0515	0.0515	0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
Total	33.5905	1.1455	1.8091	2.9700e-003	0.0515	0.0515	0.0515	0.0515	0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319

1575 University Avenue - Riverside-Mojave Desert SCAQMD County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Architectural Coating - 2026

Mitigated Construction Off-Site

Category	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
	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	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	0.1440	0.0862	1.2373	4.1200e-003	0.5701	2.2800e-003	0.5723	0.1512	2.1000e-003	0.1533	416.2839	416.2839	416.2839	8.7000e-003	9.9800e-003	419.4760
Total	0.1440	0.0862	1.2373	4.1200e-003	0.5701	2.2800e-003	0.5723	0.1512	2.1000e-003	0.1533	416.2839	416.2839	416.2839	8.7000e-003	9.9800e-003	419.4760

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

1575 University Avenue - Riverside-Mojave Desert SCAQMD County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Category	lb/day										lb/day					
	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
Mitigated	3.5299	5.5353	35.7941	0.0892	10.4524	0.0721	10.5245	2.7881	0.0676	2.8556	9,093,912	8	9,093,912	0.4676	0.4516	9,240,172
Unmitigated	3.5299	5.5353	35.7941	0.0892	10.4524	0.0721	10.5245	2.7881	0.0676	2.8556	9,093,912	8	9,093,912	0.4676	0.4516	9,240,172

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated		Mitigated	
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT	Annual VMT	Annual VMT
Apartments Mid Rise	1,398.08	1,261.87	1,051.13	4,541,590	4,541,590	4,541,590	4,541,590
Enclosed Parking Structure	0.00	0.00	0.00	129,445	129,445	129,445	129,445
General Office Building	53.08	12.04	3.82	4,671,035	4,671,035	4,671,035	4,671,035
Total	1,451.16	1,273.91	1,054.95	9,342,070	9,342,070	9,342,070	9,342,070

4.3 Trip Type Information

Land Use	Miles										Trip Purpose %				
	H-W or C-W	H-S or C-C	H-O or C-C	H-W or C-NW	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-C	H-O or C-NW	Primary	Diverted	Pass-by	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	40.20	40.60	40.20	19.20	40.60	86	11	3	86	11	3	3
Enclosed Parking Structure	16.60	8.40	6.90	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	0	0
General Office Building	16.60	8.40	6.90	33.00	19.00	33.00	48.00	19.00	77	19	4	77	19	4	4

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.542916	0.056689	0.174450	0.134041	0.024680	0.006960	0.011589	0.018600	0.000608	0.000298	0.023389	0.001091	0.004689
Enclosed Parking Structure	0.542916	0.056689	0.174450	0.134041	0.024680	0.006960	0.011589	0.018600	0.000608	0.000298	0.023389	0.001091	0.004689

1575 University Avenue - Riverside-Mojave Desert SCAQMD County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

General Office Building	0.542916	0.056689	0.174450	0.134041	0.024680	0.006960	0.011589	0.018600	0.000608	0.000298	0.023389	0.001091	0.004689
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5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Category	lb/day															
	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
NaturalGas Mitigated	0.1098	0.9383	0.4013	5.9900e-003	0.0758	0.0758	0.0758	0.0758	0.0758	0.0758	1,197,392 ⁸	1,197,392 ⁸	1,197,392 ⁸	0.0230	0.0220	1,204,508 ³
NaturalGas Unmitigated	0.1098	0.9383	0.4013	5.9900e-003	0.0758	0.0758	0.0758	0.0758	0.0758	0.0758	1,197,392 ⁸	1,197,392 ⁸	1,197,392 ⁸	0.0230	0.0220	1,204,508 ³

1575 University Avenue - Riverside-Mojave Desert SCAQMD County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

Land Use	NaturalGas Use kBTU/yr	lb/day										lb/day					
		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
Apartments Mid Rise	10126.6	0.1092	0.9332	0.3971	5.9600e-003		0.0755	0.0755		0.0755		0.0755		1,191.3675	0.0228	0.0218	1,198.4472
Enclosed Parking Structure	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
General Office Building	51.2151	5.5000e-004	5.0200e-003	4.2200e-003	3.0000e-005		3.8000e-004	3.8000e-004		3.8000e-004		3.8000e-004		6.0253	1.2000e-004	1.1000e-004	6.0611
Total		0.1098	0.9383	0.4013	5.9900e-003		0.0758	0.0758		0.0758		0.0758		1,197.3928	0.0230	0.0220	1,204.5083

1575 University Avenue - Riverside-Mojave Desert SCAQMD County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

Land Use	NaturalGas Use kBTU/yr	lb/day											CO2e				
		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
Apartments Mid Rise	10.1266	0.1092	0.9332	0.3971	5.9600e-003		0.0755	0.0755	0.0755	0.0755	0.0755	1,191.3675	1,191.3675	0.0228	0.0218	0.0218	1,198.4472
Enclosed Parking Structure	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	0.0000
General Office Building	0.0512151	5.5000e-004	5.0200e-003	4.2200e-003	3.0000e-005		3.8000e-004	3.8000e-004	3.8000e-004	3.8000e-004	3.8000e-004	6.0253	6.0253	1.2000e-004	1.1000e-004	1.1000e-004	6.0611
Total		0.1098	0.9383	0.4013	5.9900e-003		0.0758	0.0758	0.0758	0.0758	0.0758	1,197.3928	1,197.3928	0.0230	0.0220	0.0220	1,204.5083

6.0 Area Detail

6.1 Mitigation Measures Area

- Use Low VOC Paint - Residential Interior
- Use Low VOC Paint - Residential Exterior
- Use Low VOC Paint - Non-Residential Interior
- Use Low VOC Paint - Non-Residential Exterior
- No Hearths Installed

1575 University Avenue - Riverside-Mojave Desert SCAQMD County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Category	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
lb/day																
Mitigated	5.5566	0.2444	21.2256	1.1200e-003	0.1177	0.1177	0.1177	0.1177	0.1177	0.1177	0.0000	38.2700	38.2700	0.0368	0.0000	39.1899
Unmitigated	5.5566	0.2444	21.2256	1.1200e-003	0.1177	0.1177	0.1177	0.1177	0.1177	0.1177	0.0000	38.2700	38.2700	0.0368	0.0000	39.1899

6.2 Area by SubCategory
Unmitigated

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Architectural Coating	0.4029					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.5138					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Landscaping	0.6400	0.2444	21.2256	1.1200e-003	0.1177	0.1177	0.1177	0.1177	0.1177	0.1177		38.2700	38.2700	0.0368		39.1899
Total	5.5566	0.2444	21.2256	1.1200e-003		0.1177	0.1177		0.1177	0.1177	0.0000	38.2700	38.2700	0.0368	0.0000	39.1899

1575 University Avenue - Riverside-Mojave Desert SCAQMD County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
Architectural Coating	0.4029					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.5138					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.6400	0.2444	21.2256	1.1200e-003		0.1177	0.1177		0.1177	0.1177		38.2700	38.2700	0.0368		39.1899
Total	5.5566	0.2444	21.2256	1.1200e-003		0.1177	0.1177		0.1177	0.1177	0.0000	38.2700	38.2700	0.0368	0.0000	39.1899

7.0 Water Detail

7.1 Mitigation Measures Water

1575 University Avenue - Riverside-Mojave Desert SCAQMD County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation



Appendix C

Biological Assessment Report

Kimley»»Horn

1575 UNIVERSITY AVENUE, CITY OF RIVERSIDE PROJECT

Biological Assessment Report

Prepared for
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August 2022



1575 UNIVERSITY AVENUE, CITY OF RIVERSIDE PROJECT

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EXECUTIVE SUMMARY

The proposed 1575 University Avenue Mixed-Use Project is located in a fully developed portion of the City of Riverside in western Riverside County. The 4.29-acre project site (APN 250 170 036) is located within the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). There is no natural community onsite and land cover types within the project site consist of developed and ruderal areas, the latter including non-native grasses and forbs.

No special-status plant species were detected during the project site survey. No special-status wildlife species were observed during the project site survey. There is no native habitat on-site to support these special-status species. The removal of 2.27 acres of ruderal vegetation will not threaten or endanger any regional wildlife populations and the impact would be less than significant. The project site does not occur within or immediately adjacent to designed critical habitat.

Wildlife migration corridors do not occur within the project site. Thus, no impact to wildlife movement and/or nursery sites is expected as a result of project development. The proposed project may result in the disturbance of nesting birds protected by the federal Migratory Bird Treaty Act and the California Fish and Game Code Sections 3503, 3503.5, and 3513. Disturbance nesting birds would be avoided through compliance with the federal and state regulations.

The proposed project would be consistent with the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) and is within the MSHCP development fee area.

CHAPTER 1

Introduction

1.1 Project Location and Background

Environmental Science Associates (ESA) conducted a biological resources assessment of the 1575 University Avenue Mixed-Use Project (proposed project) located on the north side of University Avenue, between Chicago and Cranford Avenues in the City of Riverside, Riverside County, California (project site) (**Figure 1**, Regional Map). The project site encompasses a single parcel, Assessor's Parcel Number (APN) 250-170-036, and 4.29 acres (**Figure 2**, Project Location). The project site is within Section 19, Township 2 South and Range 4 West, in the Riverside East, 7.5-minute U.S. Geological Survey (USGS) quadrangle.

1.2 Project Description

The proposed project would consist of the construction of a five-story, at-grade mixed-use/residential building, which would occupy the majority of the project site. An at-grade parking structure would be constructed in the central portion of the project site, and a swimming pool and spa is proposed within the southern portion of the project site. Retaining walls (up to six feet high) are proposed to support excavations associated with the construction of the elevator pits. The existing building and parking lot in the southern portion, as well as the concrete pads in the vacant northern portion of the project site would be removed.

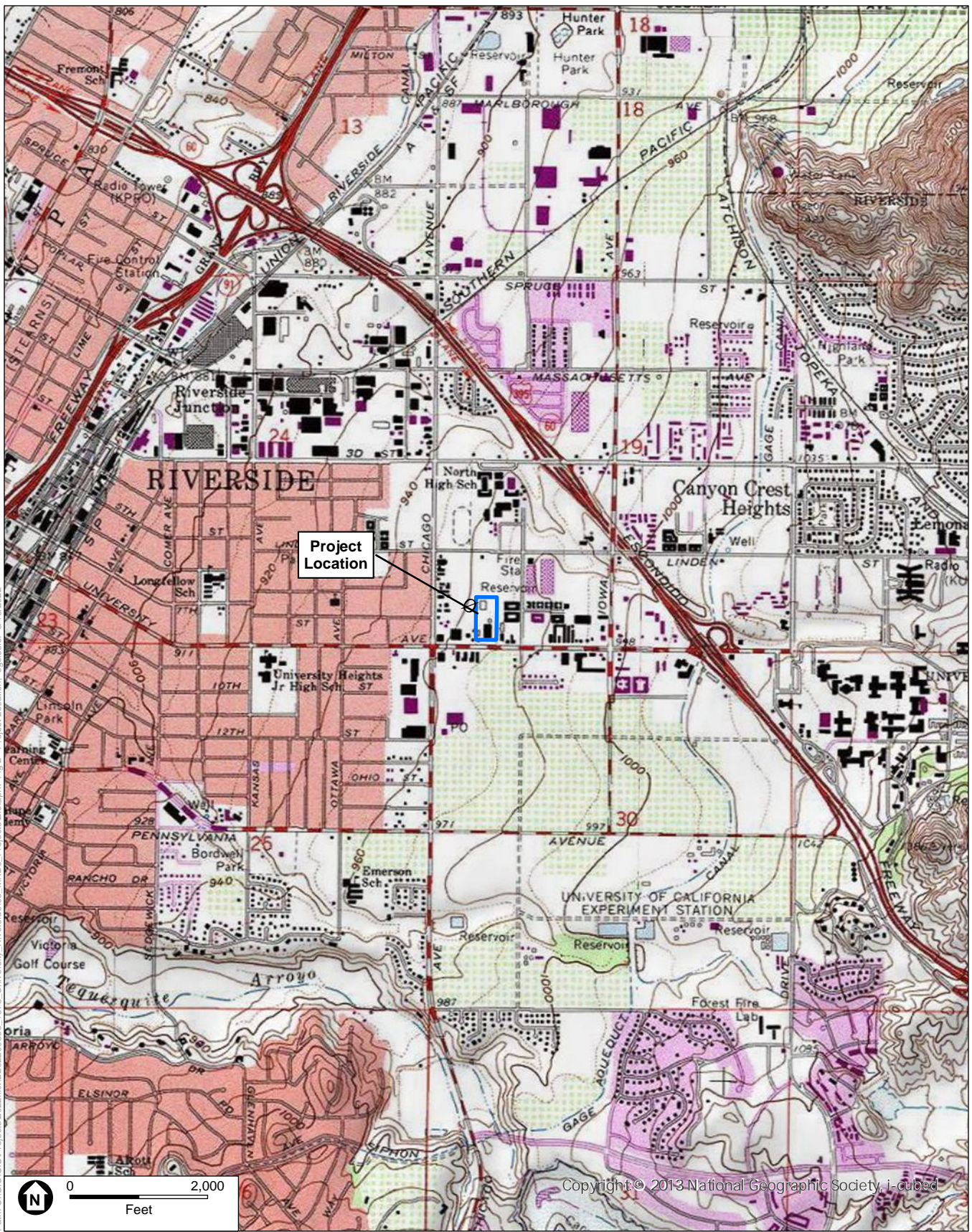


SOURCE: ESRI

1575 University Avenue

Figure 1
Regional Map





SOURCE: USGS 7.5" Topoquad Riverside East

1575 University Avenue

Figure 2
Project Location



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CHAPTER 2

Methodology

2.1 Biological Study Area

The biological study area consists of the 4.29-acre project site, including APN 250-170-036.

2.2 Existing Literature and Database Review

ESA reviewed available literature related to biological resources that occur on-site, and conducted queries of available resource inventory database to analyze the potential for sensitive resources to occur within or immediately adjacent to the project site. The literature and database review included the following sources:

- California Department of Fish and Wildlife (CDFW) *California Natural Diversity Data Base* (CNDDB) (CDFW 2022). The database was queried for special-status species records in the Riverside East USGS 7.5-minute quadrangle.
- Natural Resources Conservation Service (NRCS) Web Soil Survey (USDA 2022).
- U.S. Fish and Wildlife Service (USFWS) *Critical Habitat Portal* (USFWS 2022).

2.2.1 Regional Connectivity, Wildlife Movement, and Habitat Linkages

Pursuant to the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) Sections 6.1.1-6.1.5, ESA analyzed potential wildlife habitat linkages as they pertain to a review of the urban/wildlands interface. The analysis of wildlife habitat linkages associated with the project site and its immediate vicinity is based on information compiled from literature; MSHCP mapped habitat linkages (Figure 3-2, *Schematic Cores and Linkages Map* in the MSHCP [2004]); analysis of the Criteria Area conservation language as it relates to habitat cores and linkages; analysis of aerial photographs; and direct observations (including sign, tracks and physical movement barriers, including recent development) made in the field during the biological survey. The discussion in this report is focuses on potential wildlife movement associated with the project site and the immediate vicinity.

2.3 Field Survey

2.3.1 Biological Resources and Existing Conditions

A general biological site investigation was conducted by ESA biologist Daryl Koutnik on July 20, 2022. The biologist conducted the survey by walking the project site to map existing vegetation

and assess the potential for special-status plants and wildlife to occur. The vegetation mapping effort was conducted pursuant to *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities* (CDFW 2018). The visual inspection of species composition was deemed sufficient by the surveying biologist to accurately describe each community and the nature of biological resources.

All incidental visual observations of flora and fauna, as well as any audible detections were noted during the site investigation and considered when assessing potential for special-status species to occur. All native and non-native natural communities and land cover types were mapped based on current existing conditions, and then digitized on aerial maps using Geographic Information System software (i.e., ArcGIS). Descriptions of vegetation were characterized in the field in accordance with *A Manual of California Vegetation* (Manual) (Sawyer et al. 2009); however, the observed plant community is not listed in the Manual because of the disturbed nature of the project site. A detailed description of each natural community and land cover type is provided in Section 4.3.

2.3.2 Sensitive Natural Communities and Special-Status Plants and Wildlife

ESA assessed the potential for sensitive biological resources to occur within the project site.

Sensitive Natural Communities

Sensitive natural communities and habitats are defined by the CDFW as those natural communities that have a reduced range and/or are imperiled as a result of residential and commercial development, agriculture, energy production and mining, or an influx of invasive and other problematic species. Vegetation communities are evaluated using NatureServe’s Heritage Methodology (NatureServe 2022), which is based on the knowledge of range and distribution of a specific vegetation type and the proportion of occurrences that are of good ecological integrity. The communities and habitats are evaluated at both global (natural range within and outside of California [G]) and subnational (state level for California [S]) status ranks, each ranked from 1 (“critically imperiled” or very rare and threatened) to 5 (demonstrably secure). Natural communities and habitats with state ranks of S1–S3 are considered sensitive and may require review when environmental impacts are evaluated. When a community is given a rank of NR, this indicates that it has not yet been ranked under NatureServe (CDFW 2022).

Special-Status Plants and Wildlife

Special-status plants and wildlife are defined as those that, because of their recognized rarity or vulnerability to various forms of habitat loss or population decline, are considered by federal, state, or other agencies to be under threat from human-associated developments. Some of these species receive specific protection that is defined by federal or state endangered species legislation and others have been designated as special-status on the basis of adopted local policies (e.g., city and county) or the educated opinion of various resource interest groups (e.g., Western Bat Working Group [WBWG]). Special-status wildlife is defined as any of the following:

- Plant and wildlife species that are listed or proposed for listing as threatened or endangered, or are candidates for possible future listing as threatened or endangered, under the federal Endangered Species Act (FESA) or the California Endangered Species Act (CESA).
- Plant and wildlife species that meet the definitions of rare or endangered under California Environmental Quality Act (CEQA) Guidelines Section 15380.
- Wildlife designated by CDFW as species of special concern (SSC), included on the Watch List, or considered “Special Animals.”
- Wildlife fully protected in California (California Fish and Game Code [CFGC] Sections 3511, 4700, 5050, and 5515).
- Plants considered by the California Native Plant Society (CNPS) to be rare, threatened, or endangered (California Rare Plant Rank [CRPR] 1A, 1B, 2A, and 2B plants) in California.
- Plants listed by the CNPS as plants for which more information is needed to determine their status and plants of limited distribution (CRPR 3 and 4 plants).
- Plants listed as rare under the California Native Plant Protection Act (CFGC 1900 et seq.).
- Bird species protected by the Migratory Bird Treaty Act (MBTA).
- Eagles protected by the Bald and Golden Eagle Protection Act (BGEPA)
- Bat species considered priority by the WBWG.

Aquatic Resources

The project site was assessed for its potential to support jurisdictional areas based on the presence of definable channels (bed and bank), ordinary flow (Ordinary High Water Mark [OHWM]), hydrology, vegetation communities, and Riparian/Riverine resources that are subject to the United States Army Corps of Engineers (USACE) jurisdiction pursuant to Section 404 of the Clean Water Act, CDFW jurisdiction pursuant to Division 2, Chapter 6, Section 1600 of the CFGC, the Regional Water Quality Control Board (RWQCB) pursuant to Section 401 of the Clean Water Act and Section 13260 of the California Water Code, i.e., the Porter-Cologne Water Quality Control Act, and riparian/riverine resources pursuant to Section 6.1.2 of the MSHCP (Dudek 2003).

Other Waters of the U.S.

Other waters of the U.S. refer to those hydric features that are regulated by the Clean Water Act but are not wetlands (33 CFR 328.4). These features extend to the OHWM, defined in 33 CFR 328.3 as the line on the shore established by fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank; shelving; changes in the character of the soil; destruction of terrestrial vegetation; or the presence of litter and debris. In the Arid West region of the United States, waters are variable and include ephemeral/intermittent and perennial channel forms. The most problematic ordinary high-water delineations are associated with the commonly occurring ephemeral/intermittent channel forms that dominate the Arid West landscape” (USACE 2008a). Delineation methods for “other waters of the U.S.” were completed in accordance with *A Field Guide to the Identification of the Ordinary High Water Mark in the Arid West Region of the Western United States* (USACE 2008b).

According to the most recent guidance provided in the Navigable Waters Protection Rule Vacatur, adopted on January 5, 2022, the USACE and Environmental Protection Agency (EPA) have reverted to the pre-2015 definition of “waters of the United States” and now take jurisdiction over the following:

1. Traditional navigable waters (TNWs), which is defined as all waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide.
2. Wetlands adjacent to TNW, including adjacent wetlands that do not have a continuous surface connection to TNW.
3. Non-navigable tributaries of TNW that are relatively permanent where the tributaries typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months).
4. Wetlands adjacent to non-navigable tributaries as defined above, that have a continuous surface connection to such tributaries (e.g., they are not separated by uplands, a berm, dike, or similar feature).

The EPA and the USACE decide jurisdiction over the following waters, based on a fact-specific analysis to determine if there is a significant nexus, as described below, to a TNW.

1. Non-navigable tributaries that are not relatively permanent.
2. Wetlands adjacent to non-navigable tributaries that are not relatively permanent.
3. Wetlands that are adjacent to but do not directly abut a relatively permanent non-navigable tributary.

The EPA and the USACE generally do not assert jurisdiction over the following features:

1. Swales or erosional features (e.g., gullies, small washes characterized by low-volume, infrequent, or short-duration flow).
2. Ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water.

Other Waters of the State

Other waters of the state, when they overlap with waters of the U.S., are those that are regulated under Section 401 of the Clean Water Act and are delineated using the same methodology as waters of the U.S. However, these waters are not subject to determining a nexus to a TNW. In the absence of waters of the U.S., waters may be regulated under the Porter-Cologne Water Quality Control Act if project activities, discharges, or proposed activities or discharges could affect surface, coastal, or ground waters. The permit requested by the applicant and issued by the RWQCB is either a Water Quality Certification in the presence of waters of the U.S. or a Waste Discharge Requirement (WDR) in the absence of waters of the U.S.

Most projects involving water bodies or drainages that display a “bed and bank” (i.e., OHWM) are regulated by the RWQCB, the principal state agency overseeing water quality at the local/regional level.

Streams and Associated Vegetation and MSHCP Riparian/Riverine Areas

Pursuant to Division 2, Chapter 6, Section 1600 et seq. of the CFGC, CDFW regulates all diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake that supports fish or wildlife (streams and associated vegetation). A notification of a Lake or Streambed Alteration Agreement (LSAA) must be submitted to CDFW for “any activity that may substantially change the bed, channel, or bank of any river, stream, or lake.” In addition, CDFW has authority, under the CFGC, over wetland and riparian habitats associated with lakes and streams. The CDFW reviews proposed actions and, if necessary, submits to the applicant a draft Streambed Alteration Agreement (SAA) that includes measures to protect affected fish and wildlife resources. The final SAA is mutually agreed upon by CDFW and the applicant.

Pursuant to MSHCP Section 6.1.2, Protection of Species Associated with Riparian Areas and Vernal Pools, the potential effect of proposed project activities occurring within the MSHCP must be assessed regarding any and all impacts to riparian/riverine areas. Riparian/riverine areas include “those that contain habitat dominated by trees, shrubs, persistent emergents, or emergent mosses and lichens, which occur close to, or which depend upon soil moisture from a nearby water source; or areas with freshwater flow during all or a portion of the year” (Dudek 2003).

Potentially jurisdictional CDFW streams and associated vegetation, and MSHCP riparian/riverine areas, are determined by establishing the area within the top of bank (TOB), defined as the furthest break in slope or change in substrate, from the bed of the channel, prior to reaching adjacent upland areas (assuming the absence of riparian vegetation), and/or extent of riparian/wetland vegetation.

CHAPTER 3

Regulatory Framework

This section provides a summary of the federal, state, and local environmental regulations that govern the biological resources applicable to the project site. This section also provides a summary of other state and local environmental guidelines or listings that evaluate the rarity of species or the habitats they depend on.

3.1 Federal Regulations

3.1.1 Federal Endangered Species Act

The United States Congress passed the FESA in 1973 to protect those species that are endangered or threatened with extinction. FESA is intended to operate in conjunction with the National Environmental Policy Act (NEPA) to help protect the ecosystems upon which endangered and threatened species depend. FESA prohibits the “take” of endangered or threatened wildlife species. “Take” is defined to include harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting wildlife species or any attempt to engage in such conduct (FESA Section 3 [(3)(19)]). Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns (50 Code of Federal Regulations [CFR] Section 17.3). “Harass” is defined as actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns (50 CFR Section 17.3). Actions that result in take can result in civil or criminal penalties.

Section 7 of the FESA requires federal agencies, in consultation with and assistance from the Secretary of the Interior or the Secretary of Commerce, as appropriate, to ensure that actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of threatened or endangered species or result in the destruction or adverse modification of critical habitat for these species. The USFWS and National Marine Fisheries Service (NMFS) share responsibilities for administering the FESA. Regulations governing interagency cooperation under Section 7 are found in CCR Title 50, Part 402. Section 7 is triggered when a federal permit or other authorization is considered by a federal agency, or the project receives federal funding. The need for federal regulatory permits (i.e., Clean Water Act [CWA] Section 404 permit issued by the USACE) provides a “federal nexus” by which a Section 7 consultation can occur. This statute imposes the obligation on federal agencies to ensure that their actions (such as issuing federal CWA permits) are not likely to jeopardize the continued existence of a listed species or destroy or adversely modify its designated critical habitat. This obligation is enforced through the procedural requirement that agencies, such as the USACE, initiate consultation with USFWS on any actions that may affect a threatened or endangered species. The USFWS will determine the

proposed action is not likely to adversely affect threatened or endangered species or result in the destruction or adverse modification of critical habitat for these species, or a Biological Opinion issued at the conclusion of consultation will include a statement authorizing “take” (to harass, harm, pursue, hunt, wound, kill, etc.) that may occur incidental to an otherwise legal activity.

Section 9 lists those actions that are prohibited under the FESA. Although take of a listed species is prohibited, it is allowed when it is incidental to an otherwise legal activity. Section 9 prohibits take of listed species of fish, wildlife, and plants without special exemption. The definition of “harm” includes significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns related to breeding, feeding, or shelter. “Harass” is defined as actions that create the likelihood of injury to listed species by disrupting normal behavioral patterns related to breeding, feeding, and shelter significantly.

Section 10 provides a means whereby a non-federal action with the potential to result in take of a listed species can be allowed under an incidental take permit which may be issued once a Habitat Conservation Plan (HCP) is approved. Application procedures are found at 50 CFR 13 and 17 for species under the jurisdiction of USFWS and 50 CFR 217, 220, and 222 for species under the jurisdiction of NMFS.

In addition, a local regulatory program established by the MSHCP and associated governing documents provides for regional conservation of many species while also allowing limited impacts to biological resources in association with planned development. The MSHCP establishes an alternative pathway to the Section 10 and Section 7 procedures by which local projects in the Plan Area may receive both State and federal incidental take authorization for species identified as “covered” and “conditionally covered”, based on compliance with relevant conditions set forth in the plan. Further details about the regional MSHCP and its provisions for incidental take coverage are discussed in Section 3.3.1 below.

3.1.2 Migratory Bird Treaty Act

The MBTA generally prohibits the killing, possessing, or trading of migratory birds, bird parts, eggs, and nests, except as provided by the statute. The MBTA authorizes the Secretary of the Interior to regulate the taking of migratory birds. It further provides that it is unlawful, except as permitted by regulations, “to pursue, take, or kill any migratory bird, or any part, nest or egg of any such bird...” (16 United States Code [USC] 703).

The MBTA, first enacted in 1916, prohibits any person, unless permitted by regulations, to “pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess, offer for sale, sell, offer to purchase, purchase, deliver for shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry, or cause to be carried by any means whatever, receive for shipment, transportation or carriage, or export, at any time, or in any manner, any migratory bird, included in the terms of this Convention...for the protection of migratory birds...or any part, nest, or egg of any such bird” (16 U.S. Code 703).

3.1.3 Clean Water Act

Pursuant to Section 404 of the CWA, the USACE is authorized to regulate any activity that would result in the discharge of dredged or fill material into waters of the United States, which include those waters listed in 33 CFR Part 328 (Definitions). USACE, with oversight by the U.S. EPA, has the principal authority to issue CWA Section 404 Permits.

Pursuant to Section 401 of the CWA, the RWQCB certifies that any discharge into jurisdictional waters of the United States will comply with state water quality standards. The RWQCB has the principal authority to issue a CWA Section 401 water quality certification or waiver.

3.1.4 Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act was originally enacted in 1940 as the Bald Eagle Protection Act to protect bald eagles, and was later amended to include golden eagles. The Act prohibits the taking, possession, or commerce in bald and golden eagles, parts, feathers, nests, or eggs with limited exceptions. Take is defined as “pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb”, and includes both direct taking of individuals and take due to disturbance. “Disturb” is defined as:

“to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, 1) injury to any eagle, 2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or 3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior.”¹

The definition of “disturb” is further defined by USFWS as follows:

“In addition to immediate impacts, this definition also covers impacts that result from human-caused alterations initiated around a previously used nest site during a time when eagles are not present, if, upon the eagles return, such alterations agitate or bother an eagle to a degree that injures an eagle or substantially interferes with normal breeding, feeding, or sheltering.”²

Bald and golden eagles may not be taken for any purpose unless a permit is issued prior to the taking. Activities which can be authorized by permit include scientific collection/research, exhibition, tribal religious, depredation, falconry, and the taking of inactive eagle nests, which interfere with resource development or recovery operations. Currently, USFWS has a permitting process proposed for other activities that would allow disturbance to eagles or take of an eagle nest where their location poses a risk to human or eagle safety.

¹ 50 CFR 22.3

² USFWS. 2007. National Bald Eagle Management Guidelines

3.2 State Regulations

3.2.1 California Fish and Game Code

The CFGC regulates the taking or possession of birds, mammals, fish, amphibians, and reptiles, as well as natural resources such as wetlands and waters of the state. It includes the CESA (Sections 2050–2115) and Streambed Alteration Agreement regulations (Sections 1600–1616). These sections are described further below.

CFGC Sections 1600-1616

Pursuant to Section 1600 et seq. of the CFGC, the CDFW (formerly California Department of Fish and Game) regulates activities of an applicant’s project that would substantially alter the flow, bed, channel, or banks of streams or lakes, unless certain conditions outlined by CDFW are met by the applicant. The limits of CDFW jurisdiction are defined in CFGC Section 1600 et seq. as the “bed, channel, or bank of any river, stream,³ or lake designated by CDFW in which there is at any time an existing fish or wildlife resource or from which these resources derive benefit.”⁴ However, in practice, CDFW usually extends its jurisdictional limit and assertion to the top of a bank of a stream, the bank of a lake, or outer edge of the riparian vegetation, whichever is wider.

California Endangered Species Act (CFGC Section 2050 et seq.)

CESA establishes the policy of the state to conserve, protect, restore, and enhance threatened or endangered species and their habitats. CESA mandates that state agencies should not approve projects that would jeopardize the continued existence of threatened or endangered species if reasonable and prudent alternatives are available that would avoid jeopardy. There are no state agency consultation procedures under CESA. For projects that would affect a listed species under both CESA and FESA, compliance with FESA would satisfy CESA if CDFW determines that the federal incidental take authorization is “consistent” with CESA under CFGC Section 2080.1. For projects that would result in take of a species listed under the CESA only, the project operator would have to apply for a take permit under Section 2081(b).

In addition, a local regulatory program established by the MSHCP and associated governing documents provides for regional conservation of many species while also allowing limited impacts to biological resources in association with planned development. The MSHCP establishes an alternative pathway to the Section 2080.1 and Section 2081(b) procedures by which local projects in the Plan Area may receive both State and federal incidental take authorization for species identified as “covered” and “conditionally covered”, based on compliance with relevant conditions set forth in the plan. Further details about the regional MSHCP and its provisions for incidental take coverage are discussed in Section 3.3.1 below.

³ Title 14 California Code of Regulations (CCR) 1.72 defines a stream as “a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation.”

⁴ This also includes the habitat upon which they depend for continued viability (CFGC Division 5, Chapter 1, Section 45, and Division 2, Chapter 1, Section 711.2[a]).

CFGC Sections 2080 and 2081

Section 2080 of the CFGC states that “No person shall import into this state [California], export out of this state, or take, possess, purchase, or sell within this state, any species, or any part or product thereof, that the Commission [State Fish and Game Commission] determines to be an endangered species or threatened species, or attempt any of those acts, except as otherwise provided in this chapter, or the Native Plant Protection Act, or the California Desert Native Plants Act.” Pursuant to Section 2081, CDFW may authorize individuals or public agencies to import, export, take, or possess state-listed endangered, threatened, or candidate species. These otherwise prohibited acts may be authorized through Incidental Take permits or Memoranda of Understanding if the take is incidental to an otherwise lawful activity, impacts of the authorized take are minimized and fully mitigated, the permit is consistent with any regulations adopted pursuant to any recovery plan for the species, and the project operator ensures adequate funding to implement the measures required by CDFW, which makes this determination based on available scientific information and considers the ability of the species to survive and reproduce.

Since the MSHCP provides coverage for take of some State-listed species, there would not be a need for an additional 2081 permit process unless a project does not comply with MSHCP requirements and may result in take of a State-listed species or if a State-listed species not covered by the MSHCP were to result in take. Further details about the regional MSHCP are discussed in Section 3.3.1 below.

CFGC Sections 3503, 3503.5, and 3513

Sections 3503, 3503.5, and 3513 of the CFGC prohibit the taking, possessing, or destroying of any birds of prey; the taking or possessing of any migratory nongame bird; the taking, possessing, or needlessly destroying of the nest or eggs of any raptors or nongame birds; or the taking of any nongame bird pursuant to CFGC Section 3800. CFGC Section 3513 adopts the federal migratory bird take provisions under the MBTA that prohibit the intentional take or possession of birds designated by the MBTA as migratory nongame birds except as allowed by federal rules and regulations pursuant to the MBTA.

3.2.2 California Environmental Quality Act Guidelines, Section 15380

Although threatened and endangered species are protected by specific federal and state statutes, CEQA Guidelines Section 15380(b) provides that a species not listed on the federal or state list of protected species may be considered rare or endangered if the species can be shown to meet certain specified criteria. These criteria have been modeled after the definition in FESA and the section of the CFGC dealing with rare or endangered plants or animals. This section was included in CEQA primarily to deal with situations in which a public agency is reviewing a project that may have a significant effect on, for example, a species that has not been listed by either USFWS or CDFW but otherwise has some status as a special-status species. Thus, CEQA provides an agency with the ability to protect a species from the potential impacts of a project until the respective government agencies have an opportunity to designate the species as protected, if warranted. CEQA also calls for the protection of other locally or regionally significant resources,

including natural communities. CEQA calls for an assessment of whether any such resources would be affected and requires findings of significance if there would be substantial losses. Natural communities listed by CNDDDB as sensitive are considered by CDFW to be significant resources and fall under the State CEQA Guidelines for addressing impacts. Local planning documents such as General Plans often identify these resources as well.

3.2.3 California Water Quality Control Act (Porter-Cologne California Water Code Section 13260)

The State Water Resources Control Board (SWRCB) and the RWQCB (together “Boards”) are the principal State agencies with primary responsibility for the coordination and control of water quality. The Boards regulate activities pursuant to Section 401(a)(1) of the federal CWA as well as the Porter Cologne Water Quality Control Act (Porter-Cologne) (Water Code Section 13260). Section 401 of the CWA specifies that certification from the State is required for any applicant requesting a federal license or permit to conduct any activity including but not limited to the construction or operation of facilities that may result in any discharge into navigable waters. The certification shall originate from the State in which the discharge originates or will originate, if appropriate, from the interstate water pollution control agency having jurisdiction over the navigable water at the point where the discharge originates or will originate. Any such discharge will comply with the applicable provisions of Sections 301, 302, 303, 306, and 307 of the CWA.

Under Porter-Cologne, the Legislature declared that the “State must be prepared to exercise its full power and jurisdiction to protect the quality of the waters in the State from degradation...” (California Water Code Section 13000). Porter-Cologne grants the Boards the authority to implement and enforce the water quality laws, regulations, policies and plans to protect the groundwater and surface waters of the State. It is important to note that enforcement of the State's water quality requirements is not solely the purview of the Boards and their staff. Other agencies (e.g., CDFW) have the ability to enforce certain water quality provisions in state law.

3.3 Regional or Local Regulations

3.3.1 Western Riverside County MSHCP

Per CFGC Sections 2800-2840, the Natural Community Conservation Planning (NCCP) Act (the Act), authorized the preparation of NCCPs to protect natural communities and species while allowing a reasonable amount of economic development.

The MSHCP, adopted by the County of Riverside on June 17, 2003, serves as a HCP pursuant to the Act and pursuant to Section 10 (a)(1)(B) of the FESA. The Implementation Agreement (IA) sets forth the implementation requirements for the MSHCP as well as procedures and minimization measures related to take of habitats and species considered for conservation. Implementation of the MSHCP authorizes participating jurisdictions to “take” specified plant and wildlife species within the MSHCP Plan Area. In addition, the wildlife agencies, namely USFWS and CDFW, allow take of habitat or individual species outside of the MSHCP Conservation Area in exchange for the assembly and management of a coordinated MSHCP Conservation Area. The assembly and long-term management of the MSHCP Conservation Area is the responsibility of

the Riverside County, Federal, and State governments; Cities within the western portion of Riverside County; and private and public entities that conduct activities which would potentially impact the habitats and species considered for conservation under the MSHCP.

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CHAPTER 4

Existing Conditions

The proposed project is located in a developed portion of the City of Riverside in western Riverside County within the San Ana River watershed. Regional geographic features around the area include Santa Ana River to the west, Box Springs Mountains to the east, and scattered urban development in all directions. The project site is located within the Western Riverside County MSHCP.

4.1 Soils

The Soil Survey of Western Riverside Area identified two soil series mapped within the boundary of the project site, which are described below (NRCS 2022).

Arlington fine sandy loam, deep, 2 to 8 percent slopes: Soils in this series are well-drained on alluvial fans. These soils developed in alluvium derived from granite rock. This is not a hydric soil.

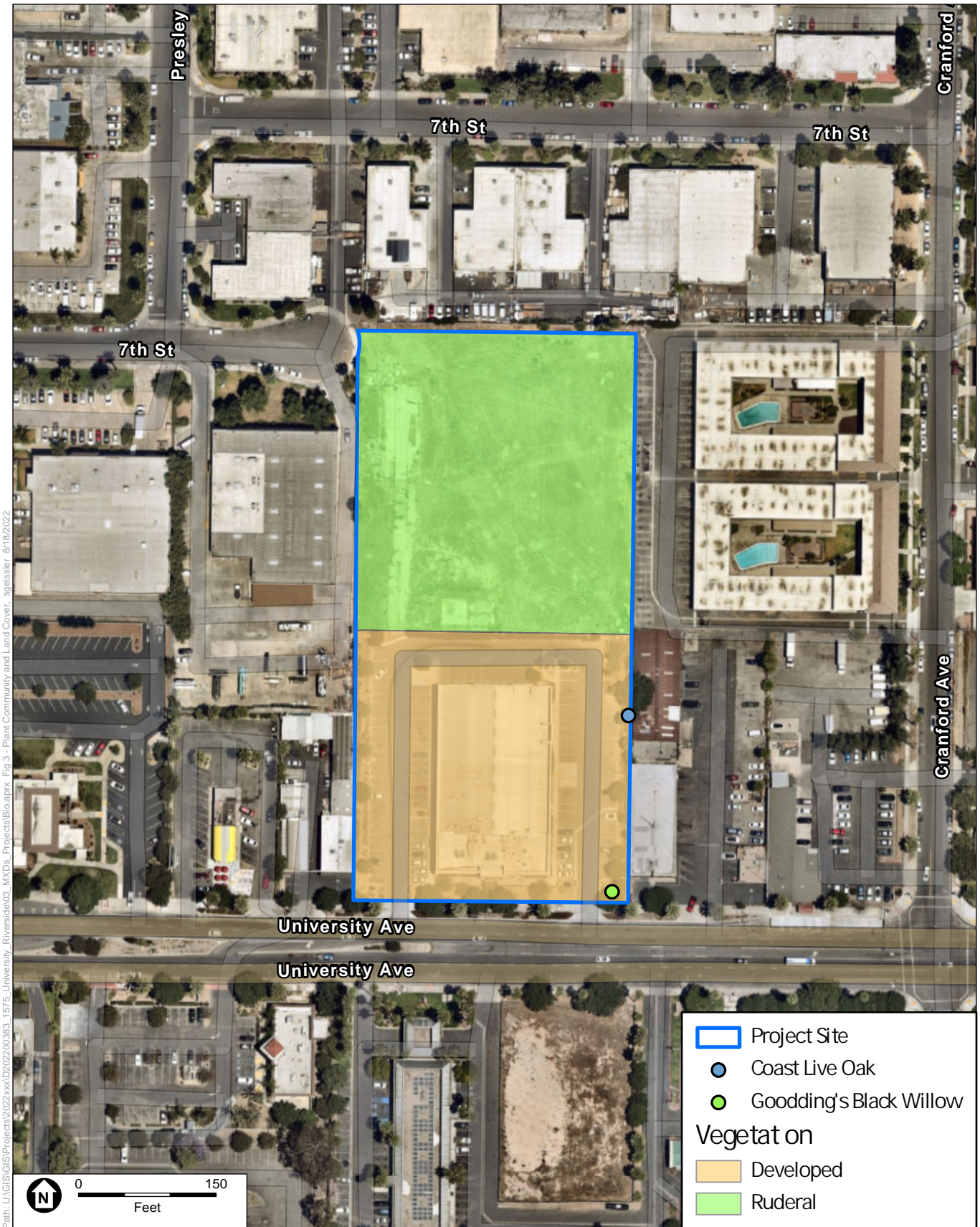
Hanford coarse sandy loam, 0 to 2 percent slopes: Soils in this series are well-drained soils on alluvial fans. These soils developed in alluvium derived from granite rock. This is not a hydric soil. The Hanford coarse sandy loam differs from Arlington fine sandy loam primarily in soil grain size and the capacity to transmit water.

4.2 Plant Communities and Land Cover Types

The natural communities and land cover types are depicted in **Figure 3**, Plant Communities and Land Cover Types, and a summary of acreages within the project site are presented below in **Table 1**, Plant Communities and Land Cover Types.

**TABLE 1
PLANT COMMUNITIES AND LAND COVER TYPES**

Natural Communities and Land Cover Types	Project Site (acres)
Ruderal	2.27
Developed	2.02
Total	4.29



SOURCE: NearMap, 2022

1755 University Avenue

Figure 3
Plant Community and Land Cover

4.2.1 Ruderal

Non-native grasses and forbs occur in the northern portion of the project site, which was previously developed, as evidence from the concrete pads that are present. Vegetation in this community consists of non-native grasses and forbs such as wild oat (*Avena fatua*), red brome (*Bromus rubens*), tocalote (*Centaurea melitensis*), red stemmed filaree (*Erodium cicutaria*), and foxtail barley (*Hordeum murinum*). There is a scattering on native herbaceous species in this community, including California poppy (*Eschscholzia californica*), common sunflower (*Helianthus annuus*), and ragweed (*Ambrosia psilostachya*). The community occupies 2.29 acres of the project site.

4.2.2 Developed

The developed land cover consists of a one-story commercial building with a surface parking lot and associated landscaping occupying the southern portion of the project site. Landscape plants observed include as Texas ranger (*Leucophyllum frutescens*), trailing lantana (*Lantana montevidensis*), coral aloe (*Aloe striata*), mock orange (*Pittosporum tobira*), and Mexican palo verde (*Parkinsonia aculeata*). In addition to the landscape species, two adventitious native tree species were observed; Gooding's black willow (*Salix goodingii*), growing onsite near an electrical utility cabinet next to the parking lot, and coast live oak (*Quercus agrifolia*), growing along the eastern property boundary, about in the middle of the parcel line.

4.3 Sensitive Biological Resources

4.3.1 Special-Status Species

Based on the literature review and field reconnaissance, special-status species were evaluated for their potential to occur within the project site or immediate vicinity, using the following definitions:

- **Present:** Species was observed or detected during project-specific biological surveys.
- **High Potential:** Species identified in the literature search and/or known to occur in the region and suitable habitat is present on the project site. These species are generally common and/or widespread in the project area and vicinity.
- **Moderate Potential:** Species identified in the literature search and/or known to occur in the region and suitable habitat is present within the project site. These species are generally less common and/or widespread than species considered to have “high” potential to occur.
- **Low Potential:** Species identified in the literature search or known to occur in the region, but the habitat on site is of low or marginal quality and/or the project site occurs outside the species known geographic or elevational range. Distance to nearest known occurrence and the age of last reported local occurrence are also considered.
- **Absent/Not Expected:** Species known to occur in the region, but deemed absent because the project site is outside their known range or elevation, suitable habitat is lacking on the site, or the species was not observed during focused surveys and would have been conspicuous if present.

Based on the database search results, a list of potentially occurring special-status species was developed and evaluated for the project site. Special-status species with potential to occur were defined as those species whose geographic and elevational range include the project site and that require habitat similar to habitat present within the project site or immediate vicinity.

Special-Status Plants

Special-status plant species include federal and state endangered and threatened species (or candidate); state rare; CNPS ranked species (California Rare Plant Rank [CRPR] 1A, 1B, 2A, and 2B, as jointly determined by CNPS and CDFW); species covered under an adopted NCCP and/or HCP; and species qualifying under State CEQA Guidelines Section 15380 (d).

Of the eight special-status plant species considered for their potential to occur within the project site, none of these species are expected to occur because the project site lacks suitable habitat and/or is outside of the known elevation range for these species to support these species. Additionally, the project site is not located within the MSHCP Narrow Endemic Plant Species Survey Area as defined by Section 6.1.3 of the MSHCP. Furthermore, the July 20, 2022 general biological site investigation detected no special-status plant species on the project site. Species evaluated for potential to occur are summarized in **Appendix B**, CNDDDB, *Special-Status Species*.

Special-Status Wildlife

Special-status wildlife species include federal and state endangered and threatened species (or candidate), state fully protected, CDFW Special Animals List, state wildlife species of special concern (SSC), species covered under an adopted NCCP and/or HCP, and species qualifying under State CEQA Guidelines Section 15380 (d).

Of the 29 special-status wildlife species considered for their potential to occur within the project site, none are not expected to occur because the developed project site lacks suitable habitat and/or is outside of the known range to support these species. Additionally, the project site is not located within the Amphibian Survey Area, Burrowing Owl Survey Area, or Mammal Survey Area as defined by Section 6.3.2 of the MSHCP. No special-status wildlife species were detected during the site investigation. Species evaluated for potential to occur are summarized in **Appendix B**, CNDDDB, *Special-Status Species*. No additional surveys are required as no special-status species are expected to occur within the project site.

4.3.2 Sensitive Natural Communities

Sensitive natural communities are designated as such by various resource agencies, such as the CDFW, or in local policies and regulations. These communities are generally considered to have important functions or values for wildlife and/or are recognized as declining in extent or distribution and may be considered threatened enough to warrant some level of protection. Sensitive natural communities include those that are identified in the CDFW *Sensitive Natural Communities*. The CDFW state rank denotes the rarity and endangerment of a vegetation type within the state as described below, with S1 through S3 considered to be a sensitive natural community by CDFW.

State Conservation Rank

S1 = Critically Imperiled – At very high risk of extirpation due to very restricted range, very few populations or occurrences, very steep declines, severe threats, or other factors.

S2 = Imperiled – At high risk of extirpation due to restricted range, few populations or occurrences, steep declines, severe threats, or other factors.

S3 = Vulnerable – At moderate risk of extirpation due to a fairly restricted range, relatively few populations or occurrences, recent and widespread declines, threats, or other factors.

S4 = Apparently Secure – At a fairly low risk of extirpation due to an extensive range and/or many populations or occurrences, but with possible cause for some concern as a result of local recent declines, threats, or other factors.

S5 = Secure - At very low or no risk of extirpation due to a very extensive range, abundant populations or occurrences, with little to no concern from declines or threats.

No natural community occurs on the project site and only the ruderal community supports native and non-native plant species. The ruderal community is not a sensitive natural community. Therefore, there are no sensitive natural communities that occur within the project site.

4.3.3 Critical Habitat

The project site does not occur within or immediately adjacent to critical habitat.

4.4 Aquatic Resources

There are no aquatic resources that occur on the project site.

4.5 Regional Connectivity, Wildlife Movement, and Habitat Linkages

Wildlife habitat linkages are areas which link otherwise isolated blocks of habitat to allow wide-ranging animals to travel, genetic exchange to occur and to allow plants and animals to move in response to environmental changes and natural disasters. Wildlife habitat linkages also allow populations of threatened species to be replenished from other areas via the metapopulation theory (Hilty et al. 2006).

Wildlife habitat linkages mitigate the effects of habitat fragmentation by (1) allowing animals to move between remaining habitats, which allows depleted populations to be replenished and promotes genetic diversity; (2) providing escape routes from natural disasters, predators, and human disturbances, thus reducing the risk that catastrophic events (such as fires or disease) will result in population or local species extinction; and (3) serving as travel routes for individual animals as they move within their home ranges in search of food, water, mates, and other needs (Noss 1983, Fahrig and Merriam 1985, Simberloff and Cox 1987, Harris and Gallagher 1989).

Wildlife linkages are landscape features that connect and link habitat patches or habitat cores with each other. They serve a similar purpose in that they are areas that allow for animal movement, but they may not have all the resources a particular species needs to complete its life cycle.

As identified in Figure 3-2, Schematic Cores and Linkages Map, of the MSHCP, wildlife migration corridors do not occur within the project site. Additionally, the project site is situated in a developed portion of the Riverside; as a result, there is no available habitat to be used for wildlife migration or dispersal. Consequently, the project site does not is not located within a wildlife corridor and does not support habitat to facilitate wildlife movement.

4.6 Regulated Trees

There are no local policies or ordinances for the protection of the tree species that occur on the project site, including the two native trees species.

CHAPTER 5

Project Impacts and Avoidance, Minimization, and Mitigation

5.1 Approach to the Analysis

This section describes the potential effects of the proposed project on biological resources that may occur as a result of project implementation. Direct, indirect, temporary, and/or permanent effects to biological resources may occur as a result of project implementation, as defined below:

- **Direct Effects:** Any alteration, disturbance, or destruction of biological resources that would result from project-related activities is considered a direct effect. Examples include loss of individual species and/or their associated plant communities, diversion of surface water flows, and encroachment into wetlands. Under FESA, direct effects are defined as the immediate effects of a project on a species or its habitat, including construction noise disturbance, sedimentation, or habitat loss.
- **Indirect Effects:** Biological resources may also be affected in an indirect manner as a result of project-related activities. Under FESA, indirect effects are defined as those effects that are caused by, or would result from, a proposed project but occur later in time and are reasonably certain to occur [50 C.F.R. §402-02]. An example of indirect effects may include irrigation runoff from a developed area into surrounding natural vegetation. Indirect effects could also include increased wildfire frequency as a result of power line failures.
- **Temporary Effects:** Any effects to biological resources that are considered reversible can be viewed as temporary. Examples include the generation of fugitive dust during construction activities.
- **Permanent Effects:** All effects that result in the irreversible removal of biological resources are considered permanent. Examples include constructing a building or permanent road on an area with native vegetation, such that the native vegetation is permanently removed and replaced with a developed structure.

A project is generally considered to have a significant effect if it proposes or results in any of the effects or conditions described in the significance thresholds discussed below, absent specific evidence to the contrary. Conversely, if a project does not propose or result in any of the following effects or conditions, it would generally not be considered to have a significant effect on biological resources, absent specific evidence of such an effect. These significance thresholds are taken from Appendix G of the State CEQA Guidelines.

5.2 Thresholds of Significance

Based on State CEQA Guidelines Appendix G, the project would result in a significant impact on biological resources if it would:

1. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.
2. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.
3. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal) through direct removal, filling, hydrological interruption, or other means.
4. 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.
5. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
6. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

5.3 Impacts Analysis

Issue 1: Would the proposed project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Special-Status Species

Special-status plant and wildlife species were not identified within the project site during the general project survey and, according to Section 6.1.3, Protection of Narrow Endemic Plant Species, and 6.3.2, Additional Survey Needs and Procedures of the MSHCP, the project site does not fall within a required survey area for special-status plant or wildlife species (including Amphibian Survey Area, Burrowing Owl Survey Area, or Mammal Survey Area) with potential to occur (Dudek 2003). Therefore, with participation in the MSHCP (the City of Riverside is an MSHCP permittee), impacts to special-status plant and wildlife species would be considered less than significant.

Critical Habitat

The project site does not occur within or immediately adjacent to critical habitat for any special-status plant or wildlife species; therefore, there would be no impacts to critical habitat as a result of project activities.

Issue 2: Would the proposed project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

No riparian or sensitive natural communities occur on the project site. As such, the proposed project would not have an impact on riparian or sensitive natural communities.

Issue 3: Would the proposed project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal) through direct removal, filling, hydrological interruption, or other means?

No state or federally protected wetlands occur on-site and therefore there will be no impacts to state or federally protected wetlands.

Issue 4: Would the proposed project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Wildlife Movement

As identified in Figure 3-2, Schematic Cores and Linkages Map, of the MSHCP, wildlife migration corridors do not occur within the project site. Thus, no impact to wildlife movement and/or nursery sites is expected as a result of project development.

Nesting Birds

The proposed project may result in the disturbance of nesting birds protected by the MBTA and CFGC 3503, 3503.5, and 3513. Impacts to nesting birds would be less than significant with compliance with the federal and state regulations protecting nesting birds and their nest.

Issue 5: Would the proposed project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

There are no local policies or ordinances protecting biological resources that apply to the proposed project. Therefore, the project would not conflict with local policies or ordinances.

Issue 6: Would the proposed project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

The project site is located within the Western Riverside County MSHCP. The project site is not located within a MSHCP Criteria Area, which is comprised of individual Cells or Cell Groups identified to guide assembly of Additional Reserve Lands for the MSHCP Conservation Area. The local jurisdictions participating in the MSHCP, such as the City of Riverside, are collectively responsible for assembling approximately 97,000 acres of land for the MSHCP Conservation Area. Local acquisition of lands for the MSHCP Conservation Area are purchased by the Western Riverside County Regional Conservation Authority (RCA) from willing sellers using the Habitat Evaluation and Acquisition Negotiation Strategy (HANS) process, or other processes, such as the

Joint Project/Acquisition Review (JPR) process during which the RCA and appropriate Permittee staff (i.e., City of Riverside) shall jointly review development applications that are within a Criteria Area and are submitted to a Permittee for consideration). However, since the project site is not located within a MSHCP Criteria Area and is therefore not subject to the HANS process or the JPR process, the proposed project would not conflict with MSHCP Reserve Assembly goals.

The project's consistency with the MSHCP is summarized below.

The project site is not within any wildlife migration corridors identified in MSHCP Figure 3-2, Schematic Cores and Linkages Map.

With respect to the proposed project's consistency with MSHCP Section 6.1.2 (Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools), the project site does not contain MSHCP riparian/riverine areas and no riparian or riverine areas will be impacted.

With respect to the proposed project's consistency with MSHCP Section 6.1.3 (Protection of Narrow Endemic Plant Species) and Section 6.3.2 (Additional Survey Needs and Procedures), as stated within the document, the project site is not located within a Narrow Endemic Plant Species Survey Area as defined by Section 6.1.3, nor Amphibian Survey Area, Burrowing Owl Survey Area, or Mammal Survey Area as defined by Section 6.3.2 of the MSHCP. Therefore, impacts to narrow endemic plant species or wildlife habitat would be covered through payment of the appropriate MSHCP development fees.

Section 6.1.4 of the MSHCP specifies that certain guidelines should be implemented for proposed projects located adjacent to or connected with existing conservation lands/lands described for conservation within the MSHCP Conservation Area; these include Public/Quasi-Public Land (PQP) Lands and conserved portions of the Criteria Area. The various guidelines include the management of site drainage/runoff and toxics/pollutants, grading, lighting, noise, invasive plant species, and wildlife barriers, to ensure that pre-project conditions are maintained during and following the completion of construction, to the degree feasible. However, the proposed project is not situated within, adjacent to, or connected with PQP Lands, or the Criteria Area; therefore, Section 6.1.4 of the MSHCP does not apply to this project, which would be consistent.

Therefore, as summarized above, the proposed project would be consistent with the MSHCP.

5.4 Avoidance, Minimization, and Mitigation Measures

No recommendations are required to minimize and avoid significant impacts to sensitive biological resources as a result of proposed project implementation because there are no sensitive biological resources that occur on the project site.

5.5 Cumulative Impacts

Cumulative impacts are defined as the direct and indirect effects of a proposed project which, when considered alone, would not be deemed a substantial impact, but when considered in addition to the impacts of related projects in the area, would be considered significant. "Related

projects” refers to past, present, and reasonably foreseeable probable future projects, which would have similar impacts to the proposed project. CEQA deems a cumulative impact analysis to be adequate if a list of “related projects” is included in the EIR or the proposed project is consistent with an adopted general, specific, master, or comparable programmatic plan (Section 15130(b)(1)(B)). CEQA also states that no further cumulative impact analysis is necessary for impacts of a proposed project consistent with an adopted general, specific, master, or comparable programmatic plan [Section 15130(d)].

As discussed above, the project site consists of disturbed or developed areas within a developed portion of the City of Riverside. Furthermore, the MSHCP addresses cumulative impacts for western Riverside County. The MSHCP identifies areas for long-term conservation and management. As such, with MSHCP compliance, cumulative impacts of proposed projects within authorized take lands within the MSHCP are minimized through the conservation of land. Therefore, implementation of the proposed project, in conjunction with other past, present, or reasonably foreseeable future projects, would not result in a significant cumulative impact related to biological resources.

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CHAPTER 6

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Appendix A
Floral and Faunal Compendium

APPENDIX A – 1575 UNIVERSITY AVENUE PROJECT

Floral Compendium

Family	Scientific Name	Common Name	Nativity	Status
ANGIOSPERMS				
DICOTS				
AMARANTHACEAE – ICE PLANT FAMILY				
	<i>Amaranthus albus</i>	pigweed amaranth	naturalized	
ANACARDIACEAE – SUMAC OR CASHEW FAMILY				
	<i>Pistacia chinensis</i>	Chinese pistachio	cultivated	
ASTERACEAE – SUNFLOWER FAMILY				
	<i>Ambrosia psilostachya</i>	ragweed	native	
	<i>Baccharis salicifolia</i>	mule fat	native	
	<i>Centaurea melitensis</i>	toçalote	naturalized	
	<i>Lactuca serriola</i>	prickly lettuce	naturalized	
	<i>Encelia farinosa</i>	brittlebush	native	
	<i>Erigeron canadensis</i>	Canada horseweed	native	
	<i>Helianthus annuus</i>	common sunflower	native	
BORAGINACEAE – BORAGE FAMILY				
	<i>Cryptantha</i> species	popcorn flower	native	
CHENOPODIACEAE – GOOSEFOOT FAMILY				
	<i>Chenopodium album</i>	lamb's quarters	naturalized	
	<i>Salsola tragus</i>	prickly Russian thistle	naturalized	
CRASSULACEAE – STONECROP FAMILY				
	<i>Aeonium arboreum</i>	tree aeonium	cultivated	
EUPHORBACEAE – SPURGE FAMILY				
	<i>Euphorbia hypericifolia</i>	graceful sandmat	naturalized	
	<i>Euphorbia maculata</i>	spotted spurge	naturalized	
	<i>Euphorbia prostrata</i>	prostrate sandmat	naturalized	
FABACEAE – LEGUME FAMILY				
	<i>Parkinsonia aculeata</i>	Mexican palo verde	cultivated	
	<i>Trifolium hirtum</i>	rose clover	naturalized	
FAGACEAE – BEECH FAMILY				
	<i>Quercus agrifolia</i>	coast live oak	native	
GERANIACEAE – GERANIUM FAMILY				
	<i>Erodium cicutaria</i>	red stemmed filaree	naturalized	
LYTHRACEAE – LOOSTRIFE FAMILY				
	<i>Lagerstroemia indica</i>	crapemyrtle	cultivated	
MALVACEAE – MALLOW FAMILY				
	<i>Brachychiton populneum</i>	whiteflower kurradjong	cultivated	
	<i>Malva parviflora</i>	cheeseweed mallow	naturalized	
PAPAVERACEAE – POPPY FAMILY				
	<i>Eschscholzia californica</i>	California poppy	native	
PITOSPORAECAE – PITTOSPORUM FAMILY				
	<i>Pittosporum tobira</i>	mock orange	cultivated	
PLATANACEAE – SYCAMORE FAMILY				
	<i>Platanus hispanica</i>	London plane tree	cultivated	

POLYGONACEAE – BUCKWHEAT FAMILY		
<i>Eriogonum fasciculatum</i>	California buckwheat	native
<i>Polygonum aviculare</i>	Prostate	native
SALICACEAE – WILLOW FAMILY		
<i>Salix goodingii</i>	Gooding's black willow	native
SAPINDACEAE – SOAPBERRY FAMILY		
<i>Koelreuteria paniculata</i>	goldenrain tree	cultivated
SCROPHULARIACEAE – FIGWORT FAMILY		
<i>Leucophyllum frutescens</i>	Texas ranger	cultivated
VERBENACEAE – VERBENA FAMILY		
<i>Lantana montevidensis</i>	trailing lanata	cultivated
ZYGOPHYLLACEAE – CALTROP FAMILY		
<i>Tribulus terrestris</i>	puncture vine	naturalized
MONOCOTS		
ARECACEAE – PALM FAMILY		
<i>Washingtonia filifera</i>	California fan palm	cultivated
<i>Washingtonia robusta</i>	Mexican fan palm	naturalized
ASPHODELACEAE – ASPHODEL FAMILY		
<i>Aloe striata</i>	coral aloe	cultivated
JUNCACEAE – RUSH FAMILY		
<i>Juncus balticus</i>	Baltic rush	cultivated
POACEAE – GRASS FAMILY		
<i>Avena fatua</i>	wild oat	naturalized
<i>Bromus rubens</i>	red brome	naturalized
<i>Cynodon dactylon</i>	Bermuda grass	cultivated
<i>Hordeum murinum</i>	foxtail barley	naturalized

APPENDIX A – 1575 UNIVERSITY AVENUE PROJECT

Faunal Compendium

Class	Family	Family Common Name	Scientific Name	Common Name	Special-status?
BIRDS					
	Troglodytidae	Wrens	<i>Troglodytes aedon</i>	House wren	N

Appendix B
**CNDDDB - Special-Status Plant
and Wildlife Species**



Selected Elements by Scientific Name
 California Department of Fish and Wildlife
 California Natural Diversity Database



Query Criteria: Quad> IS <(Riverside East (3311783))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Agelaius tricolor</i> tricolored blackbird	ABPBXB0020	None	Threatened	G1G2	S1S2	SSC
<i>Anniella stebbinsi</i> Southern California legless lizard	ARACC01060	None	None	G3	S3	SSC
<i>Arenaria paludicola</i> marsh sandwort	PDCAR040L0	Endangered	Endangered	G1	S1	1B.1
<i>Arizona elegans occidentalis</i> California glossy snake	ARADB01017	None	None	G5T2	S2	SSC
<i>Aspidoscelis hyperythra</i> orange-throated whiptail	ARACJ02060	None	None	G5	S2S3	WL
<i>Aspidoscelis tigris stejnegeri</i> coastal whiptail	ARACJ02143	None	None	G5T5	S3	SSC
<i>Athene cunicularia</i> burrowing owl	ABNSB10010	None	None	G4	S3	SSC
<i>Berberis nevini</i> Nevin's barberry	PDBER060A0	Endangered	Endangered	G1	S1	1B.1
<i>Bombus crotchii</i> Crotch bumble bee	IIHYM24480	None	None	G2	S1S2	
<i>Calochortus plummerae</i> Plummer's mariposa-lily	PMLIL0D150	None	None	G4	S4	4.2
<i>Centromadia pungens ssp. laevis</i> smooth tarplant	PDAST4R0R4	None	None	G3G4T2	S2	1B.1
<i>Ceratochrysis longimala</i> Desert cuckoo wasp	IIHYM71040	None	None	G1	S1	
<i>Chaetodipus fallax fallax</i> northwestern San Diego pocket mouse	AMAFD05031	None	None	G5T3T4	S3S4	SSC
<i>Chloropyron maritimum ssp. maritimum</i> salt marsh bird's-beak	PDSCR0J0C2	Endangered	Endangered	G4?T1	S1	1B.2
<i>Chorizanthe parryi var. parryi</i> Parry's spineflower	PDPGN040J2	None	None	G3T2	S2	1B.1
<i>Coccyzus americanus occidentalis</i> western yellow-billed cuckoo	ABNRB02022	Threatened	Endangered	G5T2T3	S1	
<i>Crotalus ruber</i> red-diamond rattlesnake	ARADE02090	None	None	G4	S3	SSC
<i>Dipodomys merriami parvus</i> San Bernardino kangaroo rat	AMAFD03143	Endangered	Candidate Endangered	G5T1	S1	SSC
<i>Dipodomys stephensi</i> Stephens' kangaroo rat	AMAFD03100	Threatened	Threatened	G2	S2	
<i>Eremophila alpestris actia</i> California horned lark	ABPAT02011	None	None	G5T4Q	S4	WL



Selected Elements by Scientific Name
California Department of Fish and Wildlife
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Icteria virens</i> yellow-breasted chat	ABPBX24010	None	None	G5	S3	SSC
<i>Lanius ludovicianus</i> loggerhead shrike	ABPBR01030	None	None	G4	S4	SSC
<i>Lasiurus xanthinus</i> western yellow bat	AMACC05070	None	None	G4G5	S3	SSC
<i>Laterallus jamaicensis coturniculus</i> California black rail	ABNME03041	None	Threatened	G3T1	S1	FP
<i>Lepidium virginicum var. robinsonii</i> Robinson's pepper-grass	PDBRA1M114	None	None	G5T3	S3	4.3
<i>Lepus californicus bennettii</i> San Diego black-tailed jackrabbit	AMAEB03051	None	None	G5T3T4	S3S4	
<i>Nyctinomops femorosaccus</i> pocketed free-tailed bat	AMACD04010	None	None	G5	S3	SSC
<i>Onychomys torridus ramona</i> southern grasshopper mouse	AMAFF06022	None	None	G5T3	S3	SSC
<i>Perognathus longimembris brevinasus</i> Los Angeles pocket mouse	AMAFD01041	None	None	G5T2	S1S2	SSC
<i>Phrynosoma blainvillii</i> coast horned lizard	ARACF12100	None	None	G3G4	S3S4	SSC
<i>Polioptila californica californica</i> coastal California gnatcatcher	ABPBJ08081	Threatened	None	G4G5T3Q	S2	SSC
<i>Senecio aphanactis</i> chaparral ragwort	PDAST8H060	None	None	G3	S2	2B.2
<i>Southern Sycamore Alder Riparian Woodland</i> Southern Sycamore Alder Riparian Woodland	CTT62400CA	None	None	G4	S4	
<i>Spea hammondi</i> western spadefoot	AAABF02020	None	None	G2G3	S3	SSC
<i>Spinus lawrencei</i> Lawrence's goldfinch	ABPBY06100	None	None	G3G4	S4	
<i>Streptocephalus woottoni</i> Riverside fairy shrimp	ICBRA07010	Endangered	None	G1G2	S1S2	
<i>Taxidea taxus</i> American badger	AMAJF04010	None	None	G5	S3	SSC
<i>Vireo bellii pusillus</i> least Bell's vireo	ABPBW01114	Endangered	Endangered	G5T2	S2	

Record Count: 38

Appendix C

Site Photographs

APPENDIX C – 1575 UNIVERSITY AVENUE, RIVERSIDE

Site Photographs



Photograph 1 (E). Photograph depicts the existing building facing University Avenue.



Photograph 2 (S). Photograph depicts the undeveloped portion of the project site with the existing building in the background.



Photograph 3 (N). Photograph depicts the undeveloped northern portion of the project site with the ruderal community.



Photograph 4 (NW). Photograph depicts the ruderal community in the undeveloped northern portion of the project site with adjacent industrial uses along northern property boundary.



Appendix D

Cultural Resources Assessment Report

Kimley»»Horn

For Public Distribution

1575 UNIVERSITY AVENUE PROJECT, CITY OF RIVERSIDE, CALIFORNIA

Cultural Resources Assessment Report

Prepared for
Kimley-Horn
660 S. Figueroa Street, Suite #2050
Los Angeles, CA 90017

November 2022



For Public Distribution

1575 UNIVERSITY AVENUE PROJECT, CITY OF RIVERSIDE, CALIFORNIA

Cultural Resources Assessment Report

Prepared for:

Kimley-Horn
660 S. Figueroa Street, Suite #2050
Los Angeles, CA 90017

November 2022

Prepared by:

ESA
626 Wilshire Blvd. Suite 1100
Los Angeles, CA 90017

Project Director:

Monica Strauss, M.A., RPA

Principal Investigator:

Sara Dietler, B.A.

Report Author:

Fatima Clark, B.A.

Project Location:

Riverside East (CA) USGS 7.5-minute Topographic Quad
Township 2 South, Range 4 West, Section 19

Acreage: Approx. 4.29 acres

Assessor Parcel Numbers: 250-170-036

626 Wilshire Boulevard
Suite 1100
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EXECUTIVE SUMMARY

1575 University Avenue Project - Cultural Resources Assessment Report

Environmental Science Associates (ESA) has been retained by Kimley-Horn to conduct a cultural resources assessment for the 1575 University Avenue Project (Project). The Project would consist of the construction of a five-story at-grade mixed-use/residential buildings, an at-grade parking structure, a swimming pool and spa. The City of Riverside (City) is the lead agency pursuant to the California Environmental Quality Act (CEQA).

A records search was conducted on July 22, 2022, by staff at the California Historical Resources Information System (CHRIS) Eastern Information Center (EIC) housed at the University of California, Riverside and included a review of all recorded archaeological resources and previous studies within the Project Site and a 0.50-mile radius of the Project Site. The records search results indicate that 27 cultural resources studies have been conducted within a 0.50-mile radius of the Project Site. Approximately 50 percent of the 0.50-mile records search radius has been included in previous cultural resources assessments; however, none of these assessments have included the Project Site. No archaeological resources have been previously recorded within a 0.50-mile radius of the Project Site.

A Sacred Lands File (SLF) conducted by the California Native American Heritage Commission (NAHC) on August 4, 2022, indicated that the SLF search yielded negative results.

A cultural resources survey of the Project Site was conducted on July 20, 2022. Two built environment resources (FC-Site-1 and FC-Site-2) were identified as a result of the survey, and these were recorded on California Department of Parks and Recreation (DPR) Site forms.

The built environment resources were evaluated to determine whether they were eligible for listing in the National Register of Historic Places (National Register) criteria A, B, C, or D, California Register of Historical Resources (California Register) criteria 1, 2, 3 or 4 or local listings. California Register of Historical Resources (California Register). The resources consist of concrete foundations and were found to be ineligible for consideration as potential historical resources under any California Register criteria 1, 2, 3 or 4. Therefore, Project impacts to these resources are not considered a significant impact to the environment under CEQA and no further analysis is necessary. The archaeological sensitivity assessment concluded that there is a low to moderate potential for encountering subsurface prehistoric archaeological resources. Since the Project includes ground disturbance, mitigation measures from the Riverside Housing and Public Safety Element Updates and Environmental Justice Policies Project Mitigation Monitoring and Reporting Program (MMRP) are provided in the Conclusions and Recommendations section at

the close of this report to reduce potential impacts to previously unknown archaeological resources and human remains to less than significant levels under CEQA.

1575 UNIVERSITY AVENUE PROJECT

Cultural Resources Assessment Report

Introduction

Environmental Science Associates (ESA) has been retained by Kimley-Horn to conduct a cultural resources assessment for the 1575 University Avenue Project (Project). The Project proposes the construction of a five-story, at-grade mixed-use/residential buildings. The City of Riverside (City) is the lead agency pursuant to the California Environmental Quality Act (CEQA).

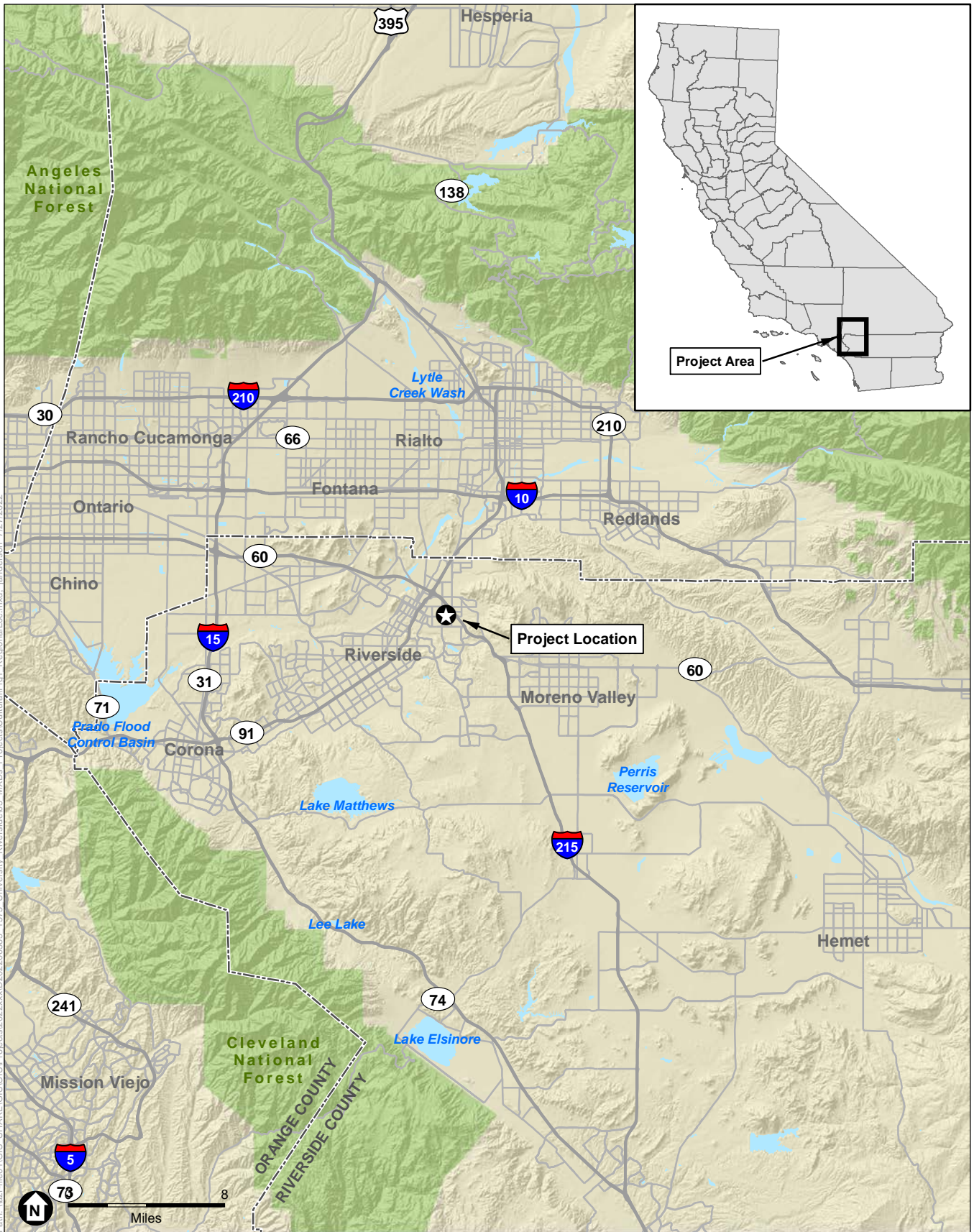
ESA personnel involved in the preparation of this report are as follows: Monica Strauss, M.A., RPA., project director; Sara Dietler, B.A., Principal Investigator; Fatima Clark, B.A., report author and surveyor; and Jaclyn Anderson, GIS specialist. Resumes of key personnel are included in **Appendix A**.

Project Location

The 4.29-acre Project Site is located in the northeast portion of the City, in Riverside County, California (**Figure 1**). The Project Site is bordered by commercial uses to the north; University Avenue to the south; residential and commercial/retail properties to the east; and Seventh Street and commercial/retail properties to the west. The Project Site is located within Section 19 of Township 2 South, Range 4 West on the Riverside East, CA U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle (**Figure 2**).

Project Description

The Project would consist of the construction of a five-story, at-grade mixed-use/residential buildings, which would occupy the majority of the Project Site. An at-grade parking structure would be constructed in the central portion of the Project Site and a swimming pool and spa in the southern portion of the Project Site. Retaining walls (up to six feet high) are proposed to support excavations associated with the pit for the elevators. The existing building and parking lot in the southern portion, as well as the concrete pads in the vacant portion of the Project Site would be removed.

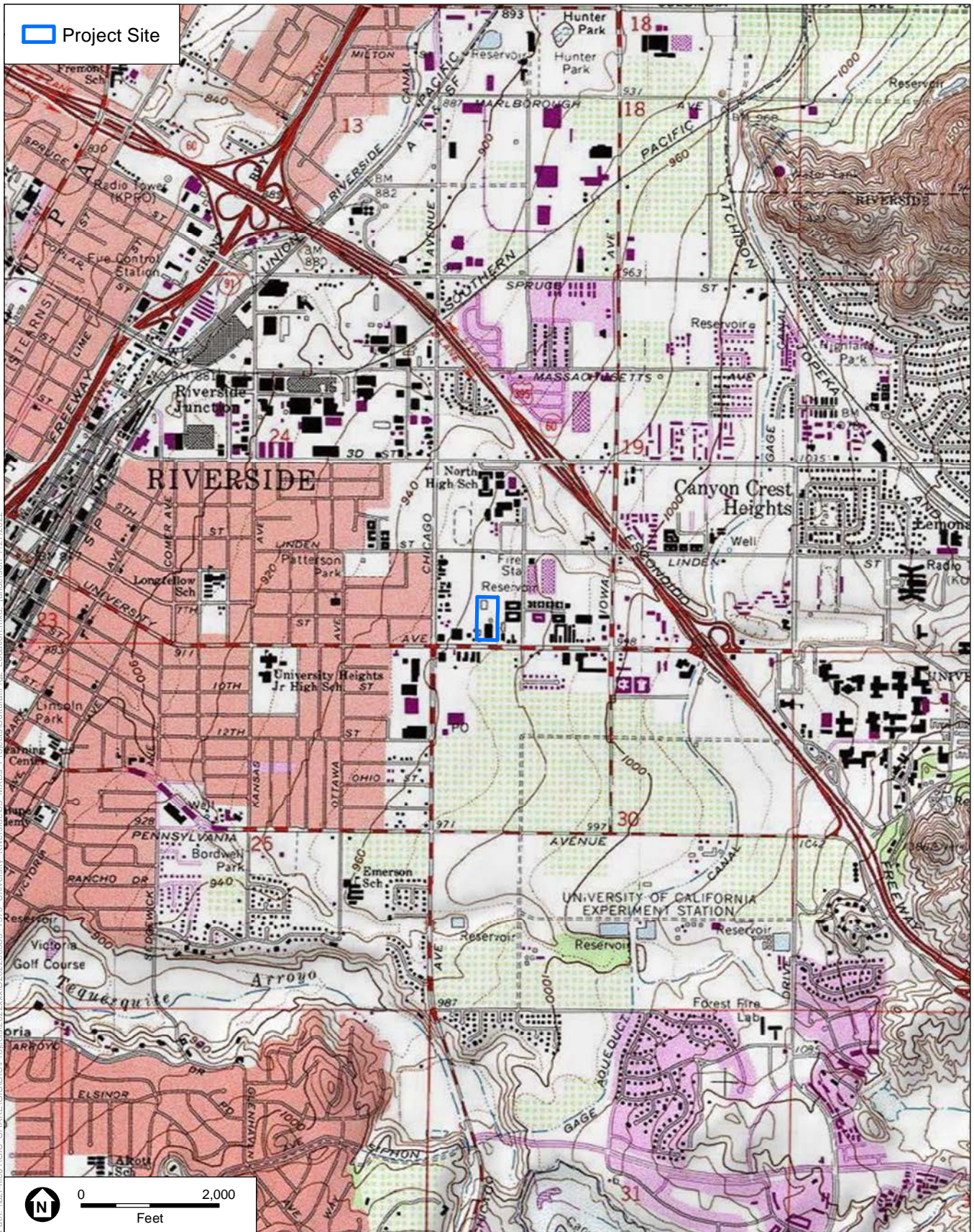


SOURCE: ESRI

1575 University Avenue

Figure 1
Regional Map





SOURCE: USGS 7.5" Topoquad Riverside East

1575 University Avenue

Figure 2
Project Location



Setting

Natural Setting

The Project Site is rectangular-shaped and partially graded parcel. A one-story commercial building with a surface parking lot and associated landscaping occupies the southern portion of the Project Site, while the remaining north portion is currently vacant, but also has concrete pads associated with former structures. Access to the Project Site is via the southern portion and along University Avenue.

Prehistoric Setting

Prehistory is most easily discussed chronologically, in terms of environmental change and recognized cultural developments. Several chronologies have been proposed for inland Southern California, the most widely accepted of which is Wallace's four-part Horizon format (1955) which was originally developed for the Southern California coastal region, and which was later updated and revised by Claude Warren (1968). The advantages and weaknesses of Southern California chronological sequences are reviewed by Warren (in Moratto 1984), Chartkoff and Chartkoff (1984), and Heizer (1978). The following discussion is based on Warren (1968), Goldberg et al. (2001), Goldberg (2001), and the more recent Byrd and Raab (2007) sequence.

Paleo-Indian Period (ca. 14,000-10,000 years before present [YBP])

Little is known of Paleo-Indian peoples in inland Southern California, and the cultural history of this period follows that of North America in general. Recent discoveries in the Americas have challenged the theory that the first Americans migrated from Siberia, following a route from the Bering Strait into Canada and the Northwest Coast sometime after the Wisconsin Ice Sheet receded (ca. 14,000 YBP), and before the Bering Land Bridge was submerged (ca. 12,000 YBP). Based on new research from the Pacific Rim, it has been proposed that modern humans settled islands of the eastern Pacific between 40,000 and 15,000 years ago. Evidence of coastal migration has also come from sites on islands off Alta and Baja California. As a result, these sites are contemporary with Clovis and Folsom points found in North America's interior regions. All of these new findings have made the coastal migration theory gain credibility in recent times (Erlandson et al. 2007).

The timing, manner, and location of this crossing are a matter of debate among archaeologists, but the initial migration probably occurred as the Laurentide Ice Sheet melted along the Alaskan Coast and interior Yukon. The earliest radiocarbon dates from the Paleo-Indian Period in North America come from the Arlington Springs Woman site on Santa Rosa Island. These human remains date to approximately 13,000 YBP (Johnson, et al. 2002). Other early Paleo-Indian sites include the Monte Verde Creek site in Chile (Meltzer, et al. 1997) and the controversial Meadowcroft Rockshelter in Pennsylvania. Both sites have early levels dated roughly at 12,000 YBP. Lifeways during the Paleo-Indian Period was characterized by highly mobile hunting and gathering. Prey included megafauna such as mammoth and technology included a distinctive flaked stone toolkit that has been identified across much of North America and into Central America. They likely used some plant foods, but the Paleo-Indian toolkit recovered

archaeologically does not include many tools that can be identified as designed specifically for plant processing.

To date, no Paleoindian period sites have been identified in inland Southern California.

The megafauna that appear to have been the focus of Paleo-Indian life went extinct during a warming trend that began approximately 10,000 years ago, and both the extinction and climatic change (which included warmer temperatures in desert valleys and reduced precipitation in mountain areas) were factors in widespread cultural change. Subsistence and social practices continued to be organized around hunting and gathering, but the resource base was expanded to include a wider range of plant and game resources. Technological traditions also became more localized and included tools specifically for the processing of plants and other materials. This constellation of characteristics has been given the name “Archaic” and it was the most enduring of cultural adaptations to the North American environment.

Early Archaic Period/Early Holocene (ca. 10,000-8,000 YBP)

The earliest Archaic Period life in inland Southern California has been given the name San Dieguito tradition, after the San Diego area where it was first identified and studied (Warren 1968). Characteristic artifacts include stemmed projectile points, crescents and leaf-shaped knives, which suggest a continued subsistence, focus on large game, although not megafauna of the earlier Paleo-Indian period. Milling equipment appears in the archaeological record at approximately 7,500 years ago (Moratto 1984:158). Artifact assemblages with this equipment include basin milling stones and unshaped manos, projectile points, flexed burials under cairns, and coggled stones, and have been given the name La Jolla Complex (7,500–3,000 YBP). The transition from San Dieguito life to La Jolla life appears to have been an adaptation to drying of the climate after 8,000 YBP, which may have stimulated movements of desert peoples to the coastal regions, bringing milling stone technology with them. Groups in the coastal regions focused on mollusks, while inland groups relied on wild-seed gathering and acorn collecting.

The earliest archaeological sites include resource CA-RIV-2798/H located on the shores of Lake Elsinore (approximately 21 miles south of the Project Site), which has been dated to approximately 8,500 years ago (Grenda 1997), and site CA-RIV-6069, found recently on the northeastern margin of the Lakeview Mountains approximately 18 miles southeast of the Project Site, dated to between 8,000 to 8,500 years ago (Horne 1998). Goldberg et al. (2001) suggest that the settlements of the populations exploiting the interior valleys, such as the Project Site, would have been located near drought-resistant water sources such as Lake Elsinore, Mystic Lake, and possibly the Cajalco Basin, and that that these locales may have been destination points on a scheduled, seasonal round.

Middle Archaic or Millingstone Period/Middle Holocene (ca. 8,000-4,000 YBP)

In central and Southern California, “millingstone” cultures appeared around 8,000 to 7,000 YBP. These cultures focused on the collection and processing of plant seeds and the hunting of a variety of medium and small game animals. The most common artifacts are manos and milling

stones (metates) and large core-cobble chopping tools. Other artifacts include hammerstones, large flake tools including scraper-planes and scrapers, worked bone, beads, cogged stones, discoidals, doughnut stones, and stone balls. Projectile points (usually large leaf-shaped points and Elko points) are not plentiful, but faunal remains indicate deer and rabbits were hunted. Sites near bays and estuaries contain abundant shell and fish remains (Byrd and Raab 2007).

In inland Southern California, archaeological investigations conducted by Applied Earthworks, Inc. at the Eastside Reservoir Project (ESRP) (now Diamond Valley Lake, located approximately 26 miles southeast of the Project Site) produced at least 19 archaeological localities dating to the Middle Archaic Period. These Middle Archaic components include residential bases and/or temporary camps containing abundant cultural materials including temporally diagnostic artifacts (e.g., Pinto and Silver Lake Projectile points, crescents), at least nine complex lithic scatters that appear to have functioned as resource extraction and processing sites, and one human burial covered with large rocks and ground stone artifacts. Moreover, the presence of isolated radiocarbon-dated features and/or sparse scatters of obsidian debitage dated by obsidian hydration methods suggests that ephemeral Middle Archaic use is present at several sites at ESRP. As a result of the ESRP investigations, researchers state that the more intensively used residential locations occur along alluvial fan margins, while less intensively used areas tend to be situated on arroyo bottoms or upland benches (Goldberg et al. 2001).

Late Archaic/Late Holocene (ca. 4,000-1,500 YBP)

Cultural responses to environmental changes around 4,000–3,000 YBP included a shift to more land-based gathering practices. This period was characterized by the increasing importance of acorn processing, which supplemented the resources from hunting and gathering. The period is characterized by the initial use of the mortar and pestle to process food stuffs such as seeds, acorns, and greens. Large Projectile points, including Elko points, indicate that hunting was probably accomplished with the atlatl or spear thrower. The settlement pattern may have been semi-sedentary with winter residential bases near a permanent water source and use of temporary camps for resource collection during the rest of the year.

At the ESRP Project Site, 23 archaeological localities show evidence that their primary use was during the Late Archaic Period, while 8 others yielded evidence of some activity during the period. Late Archaic site types documented within the ESRP Project Site include residential bases with large, diverse artifact assemblages, abundant faunal remains, and cultural features, as well as temporary bases, temporary camps, and task-specific activity areas. In general, sites showing evidence of the most intensive use tend to be on range-front benches adjacent to permanent water sources such as perennial springs or larger streams, while less intensively used locales occur either on upland benches or on the margins of active alluvial fans (Goldberg 2001).

Late Prehistoric Period/Late Holocene (ca. 1,500 YBP-A.D. 1769)

The Late Prehistoric Period of inland Southern California is often separated into three time periods; Saratoga Springs (ca. 1,500-750 YBP), Late Prehistoric (ca. 750-400 YBP), and the Protohistoric (ca. 400 to 150 YBP) due to findings from the ESRP investigations and other Projects in region. In general, the bow and arrow is introduced at the beginning of the Late

Prehistoric Period, which made hunting more efficient and productive while ceramics use was intensified after A.D. 1000. Many scholars believe that migrations occurring at this time resulted in new forms of social expression (such as cremations replacing inhumations) and in the creation of the linguistic and cultural landscape at European contact (Byrd and Raab 2007).

Some scholars have traditionally believed, based predominantly on linguistic data from ethnographic groups at European contact and archaeological data from coastal sites, that Shoshonean-speaking peoples from the deserts and Great Basin region of the western U.S. migrated into Southern California during this time period and replaced the existing groups in the area, although the precise timing of this migration is a matter of debate. However, current linguistic research contradicts this traditional theory of the “Shoshonean Wedge.” In particular, Campbell (1997) and Hill (2001) suggests that the Proto-Uto-Aztecan (PUA) homeland was somewhere in northern Mexico, western Arizona and eastern Southern California. The PUA group has generally been further divided into four subgroups: Hopic, Tubatulabalic, Takic and Numic. Luiseño, Gabrielino and Cahuilla are all language groups under the Takic umbrella. Current linguistic and DNA evidence suggests that the separation of the PUA groups into these subgroups began between 5,000 and 3,500 YBP. Takic languages are estimated to be at least 2,500 years old which suggests that Takic speakers moved into their present homelands 1,000 years before the Numic speakers were in the Great Basin. Archaeologists use the “Shoshonean Wedge” theory to describe the southern descending movement of the Takic speakers (incorrectly identifying them as Shoshoneans) into Southern California; however, linguistic evidence does not support this hypothesis. Furthermore, evidence based upon linguistic and DNA data indicate the Takic speakers were forced to move out of the southern San Joaquin Valley area by a wave of Yokustan (Penutians) prior to 3,500 years B.P. Forced to move south, these Takic speakers began replacing, and intermarried with, non-Takic speakers within the Los Angeles basin, and by extension those peoples farther south, prior to 3,500 YBP (Sutton 2009). This new evidence contradicts the old theory of a “Shoshonean Wedge” and places the Takic speakers in California 1,000 years before the Numic speakers spread across the Great Basin.

The Medieval Climatic Anomaly (MCA) (1,050 to 600 B.P.) was a warmer drier period that occurred during the Late Prehistoric Period that may have resulted in more intensive use of resources and settlement in permanent villages near water sources in inland areas such as the San Jacinto Valley. As noted during the Late Archaic Period, important food resources for inland groups was acorns gathered from oak groves in canyons, drainages, and foothills. Acorn processing was labor intensive, requiring grinding in a mortar and leaching with water to remove tannic acid. Diagnostic artifacts include small triangular projectile points, mortars and pestles, steatite ornaments and containers, perforated stones, circular shell fishhooks, and numerous and varied bone tools, as well as bone and shell ornamentation. Elaborate mortuary customs, as well as generous use of asphaltum and the development of extensive trade networks, are also characteristic of this period.

Saratoga Springs Period (ca. 1,500-750 YBP) occupation was identified at seven site components within the ESRP Project Site, while three other sites exhibited evidence of ephemeral use at this time. Six other localities within the ESRP Project Site yielded either obsidian with hydration bands suggesting Saratoga Springs age or Saratoga Springs Projectile points (a large triangular

form associated with use of the bow and arrow, which began to appear in the ESRP Project Site at this time) but without evidence of sustained site use during this period. The focal shift of prehistoric activity from alluvial fan margins to mountain-front benches adjacent to permanent water sources, which was initiated during the Late Archaic, is also evidenced in the Saratoga Springs site locations (Goldberg 2001).

In San Diego County, Meighan (1954) identified the period after A.D. 1400 as the San Luis Rey complex. San Luis Rey I (A.D. 1400–1750) is associated with bedrock mortars and milling stones, cremations, small triangular projectile points with concave bases and Olivella beads. The San Luis Rey II (A.D. 1750–1850) period is marked by the addition of pottery, red and black pictographs, cremation urns, steatite arrow straighteners and non-aboriginal materials (Meighan 1954:223, Keller and McCarthy 1989:6). Work at Cole Canyon (located approximately 29 miles south of the Project Site) and other sites in Southern California suggests that this complex, and the ethnographically described life of the native people of the region, were well established by at least 1,000 YBP (Keller and McCarthy 1989:80).

Ethnographic Setting

According to early anthropologists and ethnographers, the Project Site is located on the fringes of cultural territories of the Cahuilla, Luiseno, Serrano, and Gabrielino (Gabrieleño, Tongva, or *Kizh*) groups.

Cahuilla

The Cahuilla spoke a language belonging to the Cupan group of the Takic subfamily (Bean 1978). The Cahuilla are generally divided into three groups based on their geographic setting: the Pass Cahuilla of the Beaumont/Banning area; the Mountain Cahuilla of the San Jacinto and Santa Rosa Mountains; and the Desert Cahuilla from the Coachella Valley, as far south as the Salton Sea. The Cahuilla occupied territories that ranged from low or moderately low desert to the mountain regions of the Transverse and Peninsular ranges.

Villages were placed near canyons that received substantial precipitation or were adjacent to streams and springs (Bean 1978). House structures of the Cahuilla ranged from “brush shelters to dome-shaped or rectangular structures 15-20 feet long” (Bean 1978). The Cahuilla social structure revolved around clans and exogamous moieties (components connected through inter-marriage). Hunting, in conjunction with the exploitation of a variety of available resources, governed the Cahuilla subsistence strategy. The material culture of the Cahuilla was extensive and varied, and included pottery, ornamental items, and a number of knapped stone tools.

Prior to European contact, population estimates for the Cahuilla range from 3,600 to as high as 10,000 persons. Due to European diseases, such as smallpox, the Cahuilla population was decimated during the 19th century. However, unlike other Native American populations in southern California, the Cahuilla were able to retain their autonomy even after the arrival and increasing control of European explorers and the settling governments that followed. It was not until 1891 that the Cahuilla culture and its population began to succumb to the pressure of European and, later, United States governing bodies (Bean 1978).

Today, there are nine federally recognized tribes in California who share Cahuilla tribal affiliation, language, and culture, including the Agua Caliente Band of Cahuilla Indians (Agua Caliente), Augustine Band of Cahuilla Indians (Augustine), Cabazon Band of Mission Indians (Cabazon), Cahuilla Band of Mission Indians, Los Coyotes Band of Cahuilla and Cupeño Indians (Los Coyotes), Morongo Band of Mission Indians (Morongo), Ramona Band of Cahuilla Indians (Ramona), Santa Rosa Band of Cahuilla Indians (Santa Rosa), and Torres-Martinez Desert Cahuilla Indians (Torres-Martinez).

Luiseno

Native Americans living in the Project area at the time of Spanish contact are now known as the Luiseno, after the Mission San Luis Rey to which many of them were relocated. The language of the Luiseno people has been identified as belonging to the Cupan group of the Takic subfamily, which is part of the larger Uto-Aztecan language family (Bean and Shipek, 1978). Luiseno territory includes portions of northern San Diego, southern Orange, and Riverside Counties, and would have encompassed a diverse environment including lagoons and marshes, coastal areas, inland river valleys, foothills, and mountains. The neighbors of the Luiseno to the north and northwest were the Juaneño, Gabrielino, and Serrano; to the east were the Cahuilla and Cupeño; and to the south were the Kumeyaay.

The Luiseno subsisted on small game, coastal marine resources, and a wide variety of plant foods such as grass seeds and acorns. Luiseno houses were conical thatched reed, brush, or bark structures. The Luiseno inhabited permanent villages centered around patrilineal clans, with each village headed by a chief, or not (Kroeber, 1925; Sparkman, 1908). Seasonal camps associated with villages were also used. Each village or clan had an associated territory and hunting, collecting, and fishing areas. Villages were typically located in proximity to a food or water source, or in defensive locations, often near valley bottoms, streams, sheltered coves or canyons, or coastal strands (Bean and Shipek, 1978). It is estimated that there may have been around 50 Luiseno villages with a population of about 200 each at the time of the first Spanish contact (Bean and Shipek, 1978).

Today, there are six federally recognized tribes in California who share Luiseno tribal affiliation, language, and culture, including the La Jolla Band of Luiseno Indians (La Jolla), Rincon Band of Luiseno Indians (Rincon), Pauma Yuima Band of Mission Indians (Pauma), Pechanga Band of Luiseno Indians (Pechanga), Pala Band of Mission Indians (Pala), and Soboba Band of Luiseno Indians (Soboba).

Serrano

The Serrano occupied territories that ranged from low or moderately low desert to the mountain regions of the Transverse and Peninsular ranges bordered to the west roughly by the Cajon Pass in the San Bernardino Mountains, to the east by Twenty-Nine Palms, and to the south by Yucaipa Valley. The Serrano inhabited areas both north and south of the San Bernardino Mountains, and also encompassed the western end of the Mojave Desert (including Lovejoy Springs) in portions of Los Angeles County (Price et al. 2008). The Serrano were organized into clans, with the clan being the largest autonomous political entity. They lived in small villages where extended

families lived in circular, dome-shaped structures made of willow frames covered with tule thatching. Each clan had one or more principal villages in addition to numerous smaller villages associated with the principal village (Price et al, 2008). Villages located at higher elevations were placed near canyons that received substantial precipitation or were adjacent to streams and springs. Villages situated at lower elevations were also located close to springs or in proximity to the termini of alluvial fans where the high water table provided abundant mesquite and shallow wells could be dug.

The Serrano subsistence strategy relied upon hunting and gathering, and occasionally fishing. Villages divided into smaller, mobile gathering groups during certain seasons to gather seasonally available foods. The division of labor was split between women gathering and men hunting and fishing (Bean and Smith 1978, Warren 1984). Mountain sheep, deer, rabbits, acorns, grass seeds, piñon nuts, bulbs, yucca roots, cacti fruit, berries, and mesquite were some of the more common resources utilized (Bean and Smith 1978, Warren 1984). Despite early European and Spanish contact in 1771, the Serrano remained relatively autonomous until the period between 1819 and 1834 when most of the western Serrano were forcibly removed and relocated to missions (Bean and Smith 1978, Warren 1984).

Gabrielino

According to Bean and Smith (1978), the Gabrielino, with the exception of the Chumash to the north, “were the wealthiest, most populous, and most powerful ethnic nationality in aboriginal Southern California.” Named after the San Gabriel Mission, the Gabrielino occupied sections of Los Angeles, Orange, and San Bernardino counties, and the islands of San Nicolas, Santa Catalina, and San Clemente. The Gabrielino subsisted on a variety of resources in several ecological zones. Acorns, sage, and yucca were gathered throughout the inland areas whereas shellfish, fish, as well as a variety of plants and animals were exploited within the marshes and along the coast. Deer and various kinds of small mammals were hunted on an opportunistic basis. Their material culture reflected the subsistence technology. Lithic tools such as arrow points and modified flakes were used to hunt and process animals. A variety of ground stone grinding implements, such as the mortar, pestle, mano, and metate, were used to process both plant and animal remains for food (Bean and Smith, 1978).

The settlement patterns of the Gabrielino, and other nearby groups such as the Juaneño and Luiseño, were similar and they often interacted through marriage, trade and warfare. The seasonal availability of water and floral and faunal resources dictated seasonal migration rounds with more permanent villages and base camps being occupied primarily during winter and spring months. In the summer months, the village populations divided into smaller units that occupied seasonal food procurement areas. The more permanent settlements tended to be near major waterways and food sources and various secular and sacred activities, such as food production and storage and tool manufacturing, were conducted at these areas (Bean and Smith, 1978).

Historic Setting

Spanish Period (1769-1821)

The first European presence in what is now southern California came in 1542, when Juan Rodriguez Cabrillo led an expedition along the coast. Europeans did not return until 1769, when the expedition of Gaspar de Portola traveled overland from San Diego to San Francisco. Juan Bautista de Anza was the first recorded European visitor to the area. He is credited with the discovery of an inland route from Sonora to the northern coast of California in 1774, bringing him through much of what is now known as Riverside County, via the San Jacinto Mountains (Rolle 2003). With de Anza, the colonization of Alta California began in earnest. With the opening of the overland route, Spanish pueblos were established, evolving into the Spanish system of governance.

In the late 18th century, the Spanish began establishing missions in California and forcibly relocating and converting native peoples (Horne and McDougall 2003). The purpose of the missions was to encourage, by any means necessary, the assimilation of Native populations to adopt the Spanish custom, language, and religion. The mission strategy relied upon an agricultural economy and as such, locations selected for the construction of a mission depended upon three factors: arable soil for crops, an adequate supply of fresh water, and a large local Indian population for labor (Rolle 2003). The closest missions to the Project Site are Mission San Juan Capistrano (located approximately 37 miles southwest of the Project Site) and Mission San Gabriel Arcangel (located approximately 44 miles northwest of the Project Site).

Mexican Period (1821-1846)

In 1821 Mexico, which included much of present-day California, became independent from Spain, and during the 1820s and 1830s the California missions were secularized. Mission property was supposed to have been held in trust for the Native Californians, but instead was handed over to civil administrators and then into private ownership as land grants. After secularization, many former Mission Indians were forced to leave the Missions and seek employment as laborers, ranch hands, or domestic servants (Horne and McDougall 2003).

American Period (1846-Present)

In 1846, the Mexican-American War broke out. Mexican forces were eventually defeated in 1847 and Mexico ceded California to the United States as part of the Treaty of Guadalupe Hidalgo in 1848. California officially became one of the United States in 1850. While the treaty recognized the right of Mexican citizens to retain ownership of land granted to them by Spanish or Mexican authorities, the claimant was required to prove their right to the land before a patent was given. The process was lengthy and generally resulted in the claimant losing at least a portion of their land to attorney's fees and other costs associated with proving ownership (Starr 2007).

When the discovery of gold in northern California was announced in 1848, a huge influx of people from other parts of North America flooded into California. As a result of the discovery of gold and the mass migration of fortune hunters to both southern and northern California, the population of the region exploded, and development of urban areas grew. The transcontinental

railroad came to the region in 1869, bringing industry and settlers to the area; the city of Riverside became the first of these colonized areas in what is now Riverside County. Cattle ranches were slowly replaced by citrus farming and agriculture, industries of major importance to the populace of the area now known as Riverside County.

Project Site History

The Project Site is located within the Eastside Neighborhood which is one of the City's oldest neighborhoods which has been a part of the City since its founding in 1870. The Eastside Neighborhood is located within the eastern portion of the City of Riverside, with the center of Downtown to the west and University of Riverside to the east. University Avenue is one of two main east-west thoroughfares, Martin Luther King Boulevard/14th Street is the other. The early development was related to worker housing for the booming citrus industry and even as citrus declined over time the Eastside remained home to much of the City's working families. In the 1880s the Gage Canal brought water to the area and included underground pipes carrying water from the canal to White's Addition, the oldest part of the Eastside Neighborhood. By the 1920s there was established commercial areas on University Avenue (then known as East Eighth Street). Eighth Street/University Avenue has historically been the main corridor running east west through the heart of the Eastside. Land use was predominantly residential until the end of the 1920 when it became a general Commercial Zone and single family residences gave way to restaurants, motels, service stations and car washes. Today the Eastside does remain largely residential but large scale residential developed stopped in the late 1950s due to less available land (City of Riverside, 2009).

Regulatory Framework

State

California Environmental Quality Act

CEQA is the principal statute governing environmental review of projects occurring in the state and is codified at *Public Resources Code (PRC) Section 21000 et seq.* CEQA requires lead agencies to determine if a proposed project would have a significant effect on the environment, including significant effects on historical or unique archaeological resources. Under CEQA (Section 21084.1), a project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment.

The *CEQA Guidelines* (Title 14 California Code of Regulations [CCR] Section 15064.5) recognize that historical resources include: (1) a resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (California Register); (2) a resource included in a local register of historical resources, as defined in PRC Section 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g); and (3) any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California by the lead agency, provided the lead agency's determination is supported by substantial evidence in light of the whole record. The fact that a

resource does not meet the three criteria outlined above does not preclude the lead agency from determining that the resource may be an historical resource as defined in PRC Sections 5020.1(j) or 5024.1.

If a lead agency determines that an archaeological site is a historical resource, the provisions of Section 21084.1 of CEQA and Section 15064.5 of the *CEQA Guidelines* apply. If an archaeological site does not meet the criteria for a historical resource contained in the *CEQA Guidelines*, then the site may be treated in accordance with the provisions of Section 21083, which is as a unique archaeological resource. As defined in Section 21083.2 of CEQA a “unique” archaeological resource is 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:

- Contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information;
- Has a special and particular quality such as being the oldest of its type or the best available example of its type; or,
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.

If an archaeological site meets the criteria for a unique archaeological resource as defined in Section 21083.2, then the site is to be treated in accordance with the provisions of Section 21083.2, which state that if the lead agency determines that a project would have a significant effect on unique archaeological resources, the lead agency may require reasonable efforts be made to permit any or all of these resources to be preserved in place (Section 21083.1(a)). If preservation in place is not feasible, mitigation measures shall be required. The *CEQA Guidelines* note that if an archaeological resource is neither a unique archaeological nor a historical resource, the effects of the project on those resources shall not be considered a significant effect on the environment (*CEQA Guidelines* Section 15064.5(c)(4)).

A significant effect under CEQA would occur if a project results in a substantial adverse change in the significance of a historical resource as defined in *CEQA Guidelines* Section 15064.5(a). Substantial adverse change is defined as “physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be materially impaired” (*CEQA Guidelines* Section 15064.5(b)(1)). According to *CEQA Guidelines* Section 15064.5(b)(2), the significance of a historical resource is materially impaired when a project demolishes or materially alters in an adverse manner those physical characteristics that:

- A. Convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register; or
- B. Account for its inclusion in a local register of historical resources pursuant to section 5020.1(k) of the Public Resources Code or its identification in a historical resources survey meeting the requirements of section 5024.1(g) of the Public Resources Code,

unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or

- C. Convey its historical significance and that justify its eligibility for inclusion in the California Register as determined by a Lead Agency for purposes of CEQA.

In general, a project that complies with the Secretary of the Interior's *Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings* (Standards) (Grimmer, 2017) is considered to have mitigated its impacts to historical resources to a less-than-significant level (CEQA Guidelines Section 15064.5(b)(3)).

California Register of Historical Resources

The California Register is “an authoritative listing and guide to be used by State and local agencies, private groups, and citizens in identifying the existing historical resources of the State and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change” (PRC Section 5024.1[a]). The criteria for eligibility for the California Register are based upon National Register criteria (PRC Section 5024.1[b]). Certain resources are determined by the statute to be automatically included in the California Register, including California properties formally determined eligible for, or listed in, the National Register.

To be eligible for the California Register, a prehistoric or historic-period property must be significant at the local, state, and/or federal level under one or more of the following four criteria:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2. Is associated with the lives of persons important in our past;
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
4. Has yielded, or may be likely to yield, information important in prehistory or history.

A resource eligible for the California Register must meet one of the criteria of significance described above, and retain enough of its historic character or appearance (integrity) to be recognizable as a historical resource and to convey the reason for its significance. It is possible that a historic resource may not retain sufficient integrity to meet the criteria for listing in the National Register, but it may still be eligible for listing in the California Register.

Additionally, the California Register consists of resources that are listed automatically and those that must be nominated through an application and public hearing process. The California Register automatically includes the following:

- California properties listed on the National Register and those formally determined eligible for the National Register;

- California Registered Historical Landmarks from No. 770 onward; and,
- Those California Points of Historical Interest that have been evaluated by the OHP and have been recommended to the State Historical Commission for inclusion on the California Register.

Other resources that may be nominated to the California Register include:

- Historical resources with a significance rating of Category 3 through 5 (those properties identified as eligible for listing in the National Register, the California Register, and/or a local jurisdiction register);
- Individual historical resources;
- Historical resources contributing to historic districts; and,
- Historical resources designated or listed as local landmarks, or designated under any local ordinance, such as an historic preservation overlay zone.

California Health and Safety Code Section 7050.5

California Health and Safety Code Section 7050.5 requires that in the event human remains are discovered, the County Coroner be contacted to determine the nature of the remains. In the event the remains are determined to be Native American in origin, the Coroner is required to contact the NAHC within 24 hours to relinquish jurisdiction.

California Public Resources Code Section 5097.98

California PRC Section 5097.98, as amended, provides procedures in the event human remains of Native American origin are discovered during project implementation. PRC Section 5097.98 requires that no further disturbances occur in the immediate vicinity of the discovery, that the discovery is adequately protected according to generally accepted cultural and archaeological standards, and that further activities take into account the possibility of multiple burials. PRC Section 5097.98 further requires the NAHC, upon notification by a County Coroner, designate and notify a Most Likely Descendant (MLD) regarding the discovery of Native American human remains. The MLD has 48 hours from the time of being granted access to the site by the landowner to inspect the discovery and provide recommendations to the landowner for the treatment of the human remains and any associated grave goods.

In the event that no descendant is identified, or the descendant fails to make a recommendation for disposition, or if the land owner rejects the recommendation of the descendant, the landowner may, with appropriate dignity, reinter the remains and burial items on the property in a location that will not be subject to further disturbance.

California Government Code Sections 6254(r) and 6254.10

These sections of the California Public Records Act were enacted to protect archaeological sites from unauthorized excavation, looting, or vandalism. Section 6254(r) explicitly authorizes public agencies to withhold information from the public relating to “Native American graves,

cemeteries, and sacred places maintained by the Native American Heritage Commission.” Section 6254.10 specifically exempts from disclosure requests for “records that relate to archaeological site information and reports, maintained by, or in the possession of the Department of Parks and Recreation, the State Historical Resources Commission, the State Lands Commission, the Native American Heritage Commission, another state agency, or a local agency, including the records that the agency obtains through a consultation process between a Native American tribe and a state or local agency.”

Assembly Bill 52 and Related Public Resources Code Sections

Assembly Bill (AB) 52 was approved by California State Governor Edmund Gerry “Jerry” Brown, Jr. on September 25, 2014. The act amended California PRC Section 5097.94, and added PRC Sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3. AB 52 applies specifically to projects for which a Notice of Preparation (NOP) or a Notice of Intent to Adopt a Negative Declaration or Mitigated Negative Declaration (MND) will be filed on or after July 1, 2015. The primary intent of AB 52 was to include California Native American Tribes early in the environmental review process and to establish a new category of resources related to Native Americans that require consideration under CEQA, known as tribal cultural resources. PRC Section 21074(a)(1) and (2) defines tribal cultural resources as “sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe” that are either included or determined to be eligible for inclusion in the California Register or included in a local register of historical resources, or a resource that is determined to be a tribal cultural resource by a lead agency, in its discretion and supported by substantial evidence. On July 30, 2016, the California Natural Resources Agency adopted the final text for tribal cultural resources update to Appendix G of the CEQA Guidelines, which was approved by the Office of Administrative Law on September 27, 2016.

PRC Section 21080.3.1 requires that within 14 days of a lead agency determining that an application for a project is complete, or a decision by a public agency to undertake a project, the lead agency provide formal notification to the designated contact, or a tribal representative, of California Native American Tribes that are traditionally and culturally affiliated with the geographic area of the project (as defined in PRC Section 21073) and who have requested in writing to be informed by the lead agency (PRC Section 21080.3.1(b)). Tribes interested in consultation must respond in writing within 30 days from receipt of the lead agency’s formal notification and the lead agency must begin consultation within 30 days of receiving the tribe’s request for consultation (PRC Sections 21080.3.1(d) and 21080.3.1(e)).

PRC Section 21080.3.2(a) identifies the following as potential consultation discussion topics: the type of environmental review necessary; the significance of tribal cultural resources; the significance of the project’s impacts on the tribal cultural resources; project alternatives or appropriate measures for preservation; and mitigation measures. Consultation is considered concluded when either: (1) the parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or (2) a party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached (PRC Section 21080.3.2(b)).

If a California Native American tribe has requested consultation pursuant to Section 21080.3.1 and has failed to provide comments to the lead agency, or otherwise failed to engage in the consultation process, or if the lead agency has complied with Section 21080.3.1(d) and the California Native American tribe has failed to request consultation within 30 days, the lead agency may certify an EIR or adopt an MND (PRC Section 21082.3(d)(2) and (3)).

PRC Section 21082.3(c)(1) states that any information, including, but not limited to, the location, description, and use of the tribal cultural resources, that is submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public without the prior consent of the tribe that provided the information. If the lead agency publishes any information submitted by a California Native American tribe during the consultation or environmental review process, that information shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public.

Local

City of Riverside

The City of Riverside's General Plan (2025) has several objectives and policies geared towards the preservation of archaeological resources and these are provided below:

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

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.

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-2.3: 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.

Riverside Housing and Public Safety Element Updates and Environmental Justice Policies Project
CUL-1: Conduct a historical resource assessment. The individual applicants shall hire a Secretary of the Interior qualified historic preservation professional to conduct a historical resource assessment if a structure to be affected by a subsequent development project, at the time of application, is not in a previously surveyed area, is not a historical resource for the purposes of CEQA, and is at least 50 years old. The assessment shall formally evaluate the potential resource's eligibility for listing to the CRHR, its potential eligibility as a Landmark or Structure of Merit, and its potential eligibility as a Contributor to a Historic District or Neighborhood

Conservation Area. If the resource is found eligible for any of those designations, it shall be considered a resource that qualifies as a historical resource under CEQA and is therefore subject to the provisions of the Cultural Resources Ordinance. This includes obtaining the pertinent Certificates of Appropriateness and ensuring that the project plans adhere to the SOI Standards. For resources found ineligible for any of those designations, no additional mitigation would be necessary.

CUL-2: Conduct an archaeological study. For Opportunity Site development projects that require CEQA analysis (non-ministerial projects), prior to construction, and if it is determined that the development project will involve ground disturbance of some type, the applicant shall conduct an archaeological study. This study will be conducted during project specific CEQA analyses at Opportunity Sites that have not been studied in such a manner in the previous 5 years. The archaeological study shall follow the guidelines set forth by the City of Riverside Community & Economic Development Department in the document titled Consultant Requirements for Cultural Resources Survey, Studies and Reports Information Sheet (City of Riverside Community & Economic Development Department 2011) or successor document.

The cultural resources archaeological recommendations shall be valid for 5 years after the date of the record search. After 5 years, the applicant shall retain an archaeologist who shall acquire an updated record search from the Eastern Information Center and review the cultural resources technical report recommendations.

For proposed development locations where only a record search and/or a site visit have already been conducted prior to this EIR, the project applicant shall retain an archaeologist to:

- Review record search results, site visit results, and any recommendations.
- Obtain an updated record search from the Eastern Information Center if the record search is older than 5 years.
- Review available historic maps, historic aerials, and other archival materials.
- Prepare a cultural resources memo with existing or updated record search results; a summary of background research of historic maps, aerials, etc.; and potential for historic and prehistoric archaeological resources to be present at the proposed development location. Additionally, the memo shall identify potential impacts and provide recommendations.

The City shall review these findings and make a determination regarding the significance of project-level impacts prior to approval of any future development. Should the archaeological study result in the identification of archaeological resources on the proposed development site, or should unanticipated discoveries of previously unknown archaeological resources be made during ground disturbing activities at an Opportunity Site, Mitigation Measures MMCUL-3 through MM-CUL-6 would be applicable.

CUL-3: Avoid archaeological sites through establishment of Environmentally Sensitive Areas (ESAs). If archaeological resources are identified either through an archaeological study or as unanticipated discoveries during construction, implementation of Mitigation Measure MM-

CUL-3 would be required. Avoidance is always the preferred method of treatment for archaeological sites. Additionally, should sacred objects or objects of religious importance to Native American tribes be identified, preservation in place avoids conflicts with traditional values of tribes who ascribe meaning to these resources and their locations. Impacts on cultural resources can be avoided through establishing fencing around cultural resources with a buffer and delineating these locations as ESAs. The appropriate buffer size shall be delineated upon consultation with Native American tribes and the City (for prehistoric resources). The City and the consultant archaeologist for individual development projects shall determine appropriate buffers for historical-period (non-Native American) archaeological resources on a case-by-case basis based on the known extent of archaeological sites and the relationship to proposed ground disturbance.

CUL-4: Develop and implement an Archaeological Treatment Plan (ATP) for evaluation of newly discovered and/or unevaluated archaeological resources. Mitigation Measure MM-CUL-4 shall apply as follows:

- The results of an archaeological study conducted under Mitigation Measure MM-CUL-2 are unable to determine the eligibility of newly identified archaeological sites for inclusion to the CRHR and it is determined by the consulting archaeologist that additional study through Phase II testing is required;
- It is not possible to avoid impacts through the establishment of ESAs; or
- Unanticipated archaeological resources are discovered during construction on Opportunity Sites.

If it is necessary to properly evaluate such properties in such a manner, an ATP shall be developed that describes methods and procedures for conducting subsurface excavations to determine the vertical and horizontal extents of an archaeological site. The ATP shall define the parameters of archaeological testing at the site and the extent of excavation and analysis of any materials recovered. The ATP shall also include guidelines for treatment and curation of any materials recovered during the testing process. Subsequent to implementation of the ATP, a technical report describing the methods and results of archaeological testing and formal evaluations of the archaeological sites and recommendations for further treatment shall be completed. The ATP shall be approved by the City and should involve consultation and review by Native American tribes consulting on the proposed development project. An ATP shall only be necessary for newly discovered archaeological sites that require additional information to make determinations of eligibility.

CUL-5: Implement data recovery for CRHR-eligible sites that cannot be avoided. If archaeological studies identify a cultural resource as being potentially eligible for listing in the CRHR and ESAs cannot be established or project design cannot be altered, resulting in impacts on the site, then a Phase III data recovery program shall be developed, when mutually agreed upon by Native American representatives (for prehistoric or historic-period Native American sites) and the City. The data recovery program shall be outlined in a Data Recovery Treatment Plan that details the procedures and objectives for mitigation of impacts on the archaeological

site. The Data Recovery Treatment Plan shall include a research design with testable hypotheses and data requirements necessary to address these hypotheses. Additionally, the Data Recovery Treatment Plan shall identify methods of excavation, analysis, and curation of any archaeological materials recovered. The Data Recovery Treatment Plan shall also identify the treatment of any human remains discovered during data recovery procedures. If the archaeological resource is Native American (prehistoric or historic-period in age), then the City, the applicant, and the archaeologist shall engage in consultation so that Native American representatives can be involved in the development of the data recovery plan. Data recovery shall involve analysis of a representative sample of the materials recovered during excavation. For prehistoric archaeological sites, all excavations should be monitored by a representative from a geographically appropriate Native American group. At the conclusion of the data recovery program, a data recovery technical report shall be completed detailing the results of the excavations and analysis. Curation of recovered archaeological materials shall be conducted per the guidance in the Data Recovery Treatment Plan and with consultation between the City and appropriate Native American tribes. Other forms of mitigation could include additional research with archival sources, landscape studies, designation of open space, public outreach programs, and public education/public displays.

CUL-6: Retain an on-call archaeologist for monitoring. For Opportunity Site development projects that require CEQA analysis, Mitigation Measure MM-CUL-6 shall be implemented when archaeological studies completed under Mitigation Measure MMCUL- 2 determine that a project has a less-than-significant potential for archaeological discoveries. Additionally, upon agreement between Native American representatives (for prehistoric or historic-period Native American sites) and the City for archaeological resources that have not been determined eligible for listing in the CRHR or NRHP that are unavoidable at an Opportunity Site, Mitigation Measure MM-CUL-6 shall be implemented. Prior to the issuance of a grading permit, the applicant shall provide a letter from a qualified archaeologist stating that the applicant has retained their services, and that the archaeologist shall be on call during all grading and other significant ground-disturbing activities in native sediments.

CUL-7: Conduct archaeological and Native American monitoring. If cultural resource studies have identified archaeological resources determined eligible for the CRHR or NRHP that are unavoidable at an Opportunity Site, Mitigation Measure MM-CUL-7 shall be implemented upon agreement among Native American representatives (for prehistoric or historic-period Native American sites). At least 30 days prior to application for a grading permit and before any grading, excavation, and/or ground-disturbing activities take place, the applicant shall retain an SOI Standards-qualified archaeological monitor to monitor all ground-disturbing activities in an effort to identify any unknown archaeological resources. The archaeologist, in consultation with consulting tribes, the applicant, and the City, shall develop an Archaeological Monitoring Plan to address the details, timing, and responsibility of all archaeological and cultural activities that occur on a development site. Details in the plan shall include:

1. Project grading and development scheduling:
 - a. The development of a rotating or simultaneous schedule in coordination with the applicant and the project archaeologist for designated Native American tribal monitors (if

- resources are prehistoric in age) 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
- b. The protocols and stipulations that the applicant, tribes, and project archaeologist for the individual development project shall follow in the event of inadvertent cultural resource discoveries, including any newly discovered cultural resource deposits that shall be subject to a cultural resources evaluation
 - c. Treatment and final disposition of any cultural resources, sacred sites, and human remains if discovered on a development site
 - d. The scheduling and timing of the Cultural Sensitivity Training

CUL-8: Employ procedures for treatment and disposition of cultural resources. If cultural resources are inadvertently discovered during the course of grading for individual Opportunity Sites, the following procedures shall be carried out for treatment and disposition of the discoveries:

1. Consulting Tribe(s) Notified: Within 24 hours of discovery, and if the resources are Native American in origin, the consulting tribe(s) shall be notified via email and phone. The applicant shall provide the City evidence of notification to consulting tribes. Consulting tribe(s) shall be allowed access to the discovery in order to assist with the significance evaluation.
2. Temporary Curation and Storage: During the course of construction, all discovered resources shall be temporarily curated in a secure location on site or at the offices of the project archaeologist. The removal of any artifacts from a development site shall be thoroughly inventoried with tribal monitor oversight of the process.
3. 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 on cultural resources. The applicant shall relinquish the artifacts through one or more of the following methods and provide the City of Riverside Community & 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. Execute a curation agreement with an appropriate qualified repository within Riverside County that meets federal standards per 36 CFR Part 79 and therefore will ensure professional curation and availability 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 subsequent development project and cannot come to a consensus as to the disposition of cultural materials, curate the discovered items at the Western Science Center or Museum of Riverside by default.
- d. At the completion of grading, excavation, and ground-disturbing activities on the site, provide to the City a Phase IV Monitoring Report documenting monitoring activities conducted by the project archaeologist and Native American tribal monitors within 60 days of completion of grading. This report shall document the impacts on 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 shall be submitted to the City, the Eastern Information Center, and consulting tribes.

CUL-9: Conduct cultural sensitivity training. For Opportunity Site development projects where either Mitigation Measures MM-CUL-6 or MM-CUL-7 are implemented, Mitigation Measure MM-CUL-9 shall also be implemented. Prior to the commencement of construction activities, the SOI Standards– certified archaeologist and Native American monitors shall attend the pre-grading meeting with the applicant/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 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.

Archival Research

EIC Records Search

A records search for the Project was conducted on July 22, 2022, by staff at the California Historical Resources Information System (CHRIS) Eastern Information Center (EIC) housed at University of California, Riverside. The records search included a review of all recorded archaeological resources and previous studies within the Project Site and a 0.50-mile radius of the Project Site.

Previous Cultural Resources Investigations

The records search results indicate that 27 cultural resources studies have been conducted within a 0.50-mile radius of the Project Site (**Table 1**). Approximately 50 percent of the 0.50-mile records search radius has been included in previous cultural resources assessments. Of the 27 previous studies, none have previously included the Project Site.

**TABLE 1
PREVIOUS CULTURAL RESOURCES INVESTIGATIONS**

Author	EIC#	Title	Year
Malcolm J. Rogers	RI-00018	<i>Miscellaneous Field Notes - Riverside County. San Diego Museum of Man</i>	1953
B.E. Mc Gown	RI-00026	<i>Report of Archaeological Survey: Temecula Flood Control Basin, Temecula, California</i>	1948
B.E Mc Gown	RI-01955	<i>Report Of Archaeological Survey, Pauba Flood Control Basin, Temecula, California</i>	1948
Margie Akin	RI-02059	<i>A Survey of the Archaeological Resources of the Santa Ana and San Jacinto River Basins</i>	1971
Heller, Rod, Tim Tetherow, And C. White	RI-02344	<i>An Overview Of The Sun Desert Nuclear Project Transmission System Cultural Resource Investigation</i>	1977
Peak And Associates	RI-03190	<i>Part III, Addendum To: Cultural Resources Assessment Of AT&T's Proposed San Bernardino To San Diego Fiber Optic Cable, San Bernardino, Riverside, And San Diego Counties, California</i>	1990
Carleton S. Jones	RI-03604	<i>The Development of Cultural Complexity Among the Luiseno: A Thesis Presented to the Department of Anthropology, California State University, Long Beach in Partial Fulfillment of the Requirements for the Degree, Master of Arts</i>	1992
Wlodarski, Robert J.	RI-03605	<i>Draft Report: An Archaeological Survey Report Documenting The Effects Of The RCIC I-215 Improvement Project In Moreno Valley, Riverside County, To Orange Show Road In The City Of San Bernardino, San Bernardino County, California.</i>	1993
Foster, John M., James J. Schmidt, Carmen A. Weber, Gwendolyn R. Romani, And Roberta S. Greenwood	RI-03693	<i>Cultural Resource Investigation: Inland Feeder Project, Metropolitan Water District Of Southern California</i>	1991
Jones And Stokes Associates, Inc.	RI-04404	<i>Final Cultural Resources Inventory Report For The Williams Communications, Inc., Fiber Optic Cable System Installation Project, Riverside To San Diego, California Vol I-IV.</i>	2000
Barker, Leo R. and Ann E. Huston	RI-04762	<i>Death Valley to Deadwood; Kennecott to Cripple Creek. Proceedings Of The Historic Mining Conference, January 23-27, 1989, Death Valley National Monument</i>	1990
Wlodarski, Robert J.	RI-04799	<i>A Phase I Archaeological Study For Telacu Housing-Riverside, Inc., 1807 11th Street, City Of Riverside, County Of Riverside, California</i>	2004
Mckenna et al.	RI-04997	<i>A Phase I Cultural Resources Investigation Of The Proposed Chiller Plant, Tank, And Pipeline System On The University Of California, Riverside Campus, Riverside, Riverside County, California.</i>	2001
Mckenna et al.	RI-05056	<i>A Phase I Cultural Resources Investigation For The Proposed Corona Feeder Master Plan Project Area, Riverside County, California</i>	2003
Doan, Uyen K., Michael Hogan, And Bai Tang	RI-05748	<i>Archaeological Sensitivity Assessment: Hunter Park Redevelopment Plan Amendment, City Of Riverside, Riverside County, California</i>	2003
Love, Bruce, Bai Tang, Michael Hogan, And Mariam Dahdul	RI-05873	<i>Cultural Resources Technical Report, UCR Long Range Development Plan</i>	2002
Tang, Bai, Michael Hogan, And Josh Smallwood	RI-05996	<i>Historical/Archaeological Resources Survey Report, APNs 221-161-002, -003, -005, -024, -025, -026, 1744-1794 12th Street, City Of Riverside, Riverside County, Ca</i>	2003
Bricker, David	RI-06088	<i>First Supplemental Historic Property Survey Report For The Improvement Of Interstate Route 215/State Route 91/ State Route 60, Riverside County, Ca</i>	1998

Author	EIC#	Title	Year
Carla Allred	RI-06284	<i>Letter Report: Proposed Cellular Tower Project(S) In Riverside County, California, Site Number(S) And Name(S): La-0779b/Freeway Storage TCNs #17312</i>	2006
McKenna, Jeanette A., Kristina Lindgren, and Darlene Harr	RI-06838	<i>A Phase I Cultural Resources Investigation And Historic Building Survey For The Proposed New Eastside Elementary School Site In Riverside, Riverside County, California</i>	2006
Carolyn E. Kyle	RI-07058	<i>Cultural Resource Assessment For Cingular Wireless Facility Sb145-01 City Of Riverside, Riverside County, California</i>	2002
Rod McLean	RI-07169	<i>Cultural Resource Assessment: Cingular Wireless Facility No. Sb-304-02, City Of Riverside, Riverside County, California</i>	2004
Jeanette A. McKenna	RI-08598	<i>A Summary Report On The Proposed Improvements At The John W. North High School Campus In The City Of Riverside County, California</i>	2010
Roger D. Mason and Wayne H. Bonner	RI-09990	<i>Cultural Resources Record Search And Literature Review For A Pacific Bell Mobile Services Telecommunications Facility: Cm 043-18 City Of Riverside, California</i>	1998
Fred E. Budinger, Jr.	RI-10354	<i>With Antenna Licensing from The Federal Communications Commission (FCC), Verizon Wireless, Inc.</i>	2001

Source: EIC, 2022

Previously Recorded Cultural Resources

The records search results indicate that no archaeological resources have been previously recorded within the Project Site or 0.50-mile radius.

Sacred Lands File Search

The NAHC maintains a confidential Sacred Lands File (SLF) which contains sites of traditional, cultural, or religious value to the Native American community. The NAHC was contacted on June 27, 2022, to request a search of the SLF. The NAHC responded to the request in a letter dated August 4, 2022, indicating that the SLF search was negative (**Appendix B**).

Historic Maps and Aerial Photographs

Historic maps and aerial photographs were examined to provide historical information about land uses of the Project Site and to contribute to an assessment of the Project Site's archaeological sensitivity. Available topographic maps include the 1901 and 1947 Riverside 15-minute quadrangles, the 1942, 1953, 1967, and 1980 Riverside East 7.5-minute quadrangles (Citadel EHS 2022). Historic aerial photographs were available for the years 1931, 1938 (Citadel EHS 2022a), 1948, 1959 (historicaerials.com 2022), 1966, 1968, 1978, 1985, 1989, 1994, 2002, 2006, 2009, 2012, 2016 (Citadel EHS 2022a), and 2022 (Bing Maps 2022).

Topographic Maps

Review of the 1901 historic topographic map indicates that the Project Site is undeveloped; however, adjacent unnamed roads are depicted immediately north and south of the Project Site. Two tributaries likely associated with the Santa Ana River are depicted in the surrounding vicinity; the closest tributary is located approximately 0.25-miles north, while the second closest

tributary is shown as located approximately 0.90-miles south of the Project Site. Additionally, the Gage Canal is depicted as located approximately 0.57-miles east of the Project Site. The 1942 historic topographic map continues showing the Project Site as undeveloped; although, by this time the current University Avenue is depicted as Eighth Street. The 1947 historic topographic map shows that the Project Site is utilized as an orchard. The 1953 historic topographic map no longer depicts the orchard, but rather one large structure in the southern portion of the Project Site and a smaller structure in the northwest portion of the Project Site. The 1967 and 1980 historic topographic maps show no changes from the previous 1953 topographic map, with the exception of one small additional structure located northeast of the large structure in the southern portion of the Project Site.

Aerial Photographs

Review of the 1931 and 1938 aerial photographs show the Project Site as developed with orchards, while a paved road is depicted immediately south. The 1948 and 1959 aerial photographs no longer depict the orchards within the Project Site, but rather the Project Site appears as developed with at least two buildings. For instance, the current building in the southern portion of the Project Site is present on the site by 1948. A few small structures are also depicted immediately north of the current building and a rectangular building is depicted in the northwest portion (**Figures 3 and 4**). A driveway leading to the rectangular building in the northwest is also shown along the western portion of the Project Site. The 1966 and 1968 aerial photographs do not show major changes in the Project Site with the exception that the southwest portion appears to be used as a parking lot. The 1978 does not show changes to the Project Site. The 1985 and 1989 aerial photographs show the Project Site as it was shown in previous aerials, but by this time, it appears that only one small structure is located in the central portion of the Project Site. The 1994, 2002, 2006, 2009, and 2012 aerial photographs show no changes in the Project Site. The 2016 aerial photograph shows the large structure in the southern portion of the Project Site as surrounded by an asphalt- parking lot.

A concrete pad appears to be located immediately north and adjacent to the asphalt parking lot. The structure in the northwest corner appears to have been removed and only a concrete pad appears to remain. The 2022 aerial photograph shows no changes to the 2016 aerial photograph.

Review of Phase I ESA

Review of the Phase I Environmental Site Assessment Report (Phase I ESA report) prepared for the Project indicates that a total of two underground storage tanks (USTs), one 300-gallon and one 450-gallon once existed in the Project Site, but were removed in 1984. One of the USTs stored diesel, while the other one stored gasoline (Citadel EHS 2022a). The locations of the USTs are unknown, but these are assumed to have been located in a maintenance area north of the current existing building. An abandoned clarifier is also known to have been located in the concrete pad of the maintenance area and backfilled with concrete (Citadel EHS 2022b).



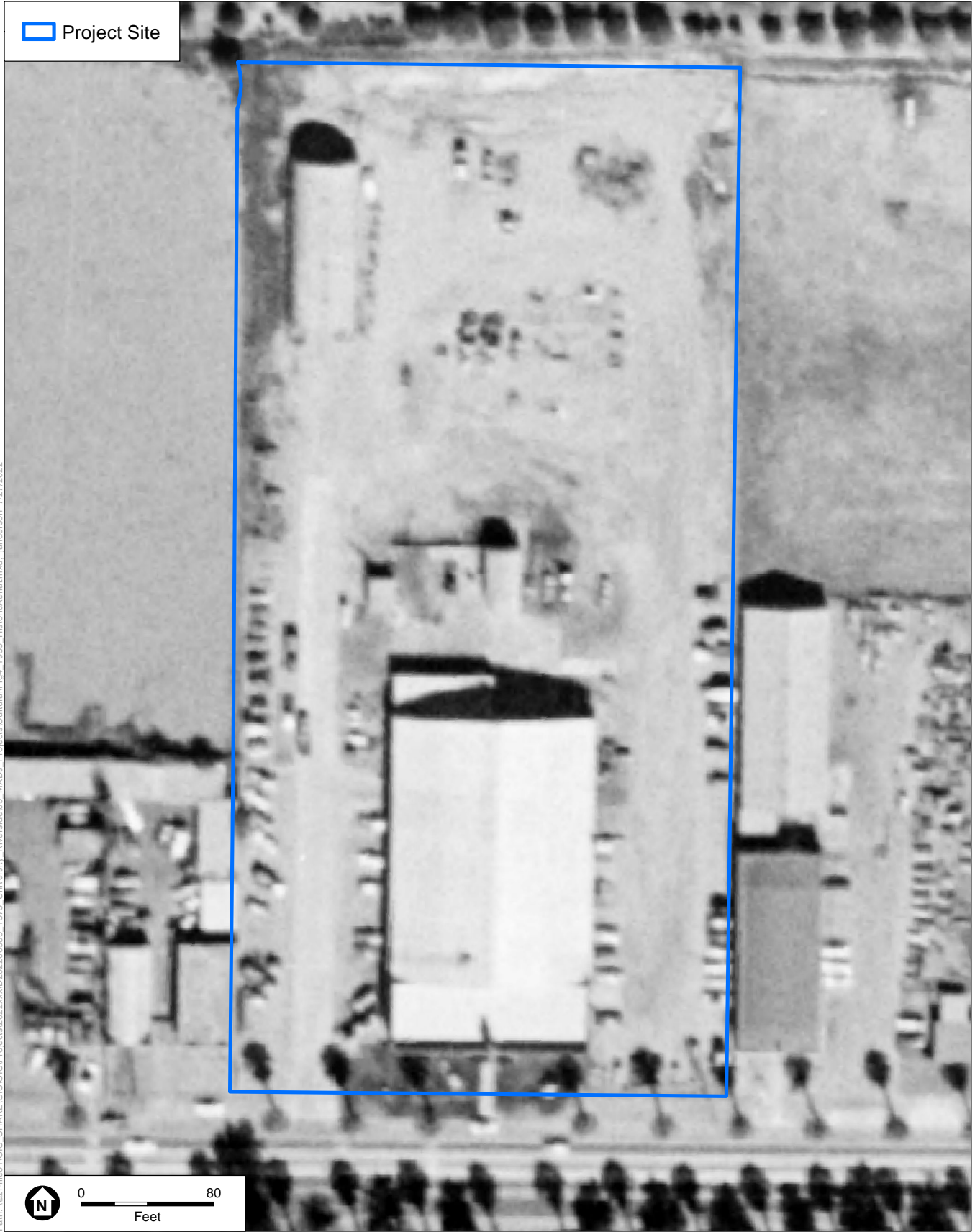
Path: \\azr-filer01\GIS-SHARE\GIS\GIS\Projects\2022\202200383_1575_University_Riverside\03_MXD\Projects\Cultural\Fig3_1948_HistoricAerial.mxd, landerson_7/27/2022

SOURCE: HistoricAerials.com

1575 University Avenue



Figure 3
1948 Historic Aerial



SOURCE: HistoricAerials.com

1575 University Avenue



Figure 4
1959 Historic Aerial

Attached to the Phase I ESA report by Citadel EHS (2022a) is an earlier Phase I ESA prepared by HEI Corporation (2012), which indicates that in the northwest portion of the Project Site was a large “Quonset hut, a bowed metal building”, and in the area immediately north of the large existing building was “a smaller Quonset hut as well as a metal shed” (HEI Corporation 2012: 4). These structures are known to have been removed by 2014 (HEI Corporation 2012).

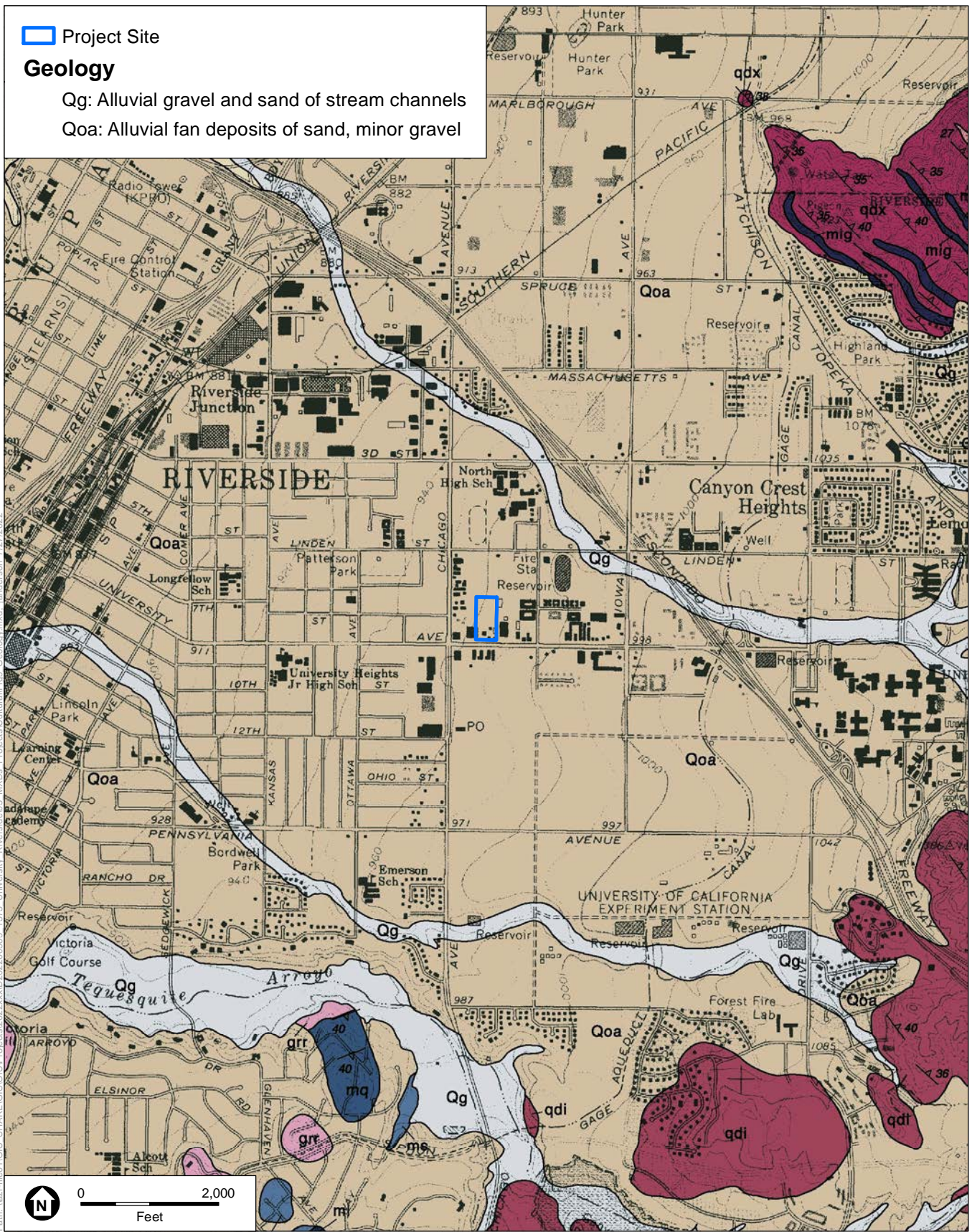
The Phase I ESA report also indicates that early occupants of the Project Site include: “McCormick Deering Farm Equipment in 1951; Braman Dickerson Co. between 1951 and 1955; Contractors Equipment CV in 1955; Brown Bevis Industrial Equipment Co. of Riverside in 1960; International Harvester Company between 1966 and 1977; Citrus International Trucks Inc. and Citrus Orchard Service Inc. in 1977; Jones and Sons Coach Builders in 1981; antique shops between 1986 and 1994; Kawasaki of Riverside, a motorcycle dealer, between 1995 to 2011; Riverside Seafood Restaurant in 2014; Riverside Restaurant between 2015 and 2017; and International Meiberlee in 2017” (Citadel EHS 2022a:12).

Geologic Map Review

Geologic mapping of the Riverside East/South half of San Bernardino South quadrangles by Dibblee and Minch (2003) indicate that the Project Site is located within Pleistocene aged Quaternary old alluvium (Qoa) deposits described as alluvial fan deposits consisting of sand and minor gravel. Areas north and northeast of the Project Site are depicted as located within Holocene aged Quaternary alluvial (Qg) gravel and sand of stream channels (**Figure 5**).

Geotechnical Report Review

ESA reviewed the *Geotechnical Engineering Exploration* report (Geotechnical report) prepared for the Project by Byer Geotechnical, Inc. (2022). The geotechnical report indicates that nine borings were drilled at the Project Site to approximate depths of 11 to 51.5-feet below existing grade. The exact locations of the borings are not known, as the geotechnical report does not contain figures showing boring locations. Nevertheless, the geotechnical report mentions that fill associated with previous site grading was found in borings B1 through B5, underlying the southern portion of the Project Site to a maximum depth of 2.5 feet. Additionally, natural alluvium (Qg) of stream channels, in the order of 10 feet thick was also encountered at the Project Site in borings B1 through B4 and B7. Lastly, older alluvium deposits (Qoa) were found beneath the alluvium (Qg) layer (Byer Geotechnical, Inc. 2022).



SOURCE: Dibblee, T. W. and Minch, J. A. 2003

1575 University Avenue

Figure 5
Geologic Map



Cultural Resources Survey

Methods

On July 20, 2022, ESA archaeologist, Fatima Clark conducted a cultural resources pedestrian survey to identify surface evidence of cultural resources within the Project Site. As the southern portion of the Project Site is fully developed with an existing large building and paved parking lot, the survey was focused on the undeveloped northern portion. Approximately 98 percent of the northern Project Site was subject to a systematic pedestrian survey using transect intervals spaced at no more than 5-meters (approximately 16 feet) apart. The remaining two percent was not surveyed, since an active homeless encampment was present in the northwest portion of the Project Site. Previously unrecorded cultural resources older than 45-years were recorded on California Department of Parks and Recreation (DPR) Site forms.

Results

The northern portion is separated from the southern portion of the Project Site by a metal fence with barbed wire. Ground surface visibility in the surveyed portion was approximately 0 to 5-percent since the majority of the Project Site is covered with grasses. Modern trash and rodent burrows were observed throughout the northern portion of the Project Site. ESA identified two built environment resources within the Project Site. These resources were documented on DPR Site forms since they appear to be older than 45 years. They will be temporarily designated as FC-Site-1 and FC-Site-2. The DPR Site Forms for these newly identified resources are provided in **Appendix C** of this report and are described in more detail below. Photographs of the Project Site and detailed notes were taken.

Significance/Eligibility Evaluation

Approach

Evaluation of cultural resources is determined by conducting an “evaluation” of a potential resource’s eligibility for listing in the National Register or California Register and/or determining whether it qualifies as a “unique archaeological resource” (i.e., Phase II assessment). This is achieved by applying the National and California Register criteria (including criteria for a “unique archaeological resource”) to the resources. A potentially eligible resource must also have integrity in order to be considered culturally significant. Integrity is evaluated with regard to the retention of Location, Design, Setting, Materials, Workmanship, Feeling, and Association. If a potential resource is recommended eligible for listing in the California Register or qualifies as a “unique archaeological resource,” then the resource is considered a historical resource pursuant to CEQA §15064.5 and any substantial adverse change to the resource is considered a significant impact on the environment.

Evaluation of Resources Identified Within the Project Site

As discussed earlier, ESA identified two built environment resources within the Project Site (FC-Site-1 and FC-Site-2) during the pedestrian survey. These resources were evaluated for significance. Since no definitive association to a significant event or person has been found based

on ESA's research, the surveyed resources do not appear to be eligible under Criteria A or 1 or B or 2. Furthermore, the resources are made from standard construction materials and they are only partially intact, therefore, they do not embody the distinctive characteristics of a type, period, region, or method of construction, or represent the work of an important creative individual, or possesses high artistic values. As such, the resources do not appear to be eligible under Criterion C or 3. Finally, research and documentation of the resources and analysis of this data has documented and exhausted their information potential, and they have been recorded on standard DPR Site Forms. Therefore, the resources do not appear eligible under Criterion D or 4.

Archaeological Sensitivity Assessment

Prehistoric Archaeological Analysis

The geologic map and geotechnical report reviews indicate that the Project Site contains Holocene-age Quaternary alluvium soils of stream channels. The Holocene-age of this alluvium encompasses the entirety of human occupation in North America, and is, therefore, conducive to the preservation of subsurface prehistoric archaeological deposits. Moreover, several water sources located in the general vicinity of the Project Site would indicate a degree of sensitivity for the presence of prehistoric subsurface archaeological deposits. Nevertheless, the Project Site has been subject to a number of previous disturbances, as indicated by the historic topographic map aerial photograph and Phase I ESA review. For instance, prior to 1948, the entire Project Site was used as an orchard, which would have required a high degree of ground disturbance associated with leveling the landform, as well as the planting of trees. By and after 1948, grading likely occurred for the existing building in the southern portion and associated asphalt parking lot, and the two buildings in the northern portion (for which only concrete pads remain) of the Project Site. A total of two USTs and a clarifier are also known to have existed within the Project Site. Lastly, the cultural resources records search and pedestrian survey yielded negative results for prehistoric archaeological resources. Based on these results, the potential to encounter prehistoric archaeological resources within the Project Site is considered low to moderate.

Historical Archaeological Analysis

As mentioned above, the Project Site was subject to historic-period land uses dating back to at least 1948, including buildings in the northern portion of the Project Site. This suggests that the Project Site could also have a low to moderate potential to contain historic-period archaeological resources. However, based on historical research that failed to identify a significant association with important events or individuals, it is unlikely that remnants of these previous uses would be eligible as historical or unique archaeological resources since they are unlikely to yield information important in history.

Conclusions and Recommendations

Since the built environment resources (FC-Site-1 and FC-Site-2) identified within the Project Site are recommended as not eligible for listing in the California Register, Project impacts to these resources are not considered a significant impact to the environment under CEQA and no further analysis is necessary.

No archaeological resources were identified within or immediately adjacent to the Project Site, and the archaeological sensitivity assessment concluded that there is a low to moderate potential for encountering subsurface archaeological resources. Nevertheless, since the Project includes ground disturbance, mitigation measures are recommended in order to reduce potential impacts to previously unknown archaeological resources and human remains to less than significant levels under CEQA. This study shows successful compliance with mitigation measure CUL-2 of the Mitigation Monitoring and Reporting Program, which included the preparation of a cultural resources report. CUL-3 of the MMRP would not apply. The following mitigation measures are consistent with the MMRP, and the project does not require full time monitoring. A qualified archaeologist shall be retained if unanticipated resources are encountered. If unanticipated resources are found to be significant under CEQA than CUL- 4, CUL-5, and CUL-8 of the MMRP would apply.

Mitigation Measure CUL-1 (MMRP CUL-4): Develop and implement an Archaeological Treatment Plan (ATP) for evaluation of newly discovered and/or unevaluated archaeological resources. Mitigation Measure MM-CUL-4 shall apply as follows:

- The results of an archaeological study conducted under Mitigation Measure MM-CUL-2 are unable to determine the eligibility of newly identified archaeological sites for inclusion to the CRHR and it is determined by the consulting archaeologist that additional study through Phase II testing is required;
- It is not possible to avoid impacts through the establishment of ESAs; or
- Unanticipated archaeological resources are discovered during construction on Opportunity Sites.

If it is necessary to properly evaluate such properties in such a manner, an ATP shall be developed that describes methods and procedures for conducting subsurface excavations to determine the vertical and horizontal extents of an archaeological site. The ATP shall define the parameters of archaeological testing at the site and the extent of excavation and analysis of any materials recovered. The ATP shall also include guidelines for treatment and curation of any materials recovered during the testing process. Subsequent to implementation of the ATP, a technical report describing the methods and results of archaeological testing and formal evaluations of the archaeological sites and recommendations for further treatment shall be completed. The ATP shall be approved by the City and should involve consultation and review by Native American tribes consulting on the proposed development project. An ATP shall only be necessary for newly discovered archaeological sites that require additional information to make determinations of eligibility.

Mitigation Measure CUL-2 (MMRP CUL-5): Implement data recovery for CRHR-eligible sites that cannot be avoided. If archaeological studies identify a cultural resource as being potentially eligible for listing in the CRHR and ESAs cannot be established or project design cannot be altered, resulting in impacts on the site, then a Phase III data recovery program shall be developed, when mutually agreed upon by Native American representatives (for prehistoric or historic-period Native American sites) and the City. The data recovery program shall be outlined

in a Data Recovery Treatment Plan that details the procedures and objectives for mitigation of impacts on the archaeological site. The Data Recovery Treatment Plan shall include a research design with testable hypotheses and data requirements necessary to address these hypotheses. Additionally, the Data Recovery Treatment Plan shall identify methods of excavation, analysis, and curation of any archaeological materials recovered. The Data Recovery Treatment Plan shall also identify the treatment of any human remains discovered during data recovery procedures. If the archaeological resource is Native American (prehistoric or historic-period in age), then the City, the applicant, and the archaeologist shall engage in consultation so that Native American representatives can be involved in the development of the data recovery plan. Data recovery shall involve analysis of a representative sample of the materials recovered during excavation. For prehistoric archaeological sites, all excavations should be monitored by a representative from a geographically appropriate Native American group. At the conclusion of the data recovery program, a data recovery technical report shall be completed detailing the results of the excavations and analysis. Curation of recovered archaeological materials shall be conducted per the guidance in the Data Recovery Treatment Plan and with consultation between the City and appropriate Native American tribes. Other forms of mitigation could include additional research with archival sources, landscape studies, designation of open space, public outreach programs, and public education/public displays.

Mitigation Measure CUL-3 (MMRP CUL-8): Employ procedures for treatment and disposition of cultural resources. If cultural resources are inadvertently discovered during the course of grading for individual Opportunity Sites, the following procedures shall be carried out for treatment and disposition of the discoveries:

1. Consulting Tribe(s) Notified: Within 24 hours of discovery, and if the resources are Native American in origin, the consulting tribe(s) shall be notified via email and phone. The applicant shall provide the City evidence of notification to consulting tribes. Consulting tribe(s) shall be allowed access to the discovery in order to assist with the significance evaluation.
2. Temporary Curation and Storage: During the course of construction, all discovered resources shall be temporarily curated in a secure location on site or at the offices of the project archaeologist. The removal of any artifacts from a development site shall be thoroughly inventoried with tribal monitor oversight of the process.
3. 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 on cultural resources. The applicant shall relinquish the artifacts through one or more of the following methods and provide the City of Riverside Community & 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. Execute a curation agreement with an appropriate qualified repository within Riverside County that meets federal standards per 36 CFR Part 79 and therefore will ensure professional curation and availability 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 subsequent development project and cannot come to a consensus as to the disposition of cultural materials, curate the discovered items at the Western Science Center or Museum of Riverside by default.
- d. At the completion of grading, excavation, and ground-disturbing activities on the site, provide to the City a Phase IV Monitoring Report documenting monitoring activities conducted by the project archaeologist and Native American tribal monitors within 60 days of completion of grading. This report shall document the impacts on 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 shall be submitted to the City, the Eastern Information Center, and consulting tribes.

Mitigation Measure CUL-4 (MMRP CUL-9): Conduct cultural sensitivity training. Prior to the commencement of construction activities, the SOI Standards– certified archaeologist and Native American monitors shall attend the pre-grading meeting with the applicant/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 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 provided to the City.

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Appendix A

Personnel



Sara Dietler

Senior Archaeologist

EDUCATION

BA. Anthropology,
San Diego State
University

20 YEARS OF EXPERIENCE

CERTIFICATIONS/ REGISTRATION

California BLM Permit,
Principal Investigator,
Statewide

Nevada BLM Permit,
Paleontology, Field
Agent, Statewide

PROFESSIONAL AFFILIATIONS

Society for American
Archaeology (SAA)

Society for California
Archaeology (SCA)

Sara is a senior archaeology and paleontology lead with 20 years of experience in cultural resources management in Southern California. As a senior project manager, she manages technical studies including archaeological and paleontological assessments and surveys, as well as monitoring and fossil salvage for many clients, including public agencies and private developers. She is a cross-trained paleontological monitor and supervisor, familiar with regulations and guidelines implementing the National Historic Preservation Act (NHPA), National Environmental Policy Act (NEPA), California Environmental Quality Act (CEQA), and the Society of Vertebrate Paleontology guidelines. She has extensive experience providing oversight for long-term monitoring projects throughout the Los Angeles Basin for archaeological, Native American, and paleontological monitoring compliance projects and provides streamlined management for these disciplines.

Relevant Experience

San Pedro Plaza Park, San Pedro, Los Angeles, CA. Senior Cultural Resources Project Manager. Provided archaeological and paleontological monitoring support for the San Pedro Plaza Park Project. The project area is located in the City of Los Angeles port district of San Pedro, approximately 26 miles south of downtown Los Angeles for the City of Los Angeles, Bureau of Engineering, Environmental Management Group, Sara provided quality control oversight for the archaeological and paleontological mitigation. During monitoring on the project, archaeological materials were recovered include refuse associated with park use since it opened in 1889, and historic building debris likely associated with the Carnegie Library which formerly stood on site. Provided recommendations for commemoration and protection of the find.

City of Los Angeles Department of Public Works BOE, Gaffey Street Pool Construction Monitoring, San Pedro, Los Angeles, CA. Project Manager. Sara oversaw the data recovery of a World War I slit trench discovered during project excavation for an ADA compliant sidewalk. Provided mitigation recommendations and immediate response to the find. Served as project manager and senior archaeologist on the project.

Warner Grand Theatre, Historic Resources Technical Report and Conditions Assessment, San Pedro, Los Angeles, CA. Project Manager, Report Co-Author. The City of Los Angeles Bureau of Engineering, Environmental Management Group requested a Cultural Resources Surveys to inform and guide future rehabilitation or redevelopment efforts of the Warner Grand Theatre. The Warner Grand Theatre designed in the Art Deco-Modern style by master architect B. Marcus Priteca in 1931, and is listed on the National Register of Historic Places, and is designated a Los Angeles Historic-Cultural Monument. ESA prepared a historical resources technical report and conditions assessment report, which provided a comprehensive table of character-defining features along with a conditions

assessment of each feature located within the interior and exterior of the Warner Grand Theatre.

City of Los Angeles Department of Public Works BOE, Alameda Street Widening Between Harry Bridges Boulevard and Anaheim Street Project, Los Angeles, CA. *Project Manager.* The project included upgrades to Alameda Street and adjoining streets with improved infrastructure to accept increased traffic from existing and proposed projects located primarily within the Port of Los Angeles and the Wilmington Industrial Park and to adequately deal with storm flows. Conducted a CHRIS record search of the project area for archaeological and paleontological resources and produced technical documents regarding the findings and recommendations for construction activities during the proposed project. In addition, provided archaeological/paleontological monitoring for geotechnical testing and further recommendations based on the results of the testing. Sara provided senior oversight of the reporting and survey and served as project manager.

670 Mesquit Street and Seventh Street Bridge Evaluation, Los Angeles, CA. *Project Manager and Report Co-author.* ESA prepared an EIR for the 670 Mesquit Street project in Los Angeles. As part of the EIR, a Cultural Resources Technical Report was prepared to determine if the project site was eligible for listing as a historical resource. The project site, originally occupied by the Los Angeles Ice and Cold Storage Company, was determined to lack integrity and therefore, ineligible for listing. Although the core of the building on the project site retained elements of the historic cold storage building, the facility was seismically upgraded resulting in significant alterations to its exterior. In its current condition, the facility does not convey its historical associations. The project was also evaluated to determine if it would result in any potential impacts to nearby historic resources, including the Seventh Street Bridge and adjacent railroad tracts. Located south of the project site is the Seventh Street Bridge, which is listed on the California Register of Historical Resources, and eligible for the National Register of Historic Places. Sara provided oversight and analysis for the preparation of Cultural Resources Technical Report.

Long Beach Courthouse Project; Long Beach, CA. *Senior Project Archaeologist and Project Manager.* Under contract to Clark Construction Sara directed the paleontological and archaeological monitoring for the construction of the New Long Beach Courthouse. She supervised monitors inspecting excavations up to 25 feet in depth. Nine archaeological features were recovered. Sara completed an assessment of the artifacts and fossil localities in a technical report at the completion of the project.

Venice Dual Force Main Project, Venice, CA. *Cultural Resources Lead.* The Venice Dual Force Main Project is an \$88 million sewer force main construction project spanning 2 miles within Venice, Marina del Rey, and Playa del Rey. Contracted to Vadnais Trenchless Services and reporting to the City of Los Angeles, Bureau of Engineering, Environmental Management Group, ESA is serving as the project's environmental resource manager. Sara provides quality control oversight for the archaeological and paleontological mitigation.

Advanced Water Treatment Facility Project Groundwater Reliability Improvement Project, Pico Rivera, CA. *Project Manager.* ESA is providing environmental compliance monitoring for the Water Replenishment District to



ensure compliance with the conditions contained in the Mitigation and Monitoring Reporting Programs associated with three environmental documents, including the Final EIR, a Mitigated Negative Declaration, and a Supplemental EIR, pertaining to three infrastructure components associated with the project. ESA provides general compliance monitoring at varying rates of frequency depending on the nature of the activities and is sometimes on-site for 4-hour spot checks and other times for full 24-hour rotations. The project is located near a residential neighborhood and adjacent the San Gabriel River. Issues of concern include noise, vibration, night lighting, biological resources, cultural resources, and air quality. Sara provides quality assurance and oversight of the field monitoring, and day-to-day response to issues. She oversees archaeological and Native American monitoring for ground disturbance and coordinates all sub-consultants for the project. She provides daily, weekly, and quarterly reporting on project compliance to support permitting and agency oversight.

Southern California Edison On-Call Master Services Agreement for Natural and Cultural Resources Services; *Cultural Resources Task Manager.* Sara provides project management and senior archaeological support for an on-call Master Services Agreement with Southern California Edison for cultural and natural resources consulting services. This contract has included numerous surveys and monitoring projects for pole replacements and small- to mid-size reconductoring projects, substation maintenance, and construction projects. Sara has served as project manager for more than 25 projects under this contract. She is the go-to person for all water, gas, and power projects occurring in the city of Avalon on Santa Catalina Island. Sara is responsible for oversight of archaeological and paleontological monitors, serving as report author and report manager.

Los Angeles Unified School District (LAUSD) Central Los Angeles High School #9; Los Angeles, CA. *Senior Project Archaeologist & Project Manager.* Sara conducted on-site monitoring and investigation of archaeological sites exposed as a result of construction activities. During the data recovery phase in connection with a 19th century cemetery located on-site, she participated in locating of features, feature excavation, mapping, and client coordination. She organized background research on the cemetery, including genealogical, local libraries, city and county archives, other local cemetery records, internet, and local fraternal organizations. Sara advised on the lab methodology and setup and served as project manager. Sara was a contributing author and editor for the published monograph, which was published as part of a technical series, "Not Dead but Gone Before: The Archaeology of Los Angeles City Cemetery."

Scattergood Olympic Transmission Line, Los Angeles, CA. *Report Author.* The Los Angeles Department of Water and Power is proposing to construct and operate approximately 11.4 miles of new 230 kilovolt (kv) underground transmission line that would connect the Scattergood Generation Station and Olympic Receiving Station. The project includes monitoring of construction activities occurring in street rights-of-way. Sara is providing final reporting for the long-term monitoring and QA/QC of the field data.

Veterans Administration Long Beach, Long Beach, CA. *Senior Project Manager.* Sara managed a long term monitoring project which also includes implementation of a Memorandum of Agreement, a Plan of Action, and Historic Properties Treatment plan for the mitigation of disturbance to a prehistoric site on the campus.

Downtown Cesar Chavez Median Project, City of Los Angeles, CA. *Project Manager.* Sara assisted the City of Los Angeles Department of Public Works Bureau of Engineering with a Local Assistance Project requiring consultations with Caltrans cultural resources. Sara was responsible for Caltrans coordination, serving as contributing author and report manager for the required Archaeological Survey Report, Historic Properties Survey Report, and Historical Resources Evaluation Report prepared for the project.

Hellman Ranch Project, Orange County, CA. *Lab Director.* Sara served as the lab director for the final monitoring phase of the John Laing Homes development project, cataloging and analyzing artifacts recovered from salvage monitoring and test units placed in relation to recovered intact burials. She conducted microscopic analysis of small items such as bone tools and shell and stone beads, directed lab assistants, and oversaw special studies, including the photo-documentation of the entire collection. Sara completed a section reporting on the results of the bead and ornament analysis in the final report, which was published as part of a technical series.

Hansen Dam Golf Course Water Recycling Project, Los Angeles, CA. *Senior Archaeologist and Project Manager.* Sara directed a phase I historical assessment for the Hansen Dam Golf Course Water Recycling Project located in the San Fernando Valley, City of Los Angeles, California. The project included the construction of an outdoor pumping station adjacent to the existing Hansen Tank located at the Los Angeles Department of Water and Power's (LADWP's) Valley Generating Station. In addition, a pipeline or distribution line was planned to be installed from the pumping station to the Hansen Dam Golf Course along the Tujunga Wash. The phase I study of this project included mitigation for the effects of the project on the portion of the golf course falling within the area of potential effects, which was potentially sensitive for buried cultural resources as the result of a complex of World War II housing units placed on the site between the 1940s and the 1960s. Sara conducted consultation with the USACE regarding the project.



Fatima Clark

Archaeologist

EDUCATION

BA, Anthropology,
California State
University, Fullerton

14 YEARS OF EXPERIENCE

QUALIFICATIONS

Orange County Certified
Archaeologist

Meets Caltrans PQS for
Lead Archaeological
Surveyor

SPECIALIZED SKILLS

Cross-Trained
Archaeology/
Paleontology

Native Spanish Speaker
& Writer

ArcGIS Survey123 and
Collector

PROFESSIONAL AFFILIATIONS

Society for California
Archaeology

SPECIALIZED TRAINING

Section 106 Webinar,
2016

Workshop: The Art and
Science of Flintknapping,
California Desert Studies
Center, 2013

Successful CEQA,
Compliance-Southern
California Edison,
Environmental Training,
2011

Cultural Resources
Protection under CEQA
and Other Legislative

Fatima has 14 years of hands-on archaeological experience and is practiced in project management and client and agency coordination. Her field experience is complimented by the course study and participation in numerous archaeological excavations in California, Arizona, and Peru. Fatima has written California Environmental Quality Act (CEQA)-level technical reports, Environmental Impact Report (EIR) sections, Initial Study (IS) sections, archaeological peer reviews, archaeological monitoring reports, and reports pursuant to California Department of Transportation (Caltrans) requirements. She is also experienced in performing archaeological testing, site recordation, laboratory analysis, pedestrian surveys, records searches through several California Historical Resources Information Systems-Information Centers, and monitoring for a wide variety of projects, including mixed-use, residential, and energy, water, and road infrastructure projects. In addition to her archaeology background, Fatima has been cross-trained in conducting paleontological surveys and monitoring and has co-authored and managed associated reports.

Relevant Experience

Orange County Water District (OCWD) Groundwater Replenishment System (GWRS) Final Expansion Project, Fountain Valley, CA (2020-current).

Archaeological/Paleontological Monitor. Fatima is currently serving as an archaeological/paleontological monitor for the project. The project includes conversion of an existing gravity pipeline and upgrades at the Orange County Sanitation District Plant No. 1 and 2.

California Department of Water Resources, Pools 20/21 and 17/18 Liner and Embankment Raise Project, Kings and Fresno Counties, CA (2020).

Fatima assisted with the field survey. The Project proposes raising the liner and embankment of California Aqueduct (Aqueduct) Pools 20/21 and 17/18. Subsidence has reduced the designed capacity of the concrete-line pools from 3 feet to less than 1 foot. The reduced freeboard has decreased storage capability and limited the operational flexibility of these pools to deliver water through the Aqueduct. To improve safety, reliability, and operational flexibility of the Aqueduct system, the liner and embankment of Pools 20/21 and 17/18 will be raised 3 to 6 feet.

Irvine Ranch Water District, Syphon Reservoir Improvement Project, Orange County, CA (2019-2020).

Archaeological/Paleontological Monitor. Fatima conducted the archaeological and paleontological monitoring for the project (which had a high potential for finding prehistoric archaeological resources, as well as paleontological resources), and prepared the monitoring report. The project proposed geotechnical explorations to characterize the subsurface conditions of the soil.

California Water Service Company, Palos Verdes Peninsula Water Reliability Project, Palos Verdes Peninsula, (2019). *Archaeological/Paleontological Monitor.* Fatima conducted the archaeological and paleontological monitoring, which led to the identification and salvage of numerous fossils from the Monterey Formation. The project proposed the construction of new potable water pipelines and a new booster pump station to replace the current water distribution system serving the Palos Verdes Peninsula.

Irvine Ranch Water District, Syphon Reservoir Improvement Project, Orange County, CA (2018-2019). *Archaeologist.* Fatima was in charge of the preparation of the Cultural Resources Assessment Report, pursuant to CEQA and Section 106. The survey for the study led to the relocation of two previously recorded prehistoric archaeological sites and the recordation of five additional resources, including one prehistoric isolate, one historic-period archaeological resource, and three historic architectural resources.

California Department of Water Resources, Lake Perris Seepage Recovery, Riverside County, CA (2019). *Archaeologist.* Fatima was in charge of the preparation of the Cultural Resources Assessment Report in compliance with CEQA. The proposed project would collect water that is currently seeping out of Lake Perris through an integrated recovery well system, and then provide the recovered water to the Metropolitan Water District of Southern California.

Los Angeles Department of Water and Power, Manhattan Wellfield On-Site Hypochlorite Generation Station, Los Angeles, CA (2019). *Archaeologist.* Fatima was in charge of preparing the Cultural Resources Assessment Report in compliance with CEQA and Section 106. The project proposed to upgrade the existing chlorination station at Manhattan Wellfield to an on-site hypochlorite.

California Department of Water Resources, Los Robles Road Bridge Seismic Retrofit Project, Quail Lake, Los Angeles County (2018). *Archaeologist.* Fatima was in charge of the preparation of the Archaeological Resources Survey Report for the project, which pertains to CEQA. The project consisted of the seismic retrofitting of the existing Los Robles Road Bridge, which crosses the West Branch of the California Aqueduct.

California Water Service Company, Palos Verdes Peninsula Water Reliability Project, Palos Verdes Peninsula, CA (2017). *Archaeologist.* Fatima assisted in the preparation of the Phase I Cultural Resources Assessment report pursuant to Section 106. The project proposed to construct new potable water pipelines and a new booster pump station to improve overall system reliability in the Palos Verdes Peninsula.

Santa Margarita Water District, San Juan Watershed Project, San Juan Capistrano and Dana Point, CA (2017). *Archaeologist.* Fatima was in charge of the preparation of the Phase I Cultural Resources Assessment pursuant to Section 106 and the Cultural Resources section of the EIR. The project included the installation of three rubber dams and control buildings within San Juan Creek.

Appendix B
Sacred Lands File Search

NATIVE AMERICAN HERITAGE COMMISSION

August 4, 2022

Fatima Clark
ESA

Via Email to: fclark@esassoc.com

Re: Native American Tribal Consultation, Pursuant to the Assembly Bill 52 (AB 52), Amendments to the California Environmental Quality Act (CEQA) (Chapter 532, Statutes of 2014), Public Resources Code Sections 5097.94 (m), 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2 and 21084.3, 1575 University Avenue Project, Riverside County

Dear Ms. Clark:

Pursuant to Public Resources Code section 21080.3.1 (c), attached is a consultation list of tribes that are traditionally and culturally affiliated with the geographic area of the above-listed project. Please note that the intent of the AB 52 amendments to CEQA is to avoid and/or mitigate impacts to tribal cultural resources, (Pub. Resources Code §21084.3 (a)) ("Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource.")

Public Resources Code sections 21080.3.1 and 21084.3(c) require CEQA lead agencies to consult with California Native American tribes that have requested notice from such agencies of proposed projects in the geographic area that are traditionally and culturally affiliated with the tribes on projects for which a Notice of Preparation or Notice of Negative Declaration or Mitigated Negative Declaration has been filed on or after July 1, 2015. Specifically, Public Resources Code section 21080.3.1 (d) provides:

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.

The AB 52 amendments to CEQA law does not preclude initiating consultation with the tribes that are culturally and traditionally affiliated within your jurisdiction prior to receiving requests for notification of projects in the tribe's areas of traditional and cultural affiliation. The Native American Heritage Commission (NAHC) recommends, but does not require, early consultation as a best practice to ensure that lead agencies receive sufficient information about cultural resources in a project area to avoid damaging effects to tribal cultural resources.

The NAHC also recommends, but does not require that agencies should also include with their notification letters, information regarding any cultural resources assessment that has been completed on the area of potential effect (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:



CHAIRPERSON
Laura Miranda
Luiseño

VICE CHAIRPERSON
Reginald Pagaling
Chumash

PARLIAMENTARIAN
Russell Attebery
Karuk

SECRETARY
Sara Dutschke
Miwok

COMMISSIONER
William Mungary
Paiute/White Mountain
Apache

COMMISSIONER
Isaac Bojorquez
Ohlone-Costanoan

COMMISSIONER
Buffy McQuillen
Yokayo Pomo, Yuki,
Nomlaki

COMMISSIONER
Wayne Nelson
Luiseño

COMMISSIONER
Stanley Rodriguez
Kumeyaay

EXECUTIVE SECRETARY
Raymond C. Hitchcock
Miwok/Nisenan

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

- A listing of any and all known cultural resources that have already been recorded on or adjacent to the APE, such as known archaeological sites;
- 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;
- Whether the records search indicates a low, moderate, or high probability that unrecorded cultural resources are located in the 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 measures.

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 public disclosure in accordance with Government Code section 6254.10.

3. The result of any Sacred Lands File (SLF) check conducted through the Native American Heritage Commission was negative.

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

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

Lead agencies should be aware that records maintained by the NAHC and CHRIS are not exhaustive and a negative response to these searches does not preclude the existence of a tribal cultural resource. 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 event that they do, having the information beforehand will help to facilitate the consultation process.

If you receive notification of change of addresses and phone numbers from tribes, please notify the NAHC. With your assistance, we can assure that our consultation list remains current.

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

Sincerely,



Andrew Green
Cultural Resources Analyst

Attachment

**Native American Heritage Commission
Tribal Consultation List
Riverside County
8/4/2022**

**Agua Caliente Band of Cahuilla
Indians**

Patricia Garcia-Plotkin, Director
5401 Dinah Shore Drive Cahuilla
Palm Springs, CA, 92264
Phone: (760) 699 - 6907
Fax: (760) 699-6924
ACBCI-THPO@aguacaliente.net

**Campo Band of Diegueno
Mission Indians**

Ralph Goff, Chairperson
36190 Church Road, Suite 1 Diegueno
Campo, CA, 91906
Phone: (619) 478 - 9046
Fax: (619) 478-5818
rgoff@campo-nsn.gov

**Agua Caliente Band of Cahuilla
Indians**

Reid Milanovich, Chairperson
5401 Dinah Shore Drive Cahuilla
Palm Springs, CA, 92264
Phone: (760) 699 - 6800
Fax: (760) 699-6919
laviles@aguacaliente.net

**Ewiaapaayp Band of Kumeyaay
Indians**

Michael Garcia, Vice Chairperson
4054 Willows Road Diegueno
Alpine, CA, 91901
Phone: (619) 933 - 2200
Fax: (619) 445-9126
michaelg@leaningrock.net

**Augustine Band of Cahuilla
Mission Indians**

Amanda Vance, Chairperson
P.O. Box 846 Cahuilla
Coachella, CA, 92236
Phone: (760) 398 - 4722
Fax: (760) 369-7161
hhaines@augustinetribe.com

**Ewiaapaayp Band of Kumeyaay
Indians**

Robert Pinto, Chairperson
4054 Willows Road Diegueno
Alpine, CA, 91901
Phone: (619) 368 - 4382
Fax: (619) 445-9126
ceo@ebki-nsn.gov

**Cabazon Band of Mission
Indians**

Doug Welmas, Chairperson
84-245 Indio Springs Parkway Cahuilla
Indio, CA, 92203
Phone: (760) 342 - 2593
Fax: (760) 347-7880
jstapp@cabazonindians-nsn.gov

**Gabrieleno Band of Mission
Indians - Kizh Nation**

Andrew Salas, Chairperson
P.O. Box 393 Gabrieleno
Covina, CA, 91723
Phone: (626) 926 - 4131
admin@gabrielenoindians.org

Cahuilla Band of Indians

Daniel Salgado, Chairperson
52701 U.S. Highway 371 Cahuilla
Anza, CA, 92539
Phone: (951) 763 - 5549
Fax: (951) 763-2808
Chairman@cahuilla.net

**Gabrieleno/Tongva San Gabriel
Band of Mission Indians**

Anthony Morales, Chairperson
P.O. Box 693 Gabrieleno
San Gabriel, CA, 91778
Phone: (626) 483 - 3564
Fax: (626) 286-1262
GTTribalcouncil@aol.com

Gabrielino /Tongva Nation

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

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and section 5097.98 of the Public Resources Code.

This list is only applicable for consultation with Native American tribes under Public Resources Code Sections 21080.3.1 for the proposed 1575 University Avenue Project, Riverside County.

**Native American Heritage Commission
Tribal Consultation List
Riverside County
8/4/2022**

Gabrielino Tongva Indians of California Tribal Council

Robert Dorame, Chairperson
P.O. Box 490 Gabrielino
Bellflower, CA, 90707
Phone: (562) 761 - 6417
Fax: (562) 761-6417
gtongva@gmail.com

Los Coyotes Band of Cahuilla and Cupeño Indians

Ray Chapparosa, Chairperson
P.O. Box 189 Cahuilla
Warner Springs, CA, 92086-0189
Phone: (760) 782 - 0711
Fax: (760) 782-0712

Gabrielino Tongva Indians of California Tribal Council

Christina Conley, Tribal Consultant and Administrator
P.O. Box 941078 Gabrielino
Simi Valley, CA, 93094
Phone: (626) 407 - 8761
christina.marsden@alumni.usc.edu

Manzanita Band of Kumeyaay Nation

Angela Elliott Santos, Chairperson
P.O. Box 1302 Diegueno
Boulevard, CA, 91905
Phone: (619) 766 - 4930
Fax: (619) 766-4957

Gabrielino-Tongva Tribe

Charles Alvarez,
23454 Vanowen Street Gabrielino
West Hills, CA, 91307
Phone: (310) 403 - 6048
roadkingcharles@aol.com

Mesa Grande Band of Diegueno Mission Indians

Michael Linton, Chairperson
P.O. Box 270 Diegueno
Santa Ysabel, CA, 92070
Phone: (760) 782 - 3818
Fax: (760) 782-9092
mesagrandeband@msn.com

La Posta Band of Diegueno Mission Indians

Gwendolyn Parada, Chairperson
8 Crestwood Road Diegueno
Boulevard, CA, 91905
Phone: (619) 478 - 2113
Fax: (619) 478-2125
LP13boots@aol.com

Morongo Band of Mission Indians

Robert Martin, Chairperson
12700 Pumarra Road Cahuilla
Banning, CA, 92220 Serrano
Phone: (951) 755 - 5110
Fax: (951) 755-5177
abrierty@morongo-nsn.gov

La Posta Band of Diegueno Mission Indians

Javaughn Miller, Tribal Administrator
8 Crestwood Road Diegueno
Boulevard, CA, 91905
Phone: (619) 478 - 2113
Fax: (619) 478-2125
jmiller@LPtribe.net

Morongo Band of Mission Indians

Ann Brierty, THPO
12700 Pumarra Road Cahuilla
Banning, CA, 92220 Serrano
Phone: (951) 755 - 5259
Fax: (951) 572-6004
abrierty@morongo-nsn.gov

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and section 5097.98 of the Public Resources Code.

This list is only applicable for consultation with Native American tribes under Public Resources Code Sections 21080.3.1 for the proposed 1575 University Avenue Project, Riverside County.

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Native American Heritage Commission
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Appendix C

**DPR Site Forms (Confidential –
Not for Public Dissemination)**



Appendix E

Paleontological Resources Study

FOR PUBLIC DISTRIBUTION

1575 UNIVERSITY AVENUE PROJECT, CITY OF RIVERSIDE, CALIFORNIA

Paleontological Resources Assessment

Prepared for

Kimley-Horn
660 S. Figueroa Street, Suite #2050
Los Angeles, CA 90017

October 2022



FOR PUBLIC DISTRIBUTION

**1575 UNIVERSITY AVENUE PROJECT, CITY OF
RIVERSIDE, CALIFORNIA
Paleontological Resources Assessment**

Prepared for

Kimley-Horn
660 S. Figueroa Street, Suite #2050
Los Angeles, CA 90017

October 2022

Project Director:

Monica Strauss, M.A., RPA

Project Manager:

Sara Dietler

Principal Investigator:

Russell Shapiro, Ph.D.

Authors:

Russell Shapiro, Ph.D.
Fatima Clark, B.A.

Project Location:

Riverside East (CA) USGS 7.5-minute Topographic Quad
Township 2 South, Range 4 West, Section 19

Acreage: Approx. 4.29 acres

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EXECUTIVE SUMMARY

1575 University Avenue Project – Paleontological Resources Assessment

Environmental Science Associates (ESA) has been retained by Kimley-Horn to conduct a paleontological resources assessment for the 1575 University Avenue Project (Project). The Project would consist of the construction of a five-story at-grade mixed-use/residential buildings, an at-grade parking structure, a swimming pool and spa. The City of Riverside (City) is the lead agency pursuant to the California Environmental Quality Act (CEQA).

No paleontological resources were identified within the Project Site. However, the geologic map review, literature review, and the paleontological resources records search revealed that the Project Site is underlain by the potentially fossiliferous Older (Pleistocene) silt and clay alluvium. Alluvium of this age has produced significant fossils elsewhere in western Riverside County as well as the greater Los Angeles area.

This study shows successful compliance with mitigation measure PAL-1 of the Mitigation Monitoring and Reporting Program (MMRP), which included the preparation of a paleontological resources report. Mitigation Measure PAL-2 of the MMRP would apply to the Project, which includes retention of a qualified paleontologist, paleontological monitoring of excavations exceeding 10 feet or when older Quaternary alluvial silts and clays are encountered, salvage and curation of significant fossil discoveries, and final reporting. Mitigation Measure PAL-3 of the MMRP would also apply to the Project if paleontological resources and sensitive deposits remain or become exposed, then an avoidance and minimization plan shall be prepared. With implementation of these measures, impacts to paleontological resources would be less than significant under CEQA.

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1575 UNIVERSITY AVENUE PROJECT

Paleontological Resources Assessment

Introduction

Environmental Science Associates (ESA) has been retained by Kimley-Horn to conduct a paleontological resources assessment for the 1575 University Avenue Project (Project). The Project proposes the construction of a five-story, at-grade mixed-use/residential buildings. The City of Riverside (City) is the lead agency pursuant to the California Environmental Quality Act (CEQA).

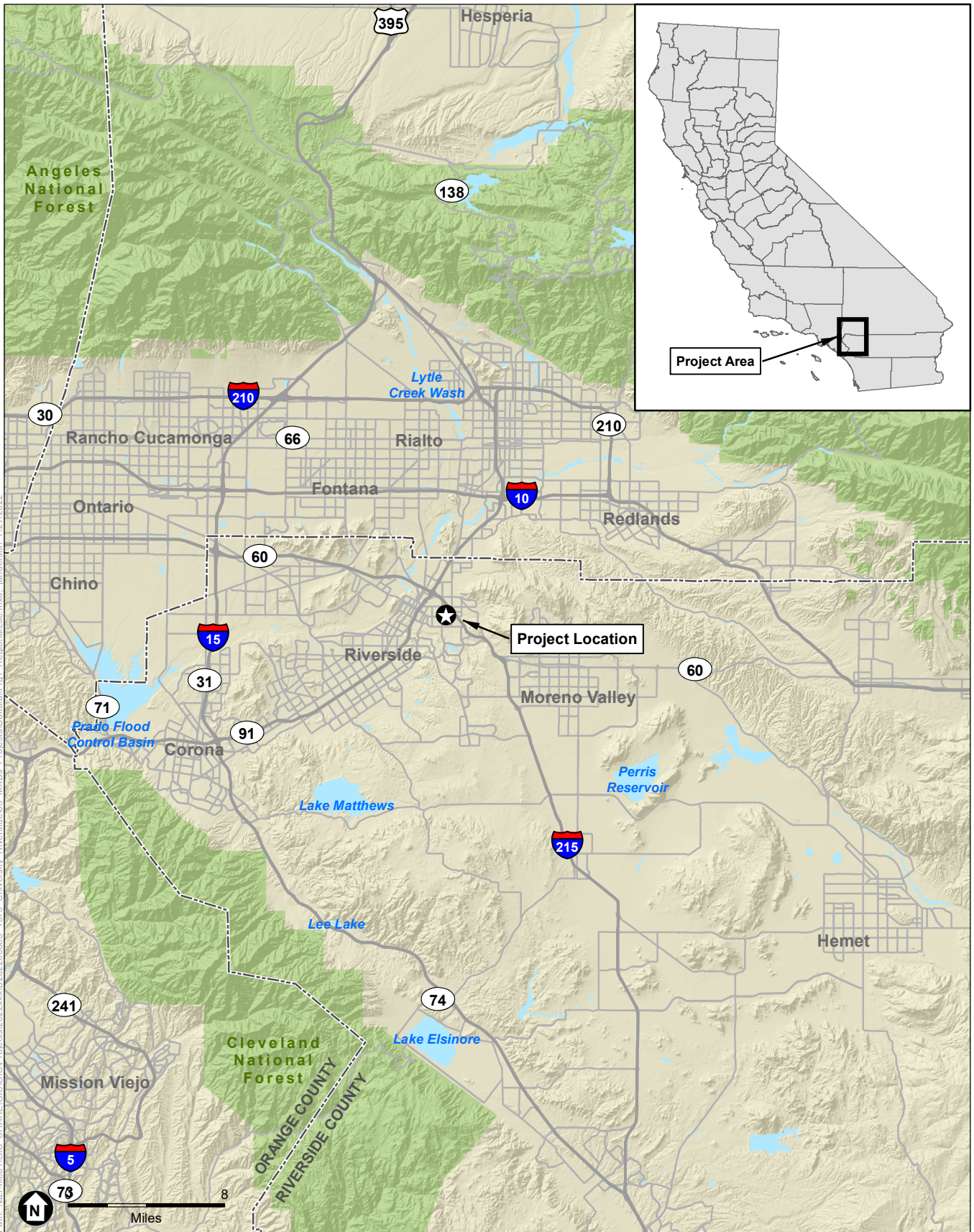
ESA personnel involved in the preparation of this assessment include: Monica Strauss, M.A., RPA, Project Director; Sara Dietler, B.A., Project Manager; Russell Shapiro, Ph.D., Paleontological Principal Investigator, author; Fatima Clark, B.A., report contributor; and Jaclyn Anderson, GIS Specialist. Resumes of key personnel are provided in **Appendix A**.

Project Location

The 4.29-acre Project Site is located in the northeast portion of the City, in Riverside County, California (**Figure 1**). The Project Site is bordered by commercial uses to the north; University Avenue to the south; residential and commercial/retail properties to the east; and Seventh Street and commercial/retail properties to the west. The Project Site is located within Section 19 of Township 2 South, Range 4 West on the Riverside East, CA U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle (**Figure 2**).

Project Description

The Project would consist of the construction of a five-story, at-grade mixed-use/residential buildings, which would occupy the majority of the Project Site. An at-grade parking structure would be constructed in the central portion of the Project Site and a swimming pool and spa in the southern portion of the Project Site. Retaining walls (up to six feet high) are proposed to support excavations associated with the pit for the elevators. The existing building and parking lot in the southern portion, as well as the concrete pads in the vacant portion of the Project Site would be removed.

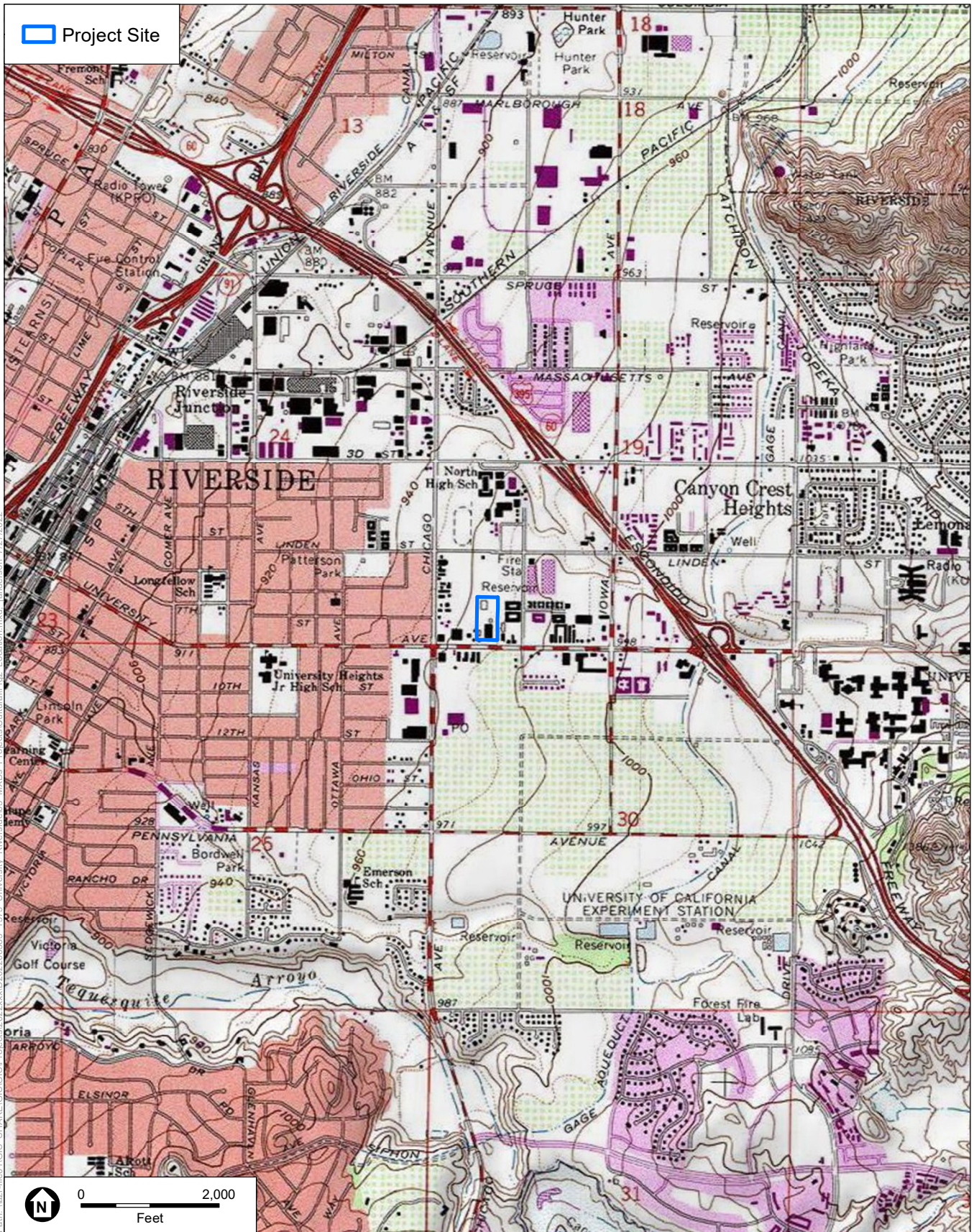


SOURCE: ESRI

1575 University Avenue

Figure 1
Regional Map





SOURCE: USGS 7.5" Topoquad Riverside East

1575 University Avenue

Figure 2
Project Location



Regulatory Framework

Paleontological resources are limited, nonrenewable resources of scientific, cultural, and educational value that are afforded protection under state laws and regulations. The following section summarizes the applicable state and local laws and regulations, as well as professional standards.

State

California Environmental Quality Act

The State CEQA Guidelines (Title 14, Chapter 3 of the California Code of Regulations, Section 15000 *et seq.*), define the procedures, types of activities, individuals, and public agencies required to comply with CEQA. As part of CEQA's Initial Study process, one of the questions that must be answered by the lead agency relates to paleontological resources: "Will the proposed project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?" (State CEQA Guidelines, Appendix G, Section VII, Part f).

The loss of a significant paleontological resources which includes any identifiable fossil that is unique, unusual, rare, uncommon, diagnostically or stratigraphically important, and/or those that add to an existing body of knowledge in specific areas – stratigraphically, taxonomically, and/or regionally, would be a significant environmental impact. Direct impacts to paleontological resources primarily concern the potential destruction of nonrenewable paleontological resources and the loss of information associated with these resources. This includes the unauthorized collection of fossil remains. If potentially fossiliferous bedrock or surficial sediments are disturbed, the disturbance could result in the destruction of paleontological resources and subsequent loss of information.

The CEQA threshold of significance for a significant impact to paleontological resources is reached when a project is determined to "directly or indirectly destroy a significant paleontological resource or unique geologic feature" (State CEQA Guidelines Appendix G, Section VII, Part f). In general, for project sites that are underlain by paleontologically sensitive geologic units, the greater the amount of ground disturbance, the higher the potential for significant impacts to paleontological resources.

Public Resources Code Section 5097.5 and Section 30244

Other state requirements for paleontological resource management are included in PRC Section 5097.5 and Section 30244. These statutes prohibit the removal of any paleontological site or feature from public lands without permission of the jurisdictional agency, define the removal of paleontological sites or features as a misdemeanor, and require reasonable mitigation of adverse impacts to paleontological resources from developments on public (state, county, city, district) lands.

Local

City of Riverside

The City of Riverside's General Plan (2025) has one objective and policy geared towards the preservation of paleontological resources and these are provided below:

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

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.

Riverside Housing and Public Safety Element Updates and Environmental Justice Policies Project Mitigation Monitoring and Reporting Program

PAL-1: Conduct paleontological resources investigations. During the development review process and prior to construction on Opportunity Sites that are located on geologic units with Undetermined, High A, or High B paleontological sensitivity, the project applicant shall conduct paleontological resource investigations consistent with SVP guidelines. This process shall include:

- Conducting a paleontological records search through the Los Angeles County Natural History Museum to identify previously recorded paleontological localities and the presence of sensitive deposits in the City
- Reviewing Opportunity Site design and maximum depths and extents of Project ground disturbance components
- Reviewing publicly available geotechnical reports for information concerning subsurface deposits and deposit depths across the City
- Identifying the potential for sensitive paleontological deposits underlying the Opportunity Site that project implementation could affect
- Determining whether impacts on sensitive deposits, if present, would be significant.

If no sensitive deposits are identified or if they are sufficiently deeper than the Opportunity Site excavations and would not be encountered during construction, no further steps shall be required. If sensitive deposits are identified and could be affected by development of the Opportunity Sites, implement Mitigation Measure MM-PAL-2.

PAL-2: Avoid paleontological resources or conduct monitoring. The applicant shall redesign the Opportunity Site development to avoid sensitive paleontological resources and deposits that could potentially contain these resources. If avoidance and/or Opportunity Site redesign is infeasible, then paleontological monitoring shall be implemented and shall include the following implementation steps:

- The applicant shall retain a qualified paleontologist, who shall attend the preconstruction meeting(s) to consult with the grading and excavation contractors or subcontractors concerning excavation schedules, paleontological field techniques, and safety issues. A qualified paleontologist is defined as an individual who (1) has an MS or PhD in paleontology or geology and/or a publication record in peer-reviewed journals; (2) also has demonstrated familiarity with paleontological procedures and techniques; (3) is knowledgeable in the geology and paleontology of the county; (4) has proficiency in recognizing fossils in the field, determining their significance, and collecting vertebrate fossils in the field; and (5) has worked as a paleontological mitigation project supervisor in the county for at least 1 year.
- A paleontological monitor or a qualified paleontologist shall be on site on a full-time basis during excavation and ground disturbing activities that occur in any undisturbed deposits below ground surface, to inspect exposures for contained fossils. The paleontological monitor shall work under the direction of the Project's qualified paleontologist. A paleontological monitor is defined as an individual selected by the qualified paleontologist who has experience in the collection and salvage of fossil materials. If fossils that have significance for the scientific record are discovered on a development site, the qualified paleontologist shall recover them and temporarily direct, divert, or halt grading to allow recovery of fossil remains.
- The qualified paleontologist shall be responsible for the cleaning, repairing, sorting, and cataloguing of fossil remains collected during the monitoring and salvage portion of the mitigation program.
- Prepared fossils, along with copies of all pertinent field notes, photos, and maps, shall be deposited (as a donation) at a scientific institution with permanent paleontological collections, such as the Los Angeles County Natural History Museum.
- Within 30 days after the completion of excavation and ground disturbing activities, the qualified paleontologist shall prepare and submit to the City of Riverside Community & Economic Development Department, Planning Division a paleontological resource recovery report that documents the results of the mitigation program. This report shall include discussions of the methods used, stratigraphic section(s) exposed, fossils collected, and significance of recovered fossils.

PAL-3: Avoid/minimize impacts on paleontological resources during operation. If significant paleontological resources and sensitive deposits with the potential to contain significant paleontological resources are identified within an Opportunity Site area during design/planning (Mitigation Measures MM-PAL-1 and MM-PAL-2), and deposits that are sensitive for significant paleontological resources remain exposed at or near the ground surface or become exposed during project operations, then an avoidance and minimization plan shall be prepared to avoid/minimize potential impacts during operations. This plan may include, but not be limited to:

- Securing sensitive deposits from accessibility through the development of exclusion zones
- Preparing an operations and maintenance plan to minimize degradation and exposure of sensitive deposits
- Designing and developing interpretive exhibits to provide education and understanding of the importance of avoiding and protecting sensitive deposits and paleontological resources

If significant impacts on a newly exposed or existing significant paleontological resource cannot be avoided, then Mitigation Measure MM-PAL-2 shall be implemented.

Professional Standards

Society of Vertebrate Paleontology

The Society of Vertebrate Paleontology (SVP) Guidelines (SVP, 2010) outline professional protocols and practices for conducting paleontological resource assessments and surveys, monitoring and mitigation, data and fossil recovery, sampling procedures, specimen preparation, identification, analysis, and curation. Most practicing professional vertebrate paleontologists adhere closely to the SVP's assessment, mitigation, and monitoring requirements as specifically provided in its standard guidelines. Most state regulatory agencies with paleontological resource-specific Laws, Ordinances, Regulations, and Standards (LORS) accept and use the professional standards set forth by the SVP.

Paleontological Resources Significance Criteria

As defined by the SVP (2010:11), significant nonrenewable paleontological resources are:

Fossils and fossiliferous deposits, here defined as consisting of identifiable vertebrate fossils, large or small, uncommon invertebrate, plant, and trace fossils, and other data that provide taphonomic, taxonomic, phylogenetic, paleoecologic, stratigraphic, and/or biochronologic information. Paleontological resources are considered to be older than recorded human history and/or older than middle Holocene (i.e., older than about 5,000 radiocarbon years).

Numerous paleontological studies have further developed criteria for the assessment of significance for fossil discoveries (e.g., Eisenstraut and Cooper, 2002; Murphey and Daitch, 2007; Scott and Springer, 2003, etc.). In general, these studies assess fossils as significant if one or more of the following criteria apply:

1. The fossils provide information on the evolutionary relationships and developmental trends among organisms, living or extinct;
2. The fossils provide data useful in determining the age(s) of the rock unit or sedimentary stratum, including data important in determining the depositional history of the region and the timing of geologic events therein;
3. The fossils provide data regarding the development of biological communities or interaction between paleobotanical and paleozoological biotas;
4. The fossils demonstrate unusual or spectacular circumstances in the history of life; or
5. The fossils are in short supply and/or in danger of being depleted or destroyed by the elements, vandalism, or commercial exploitation, and are not found in other geographic locations.

In summary, significant paleontological resources are determined to be fossils or assemblages of fossils that are unique, unusual, rare, uncommon, or diagnostically important (Eisenstraut and

Cooper, 2002; Murphey and Daitch, 2007; Scott and Springer, 2003). Significant fossils can include remains of large to very small aquatic and terrestrial vertebrates or remains of plants and animals previously not represented in certain portions of the stratigraphy. Assemblages of fossils that might aid stratigraphic correlation, particularly those offering data for the interpretation of tectonic events, geomorphologic evolution, and paleoclimatology are also critically important (Scott and Springer, 2003; Scott et al., 2004).

Paleontological Potential

Paleontological potential is defined as the potential for a geologic unit to produce scientifically significant fossils. This is determined by rock type, the past history of the geologic unit in producing significant fossils, and the fossil localities recorded from that unit. Paleontological potential is derived from the known fossil data collected from the entire geologic unit and not just from one specific survey. In its “Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources,” the SVP (2010) defines four categories of paleontological sensitivity (potential) for rock units: high, low, undetermined, and no potential.

- **High Potential.** Rock units from which vertebrate or significant invertebrate, plant, or trace fossils have been recovered are considered to have a high potential for containing additional significant paleontological resources. Rock units classified as having high potential for producing paleontological resources include, but are not limited to, sedimentary formations and some volcanoclastic formations (e. g., ashes or tephras), and some low-grade metamorphic rocks which contain significant paleontological resources anywhere within their geographical extent, and sedimentary rock units temporally or lithologically suitable for the preservation of fossils (e. g., middle Holocene and older, fine-grained fluvial sandstones, argillaceous and carbonate-rich paleosols, cross-bedded point bar sandstones, fine-grained marine sandstones, etc.).
- **Low Potential.** Reports in the paleontological literature or field surveys by a qualified professional paleontologist may allow determination that some rock units have low potential for yielding significant fossils. Such rock units will be poorly represented by fossil specimens in institutional collections, or based on general scientific consensus only preserve fossils in rare circumstances and the presence of fossils is the exception not the rule, e. g. basalt flows or Recent colluvium. Rock units with low potential typically will not require impact mitigation measures to protect fossils.
- **Undetermined Potential.** Rock units for which little information is available concerning their paleontological content, geologic age, and depositional environment are considered to have undetermined potential. Further study is necessary to determine if these rock units have high or low potential to contain significant paleontological resources. A field survey by a qualified professional paleontologist to specifically determine the paleontological resource potential of these rock units is required before a paleontological resource impact mitigation program can be developed. In cases where no subsurface data are available, paleontological potential can sometimes be determined by strategically located excavations into subsurface stratigraphy.
- **No Potential.** Some rock units have no potential to contain significant paleontological resources, for instance high-grade metamorphic rocks (such as gneisses and schists) and plutonic igneous rocks (such as granites and diorites). Rock units with no potential require no protection nor impact mitigation measures relative to paleontological resources. [SVP, 2010; 1-2].

For geologic units with high potential, full-time monitoring is generally recommended during any project-related ground disturbance. For geologic units with low potential, monitoring will not generally be required. For geologic units with undetermined potential, field surveys by a qualified vertebrate paleontologist should be conducted to specifically determine the paleontological potential of the rock units present within the study area.

Environmental Setting

Natural Setting

The Project Site is rectangular-shaped and partially graded parcel. A one-story commercial building with a surface parking lot and associated landscaping occupies the southern portion of the Project Site, while the remaining north portion is currently vacant, but also has concrete pads associated with former structures. Access to the Project Site is via the southern portion and along University Avenue.

Geologic Setting

The Project lies within the northern end of the Peninsular Ranges, about 10 miles south of the complex tectonic border with the east-west trending Peninsular Ranges. Like much of the western half of southern California, the landscape around Riverside comprises a series of elongate northwest to southeast valleys between uplifted mountain ranges (Morton and Miller, 2006). The uplift was due to the migration of the transform San Andreas Fault system, starting around 15 million years ago (Sylvester and O'Black Gans, 2016). Specifically, the Project lies in the valley between the Santa Ana Mountains to the west and the closer San Jacinto Mountains to the east, with the Box Springs Mountain immediately adjacent to the project to the east. These ranges are composed primarily of Mesozoic-aged intrusive rocks of tonalite and granodiorite composition along with dispersed metasedimentary rocks.

The Project itself lies upon a broad, sloping apron of older alluvium that eroded from the uplifted Box Springs Mountains to the east-southeast during the Pleistocene. Evidence of continual uplift is suggested by the lack of younger alluvial cover though young alluvium is found in the adjacent valley floor to the west (Dibblee and Minch, 2003).

Archival Research

Geological Map Review

As shown on **Figure 3**, geologic mapping of the Riverside East/south ½ of San Bernardino South quadrangles by Dibblee and Minch (2003) indicate that the Project Site is located within Pleistocene-aged Quaternary old alluvium (Qoa) deposits described as alluvial fan deposits consisting of sand and minor gravel. Similarly, mapping by Morton and others (2002) note the area as old alluvial fan deposits (Qof) of middle to late Pleistocene age. These deposits overly Mesozoic-aged igneous intrusive bedrock exposed to the east. It is unlikely the Project will excavate deep enough to reach the intrusive rocks.

Geotechnical Report Review

ESA reviewed the *Geotechnical Engineering Exploration* report (geotechnical report) prepared for the Project by Byer Geotechnical, Inc. (2022). The geotechnical report indicates that nine borings were drilled at the Project Site to approximate depths of 11 to 51.5 feet below existing grade. The exact locations of the borings are not known, as the geotechnical report does not contain figures showing boring locations. Nevertheless, the geotechnical report mentions that fill associated with previous site grading was found in two borings (B1 and B5) underlying the southern portion of the Project Site to a maximum depth of 2.5 feet. The report itself noted that past grading on the site resulted in a thin layer of fill only in the southern portion of the site to create a level pad for the existing commercial building and associated parking lot.

Additionally, natural alluvium (Qg) in the order of 10 feet thick was also encountered at the Project Site in borings B1 through B4 and B7. Lastly, older alluvium deposits (Qoa) were found beneath the alluvium (Qg) layer. Of note is that the alluvium at the Project Site consists of layers of silty sand and clay that are fine grained and more likely to contain fossil remains than coarse gravels.

LACM Database Search

A paleontological resources database search was conducted by the Natural History Museum of Los Angeles County (LACM) on July 10, 2022 (**Appendix B**). The search entailed an examination of current geologic maps and known fossil localities within the Project Site and vicinity. The purpose of the records search was to: (1) determine whether any previously recorded fossil localities occur in the Project Site or vicinity; (2) assess the potential for disturbance of these localities during construction; and (3) assist in evaluating the paleontological sensitivity of the Project Site. Results of the paleontological resources records search conducted by the LACM indicated that no fossil localities lie directly within the Project Site; however, seven fossil localities (LACM VP 1207, 1728, 4540, 4619, 7811, 7268 and 7271) were identified nearby from Pleistocene sedimentary deposits outside the Project Site (**Table 1**) (Bell, 2022).

LACM VP 1207 is located approximately 15.25 miles from the Project Site and produced a Bovidae specimen at an unknown depth. LACM VP 1728 is located approximately 22 miles from the Project Site and produced fossil specimens of horse (*Equus*) and camel (*Camelops*) at depths between 15 and 20 feet below ground surface (bgs). LACM VP 4540 is situated approximately 16.75 miles away and yielded a fossil specimen from the horse family (Equidae) at an unknown depth. LACM VP 4619 is located 11 miles away and produced a fossil specimen of mammoth at 100 feet bgs. LACM VP 7268 and 7271 are located approximately 20 miles away from the Project Site and yielded fossil specimens of horse (*Equus*) at unknown depths. LACM VP 7811 produced a fossil specimen of whip snake (*Masticophis*) at depths between 15 and 20 feet bgs.

While these results are quite a distance from the Project Site, in total they demonstrate the likelihood that similar Pleistocene-aged fine-grained alluvium may contain fossil resources. It should also be noted that in these other regions, the Pleistocene alluvium was located below younger alluvium so similar deposits may be closer to the surface in the Project Site.

TABLE 1
LACM FOSSIL LOCALITIES

Locality Number	Formation	Taxa	Depth
LACM VP 1207	Unknown formation (Pleistocene)	Bovidae	Unknown
LACM VP 1728	Unknown (light brown shale with interbeds of very coarse brown sand; Pleistocene)	Horse (<i>Equus</i>), camel (<i>Camelops</i>)	15-20 feet bgs
LACM VP 4540	Unnamed formation (Pleistocene, gravel pit)	Horse Family (Equidae)	Unknown
LACM VP 4619	Unknown Formation (Pleistocene)	Mammoth (<i>Mammuthus</i>)	100 feet bgs
LACM VP 7268, 7271	Unknown (Pleistocene)	Horse (<i>Equus</i>)	Unknown
LACM VP 7811	Unknown formation (eolian, tan silt; Pleistocene)	Whip snake (<i>Masticophis</i>)	9-11 feet bgs

VP: Vertebrate Paleontology
IP: Invertebrate Paleontology
Bgs; below ground surface

Literature Review

ESA conducted a literature review of published sources to determine whether paleontological resources have been identified in the particular geologic units that are mapped within the Project Site.

Paleontology of Quaternary Older Alluvium: The published literature rarely distinguishes the specific facies of Pleistocene deposits, focusing more on the specific taxa. Regardless, a review of the literature demonstrates a rich though spotty faunal record from the broader Los Angeles-Riverside region. The following review ignores irrelevant deposits from the La Brea Tar Pits, non-alluvial lake settings, coastal regions, and the region east of the San Jacinto Mountains.

There have been a few professional meeting abstracts (e.g., Dooley et al., 2017; Hohman and Dooley 2019; 2021) and several papers (e.g., Pajak, 1997; Springer et al., 2010) that have described the Pleistocene fauna of western Riverside County. In general, the pattern follows that of the broader Los Angeles Basin (e.g., Jefferson, 1991a, b) in a mixed fauna of large terrestrial herbivores such as mammoths, mastodons, and camelids along with smaller rodents and occasional reptiles. It should be noted that most of these reports were a result of paleontological mitigation monitoring.

Paleontological Sensitivity Analysis

The review of the scientific literature, geologic mapping, and record search results from the LACM were used to assign paleontological sensitivity to the geologic units present at the surface and in the subsurface of the Project Site, following the guidelines of the SVP (2010) and are as follows:

- **Older Quaternary Alluvium (Qoa)** – The alluvium in the Project site is of an age and sedimentary grain size to contain significant Pleistocene fauna. Based on the geotechnical report, it is likely that younger gravels not mapped by Dibblee and Minch (2003) or Morton and others (2002) overly the older alluvium to a depth of about 10 feet across the Project Site. Based on the local records of the LACM and published record in the general area, the Qoa is considered **high potential** for paleontological resources.

Summary and Recommendations

ESA has identified the older Quaternary alluvium as a potentially fossiliferous geologic unit underlying artificial fill and younger alluvial gravels. The depth to the older alluvium is constrained by boreholes to be below 10 feet below grade, approximately. Therefore, any Project excavations that exceed 10 feet in depth have the potential to encounter buried paleontological resources.

This study shows successful compliance with mitigation measure PAL-1 of the Mitigation Monitoring and Reporting Program (MMRP), which included the preparation of a paleontological resources report. Mitigation Measure PAL-2 of the MMRP would apply to the Project, which includes retention of a qualified paleontologist, paleontological monitoring of excavations exceeding 10 feet or when older Quaternary alluvial silts and clays are encountered, salvage and curation of significant fossil discoveries, and final reporting. Mitigation Measure PAL-3 of the MMRP would also apply to the Project if paleontological resources and sensitive deposits remain or become exposed, then an avoidance and minimization plan shall be prepared. With implementation of these measures, impacts to paleontological resources would be less than significant under CEQA.

Mitigation Measures

PAL-2: Avoid paleontological resources or conduct monitoring. The applicant shall redesign the Opportunity Site development to avoid sensitive paleontological resources and deposits that could potentially contain these resources. If avoidance and/or Opportunity Site redesign is infeasible, then paleontological monitoring shall be implemented and shall include the following implementation steps:

- The applicant shall retain a qualified paleontologist, who shall attend the preconstruction meeting(s) to consult with the grading and excavation contractors or subcontractors concerning excavation schedules, paleontological field techniques, and safety issues. A qualified paleontologist is defined as an individual who (1) has an MS or PhD in paleontology or geology and/or a publication record in peer-reviewed journals; (2) also has

demonstrated familiarity with paleontological procedures and techniques; (3) is knowledgeable in the geology and paleontology of the county; (4) has proficiency in recognizing fossils in the field, determining their significance, and collecting vertebrate fossils in the field; and (5) has worked as a paleontological mitigation project supervisor in the county for at least 1 year.

- A paleontological monitor or a qualified paleontologist shall be on site on a full-time basis during excavation and ground disturbing activities that occur in any undisturbed deposits below ground surface, to inspect exposures for contained fossils. The paleontological monitor shall work under the direction of the Project's qualified paleontologist. A paleontological monitor is defined as an individual selected by the qualified paleontologist who has experience in the collection and salvage of fossil materials. If fossils that have significance for the scientific record are discovered on a development site, the qualified paleontologist shall recover them and temporarily direct, divert, or halt grading to allow recovery of fossil remains.
- The qualified paleontologist shall be responsible for the cleaning, repairing, sorting, and cataloguing of fossil remains collected during the monitoring and salvage portion of the mitigation program.
- Prepared fossils, along with copies of all pertinent field notes, photos, and maps, shall be deposited (as a donation) at a scientific institution with permanent paleontological collections, such as the Los Angeles County Natural History Museum.
- Within 30 days after the completion of excavation and ground disturbing activities, the qualified paleontologist shall prepare and submit to the City of Riverside Community & Economic Development Department, Planning Division a paleontological resource recovery report that documents the results of the mitigation program. This report shall include discussions of the methods used, stratigraphic section(s) exposed, fossils collected, and significance of recovered fossils.

PAL-3: Avoid/minimize impacts on paleontological resources during operation. If significant paleontological resources and sensitive deposits with the potential to contain significant paleontological resources are identified within an Opportunity Site area during design/planning (Mitigation Measures MM-PAL-1 and MM-PAL-2), and deposits that are sensitive for significant paleontological resources remain exposed at or near the ground surface or become exposed during project operations, then an avoidance and minimization plan shall be prepared to avoid/minimize potential impacts during operations. This plan may include, but not be limited to:

- Securing sensitive deposits from accessibility through the development of exclusion zones
- Preparing an operations and maintenance plan to minimize degradation and exposure of sensitive deposits
- Designing and developing interpretive exhibits to provide education and understanding of the importance of avoiding and protecting sensitive deposits and paleontological resources

If significant impacts on a newly exposed or existing significant paleontological resource cannot be avoided, then Mitigation Measure MM-PAL-2 shall be implemented.

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Appendix A

Personnel



Sara Dietler

Senior Archaeologist

EDUCATION

BA. Anthropology,
San Diego State
University

20 YEARS OF EXPERIENCE

CERTIFICATIONS/ REGISTRATION

California BLM Permit,
Principal Investigator,
Statewide

Nevada BLM Permit,
Paleontology, Field
Agent, Statewide

PROFESSIONAL AFFILIATIONS

Society for American
Archaeology (SAA)

Society for California
Archaeology (SCA)

Sara is a senior archaeology and paleontology lead with 20 years of experience in cultural resources management in Southern California. As a senior project manager, she manages technical studies including archaeological and paleontological assessments and surveys, as well as monitoring and fossil salvage for many clients, including public agencies and private developers. She is a cross-trained paleontological monitor and supervisor, familiar with regulations and guidelines implementing the National Historic Preservation Act (NHPA), National Environmental Policy Act (NEPA), California Environmental Quality Act (CEQA), and the Society of Vertebrate Paleontology guidelines. She has extensive experience providing oversight for long-term monitoring projects throughout the Los Angeles Basin for archaeological, Native American, and paleontological monitoring compliance projects and provides streamlined management for these disciplines.

Relevant Experience

San Pedro Plaza Park, San Pedro, Los Angeles, CA. Senior Cultural Resources Project Manager. Provided archaeological and paleontological monitoring support for the San Pedro Plaza Park Project. The project area is located in the City of Los Angeles port district of San Pedro, approximately 26 miles south of downtown Los Angeles for the City of Los Angeles, Bureau of Engineering, Environmental Management Group, Sara provided quality control oversight for the archaeological and paleontological mitigation. During monitoring on the project, archaeological materials were recovered include refuse associated with park use since it opened in 1889, and historic building debris likely associated with the Carnegie Library which formerly stood on site. Provided recommendations for commemoration and protection of the find.

City of Los Angeles Department of Public Works BOE, Gaffey Street Pool Construction Monitoring, San Pedro, Los Angeles, CA. Project Manager. Sara oversaw the data recovery of a World War I slit trench discovered during project excavation for an ADA compliant sidewalk. Provided mitigation recommendations and immediate response to the find. Served as project manager and senior archaeologist on the project.

Warner Grand Theatre, Historic Resources Technical Report and Conditions Assessment, San Pedro, Los Angeles, CA. Project Manager, Report Co-Author. The City of Los Angeles Bureau of Engineering, Environmental Management Group requested a Cultural Resources Surveys to inform and guide future rehabilitation or redevelopment efforts of the Warner Grand Theatre. The Warner Grand Theatre designed in the Art Deco-Modern style by master architect B. Marcus Priteca in 1931, and is listed on the National Register of Historic Places, and is designated a Los Angeles Historic-Cultural Monument. ESA prepared a historical resources technical report and conditions assessment report, which provided a comprehensive table of character-defining features along with a conditions

assessment of each feature located within the interior and exterior of the Warner Grand Theatre.

City of Los Angeles Department of Public Works BOE, Alameda Street Widening Between Harry Bridges Boulevard and Anaheim Street Project, Los Angeles, CA. *Project Manager.* The project included upgrades to Alameda Street and adjoining streets with improved infrastructure to accept increased traffic from existing and proposed projects located primarily within the Port of Los Angeles and the Wilmington Industrial Park and to adequately deal with storm flows. Conducted a CHRIS record search of the project area for archaeological and paleontological resources and produced technical documents regarding the findings and recommendations for construction activities during the proposed project. In addition, provided archaeological/paleontological monitoring for geotechnical testing and further recommendations based on the results of the testing. Sara provided senior oversight of the reporting and survey and served as project manager.

670 Mesquit Street and Seventh Street Bridge Evaluation, Los Angeles, CA. *Project Manager and Report Co-author.* ESA prepared an EIR for the 670 Mesquit Street project in Los Angeles. As part of the EIR, a Cultural Resources Technical Report was prepared to determine if the project site was eligible for listing as a historical resource. The project site, originally occupied by the Los Angeles Ice and Cold Storage Company, was determined to lack integrity and therefore, ineligible for listing. Although the core of the building on the project site retained elements of the historic cold storage building, the facility was seismically upgraded resulting in significant alterations to its exterior. In its current condition, the facility does not convey its historical associations. The project was also evaluated to determine if it would result in any potential impacts to nearby historic resources, including the Seventh Street Bridge and adjacent railroad tracts. Located south of the project site is the Seventh Street Bridge, which is listed on the California Register of Historical Resources, and eligible for the National Register of Historic Places. Sara provided oversight and analysis for the preparation of Cultural Resources Technical Report.

Long Beach Courthouse Project; Long Beach, CA. *Senior Project Archaeologist and Project Manager.* Under contract to Clark Construction Sara directed the paleontological and archaeological monitoring for the construction of the New Long Beach Courthouse. She supervised monitors inspecting excavations up to 25 feet in depth. Nine archaeological features were recovered. Sara completed an assessment of the artifacts and fossil localities in a technical report at the completion of the project.

Venice Dual Force Main Project, Venice, CA. *Cultural Resources Lead.* The Venice Dual Force Main Project is an \$88 million sewer force main construction project spanning 2 miles within Venice, Marina del Rey, and Playa del Rey. Contracted to Vadnais Trenchless Services and reporting to the City of Los Angeles, Bureau of Engineering, Environmental Management Group, ESA is serving as the project's environmental resource manager. Sara provides quality control oversight for the archaeological and paleontological mitigation.

Advanced Water Treatment Facility Project Groundwater Reliability Improvement Project, Pico Rivera, CA. *Project Manager.* ESA is providing environmental compliance monitoring for the Water Replenishment District to



ensure compliance with the conditions contained in the Mitigation and Monitoring Reporting Programs associated with three environmental documents, including the Final EIR, a Mitigated Negative Declaration, and a Supplemental EIR, pertaining to three infrastructure components associated with the project. ESA provides general compliance monitoring at varying rates of frequency depending on the nature of the activities and is sometimes on-site for 4-hour spot checks and other times for full 24-hour rotations. The project is located near a residential neighborhood and adjacent the San Gabriel River. Issues of concern include noise, vibration, night lighting, biological resources, cultural resources, and air quality. Sara provides quality assurance and oversight of the field monitoring, and day-to-day response to issues. She oversees archaeological and Native American monitoring for ground disturbance and coordinates all sub-consultants for the project. She provides daily, weekly, and quarterly reporting on project compliance to support permitting and agency oversight.

Southern California Edison On-Call Master Services Agreement for Natural and Cultural Resources Services; *Cultural Resources Task Manager.* Sara provides project management and senior archaeological support for an on-call Master Services Agreement with Southern California Edison for cultural and natural resources consulting services. This contract has included numerous surveys and monitoring projects for pole replacements and small- to mid-size reconductoring projects, substation maintenance, and construction projects. Sara has served as project manager for more than 25 projects under this contract. She is the go-to person for all water, gas, and power projects occurring in the city of Avalon on Santa Catalina Island. Sara is responsible for oversight of archaeological and paleontological monitors, serving as report author and report manager.

Los Angeles Unified School District (LAUSD) Central Los Angeles High School #9; Los Angeles, CA. *Senior Project Archaeologist & Project Manager.* Sara conducted on-site monitoring and investigation of archaeological sites exposed as a result of construction activities. During the data recovery phase in connection with a 19th century cemetery located on-site, she participated in locating of features, feature excavation, mapping, and client coordination. She organized background research on the cemetery, including genealogical, local libraries, city and county archives, other local cemetery records, internet, and local fraternal organizations. Sara advised on the lab methodology and setup and served as project manager. Sara was a contributing author and editor for the published monograph, which was published as part of a technical series, "Not Dead but Gone Before: The Archaeology of Los Angeles City Cemetery."

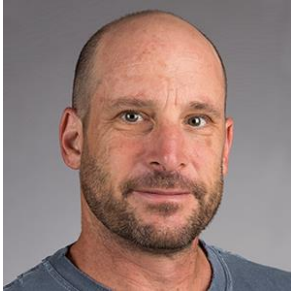
Scattergood Olympic Transmission Line, Los Angeles, CA. *Report Author.* The Los Angeles Department of Water and Power is proposing to construct and operate approximately 11.4 miles of new 230 kilovolt (kv) underground transmission line that would connect the Scattergood Generation Station and Olympic Receiving Station. The project includes monitoring of construction activities occurring in street rights-of-way. Sara is providing final reporting for the long-term monitoring and QA/QC of the field data.

Veterans Administration Long Beach, Long Beach, CA. *Senior Project Manager.* Sara managed a long term monitoring project which also includes implementation of a Memorandum of Agreement, a Plan of Action, and Historic Properties Treatment plan for the mitigation of disturbance to a prehistoric site on the campus.

Downtown Cesar Chavez Median Project, City of Los Angeles, CA. *Project Manager.* Sara assisted the City of Los Angeles Department of Public Works Bureau of Engineering with a Local Assistance Project requiring consultations with Caltrans cultural resources. Sara was responsible for Caltrans coordination, serving as contributing author and report manager for the required Archaeological Survey Report, Historic Properties Survey Report, and Historical Resources Evaluation Report prepared for the project.

Hellman Ranch Project, Orange County, CA. *Lab Director.* Sara served as the lab director for the final monitoring phase of the John Laing Homes development project, cataloging and analyzing artifacts recovered from salvage monitoring and test units placed in relation to recovered intact burials. She conducted microscopic analysis of small items such as bone tools and shell and stone beads, directed lab assistants, and oversaw special studies, including the photo-documentation of the entire collection. Sara completed a section reporting on the results of the bead and ornament analysis in the final report, which was published as part of a technical series.

Hansen Dam Golf Course Water Recycling Project, Los Angeles, CA. *Senior Archaeologist and Project Manager.* Sara directed a phase I historical assessment for the Hansen Dam Golf Course Water Recycling Project located in the San Fernando Valley, City of Los Angeles, California. The project included the construction of an outdoor pumping station adjacent to the existing Hansen Tank located at the Los Angeles Department of Water and Power's (LADWP's) Valley Generating Station. In addition, a pipeline or distribution line was planned to be installed from the pumping station to the Hansen Dam Golf Course along the Tujunga Wash. The phase I study of this project included mitigation for the effects of the project on the portion of the golf course falling within the area of potential effects, which was potentially sensitive for buried cultural resources as the result of a complex of World War II housing units placed on the site between the 1940s and the 1960s. Sara conducted consultation with the USACE regarding the project.



Russell S. Shapiro, PhD

Principal Investigator

EDUCATION

Ph.D., Geological Sciences, University of California, Santa Barbara, 1998
 B.S., Geology, Humboldt State University, 1992

25 YEARS EXPERIENCE

CERTIFICATIONS/REGISTRATION

U.S. Fish and Wildlife Cultural Resources Use Permit
 U.S. Forest Service Cultural Resources Use Permit
 Bureau of Land Management Cultural Resources Use Permit
 Wilderness and Remote First Aid (Red Cross Certified)

PROFESSIONAL AFFILIATIONS

Geobiology Society; Treasurer
 Society for Sedimentary Geology (SEPM); Vice-President
 Society for Vertebrate Paleontology

As a Principal Investigator, Dr. Shapiro has been involved in review of paleontological resource reports and evaluating proposed mitigation plans. Dr. Shapiro researches and prepares environmental impact reports regarding cultural resources (fossils), conducts field (geological and paleontological) surveys, and oversees ground disturbance at construction sites for Environmental Quality compliance (CEQA, NEPA, and the Paleontological Resources Preservation Act). As a Qualified Paleontologist, Dr. Shapiro has also reviewed resource planning documents for several counties in California and was the lead on the Bureau of Land Management’s assessment of fossil resources of Northern California.

In his academic role as Professor of Geology, Dr. Shapiro teaches several paleontology courses including “Applied Paleontology” which is a modified “Cultural Resources” course, focusing on budgeting, CEQA and NEPA regulations, field surveys, GIS projections, fossil recovery, and curation. He also teaches in the annual Field Camp courses and manages the rock preparation lab and maintains the microscopes.

Relevant Experience

ReneSola Gentry Solar Project, Paleontological Resource Assessment Report, Lincoln, California. *Principal Investigator, Mapping.* Literature, geological map, and museum review for fossil resources. Field mapping of entire property. Final product included a mitigation and monitoring plan.

Paleontological Sensitivity Analysis Report, Elk Grove, California; Pacific Gas and Electric. *Principal Investigator.* Literature, geological map, and air photo archival report on the potential fossil yield for a proposed pipeline. Recommendations based on searches of museum collections of relevant geological formations. Deliverables consisted of a sensitivity report and appendix of known fossil occurrences by taxa and location.

Mojave Solar Project Cultural Services; San Bernardino County, California; CH2M Hill. *Principal Investigator.* Reviewed technical report; advised on scientific analyses.

El Camino Real Bridge Replacement Environmental Services; San Luis Obispo County, California, Quincy Engineering. *Principal Investigator.* Reviewed technical report for CEQA/NEPA documentation, technical studies, and permitting, for the replacement of the El Camino Real bridge over Santa Margarita Creek in Atascadero.

San Bernardino County General Plan Update: Paleontological Resources Technical Report. *Primary Reviewer.* External reviewer for general plan update. Involved assessing all geological formations in San Bernardino County and museum records of significant fossils.

Recent Significant Excavations

Miocene Vertebrates of the Sheldon Wildlife National Refuge. Oversaw operations to conduct significant collection of Miocene-age fossils from volcanic sediments for the U.S. Fish and Wildlife Service. Duties included field collection and high-resolution GPS mapping, fossil preparation and identification, curation at the Gateway Science Museum.

Eocene Horses from Black Butte Lake Reservoir. Field jacketing and preparation of fossil horse skull material from the reservoir under the direction of the U.S. Army Corps of Engineers. Fossils were prepared, identified, and returned to the Army Corps for public display.

Pleistocene Camelid from Nevada. This project grew out of a paleontological resource assessment field survey. During the survey, a semi-articulated rear leg of a late Pleistocene camelid was collected and prepared. A manuscript was published in 2016.

Publications and Presentations

Shapiro, R. S., 2016, Camelid record of Mesquite Lake, California: impact of earliest Holocene climate change in Reynolds, R. E., ed., *Going LOCO investigations along the Lower Colorado River*, 2016 Desert Symposium Field Guide and Proceedings, p 41-47.

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Shapiro, R. S. and Spangler, E., 2009, Bacterial fossil record in whale falls: relation of taphonomy and paleoecology to depositional environment: *Palaeogeography, Palaeoclimatology, Palaeoecology*, v. 274, p. 196-203.

Shapiro, R. S., Fricke, H., and Fox, K., 2009, Dinosaur-bearing oncoids from ephemeral lakes of the Lower Cretaceous Cedar Mountain Formation, Utah: *PALAIOS*, v. 24, p. 51-58.

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Shapiro, R. S., 1998, Paleogene-Early Neogene macrofossils of southwestern Santa Cruz Island in Weigand, P. W., ed., *Contributions to the Geology of the Northern Channel Islands, Southern California: Pacific Section, American Association of Petroleum Geologists*, MP-45, p. 123-132.

Appendix B

LACM Database Search (Not for Public Distribution)



Appendix F

Noise and Vibration Analysis



TECHNICAL MEMORANDUM

To: Haig Nazarian and Matthew Keenen, CGI Plus

From: Jessie Fan, Ryan Callahan, Simran Singh, Kimley-Horn and Associates, Inc.

Date: August 18, 2022

Subject: 1575 University Avenue Development Project – Noise and Vibration Analysis

Purpose

The purpose of this memorandum is to identify the noise and vibration associated with construction and operations of the proposed 1575 University Avenue Development Project (Project), located in the City of Riverside, California (City). This memorandum has been prepared at the request of the City to respond to the Environmental and Technical Studies Items on the Planning – Comment Summary Matrix dated March 2, 2022.

Project Location and Setting

The Project is located at 1575 University Avenue in Riverside, Riverside County, California. The approximate 4.29 acre site (Assessor Parcel Number [APN] 250-170-036) is bordered by Seventh Street to the north, Cranford Avenue to the east, University Avenue to the south, and Chicago Avenue to the west. State Road 60 (Moreno Valley Freeway) is located approximately 1,900 feet to the northeast of the Project Site. The Project Site is currently developed with a 24,848 square-foot commercial building and a surface parking lot with 101 parking stalls. Existing commercial, retail buildings, and multi-family residential uses exist north, south, and east of the Project Site, respectively.

For more details, see [Exhibit 1: Project Vicinity Map](#).

Project Description

The Project proposes the demolition of the existing improvements (24,848 square-foot commercial structure and 101-stall surface parking lot) and construct a new mixed-use development with 257 dwelling units, approximately 5,450 square feet of new commercial uses, and 488 parking stalls within seven levels of a single parking garage and 11 parking stalls on the ground level.

Exhibit 1: Project Vicinity Map



1575 University Avenue Development Project
Project Vicinity Map

Noise Background

Sound is technically described in terms of amplitude (loudness) and frequency (pitch). The standard unit of sound amplitude measurement is the decibel (dB). The decibel scale is a logarithmic scale that describes the physical intensity of the pressure vibrations that make up any sound. The pitch of the sound is related to the frequency of the pressure vibration. Since the human ear is not equally sensitive to a given sound level at all frequencies, a special frequency-dependent rating scale has been devised to relate noise to human sensitivity. The A-weighted decibel scale (dBA) provides this compensation by discriminating against frequencies in a manner approximating the sensitivity of the human ear. Noise, on the other hand, is typically defined as unwanted sound. A typical noise environment consists of a base of steady ambient noise that is the sum of various distant and indistinguishable noise sources. Superimposed on this background noise is the sound from individual local sources. These can vary from an occasional aircraft or train passing by to virtually continuous noise from traffic on a major highway.

Several rating scales have been developed to analyze the adverse effect of community noise on people. Since environmental noise fluctuates over time, these scales consider that the effect of noise on people is largely dependent on the total acoustical energy content of the noise as well as the time of day when the noise occurs. For example, the equivalent continuous sound level (L_{eq}) is the average acoustic energy content of noise for a stated period of time; thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. The Day-Night Sound level (L_{dn}) is a 24-hour average L_{eq} with a 10 dBA “weighting” added to noise during the hours of 10:00 P.M. to 7:00 A.M. to account for noise sensitivity in the nighttime. The Community Noise Equivalent Level (CNEL) is a 24-hour average L_{eq} with a 10 dBA weighting added to noise during the hours of 10:00 P.M. to 7:00 A.M. and an additional 5 dBA weighting during the hours of 7:00 P.M. to 10:00 P.M. to account for noise sensitivity in the evening and nighttime.

Regulatory Setting

Federal Noise and Vibration Standards

There are no federal noise standards that directly regulate environmental noise related to the construction or operation of the Project. Under the Occupational Safety and Health Act of 1970 (29 United States Code [U.S.C.] Section 1919 et seq.), the Occupational Safety and Health Administration (OSHA) has adopted regulations designed to protect workers against the effects of occupational noise exposure. These regulations list permissible noise level exposure as a function of the amount of time during which the worker is exposed. The regulations further specify a hearing conservation program that involves monitoring the noise to which workers are exposed, ensuring that workers are made aware of overexposure to noise, and periodically testing the workers’ hearing to detect any degradation.

There are no federal vibration standards or regulations adopted by any agency that are applicable to evaluating vibration impacts from land use development projects, such as the Project. However, the Federal Transit Administration (FTA) has adopted vibration criteria that are commonly used to

evaluate potential structural damage to buildings by building category from construction activities. The vibration damage criteria adopted by FTA are shown in [Table 1, Construction Vibration Damage Criteria](#).

Table 1: Construction Vibration Damage Criteria	
Building Category	PPV (in/sec)
I. Reinforced-concrete, steel, or timber (no plaster)	0.5
II. Engineered concrete and masonry (no plaster)	0.3
III. Non-engineered timber and masonry buildings	0.2
IV. Buildings extremely susceptible to vibration damage (such as historic buildings)	0.12
Source: FTA, Transit Noise and Vibration Impact Assessment Manual, 2018.	

FTA has also adopted vibration criteria associated with the potential for human annoyance from groundborne vibration for the following three land-use categories: Category 1 – High Sensitivity, Category 2 – Residential, and Category 3 – Institutional, as shown in [Table 2, Groundborne Vibration Impact Criteria for General Assessment](#). FTA defines Category 1 as buildings where vibration would interfere with operations within the building, including vibration-sensitive research and manufacturing facilities, hospitals with vibration-sensitive equipment, and university research operations. Vibration-sensitive equipment includes, but is not limited to, electron microscopes, high-resolution lithographic equipment, and normal optical microscopes. Category 2 refers to all residential land uses and any buildings where people sleep, such as hotels and hospitals. Category 3 refers to institutional land uses such as schools, churches, other institutions, and quiet offices that do not have vibration-sensitive equipment but still have the potential for activity interference.

Table 2: Groundborne Vibration Impact Criteria for General Assessment			
Land Use Category	Frequent Events¹	Occasional Events²	Infrequent Events³
Category 1: Buildings where vibration would interfere with interior operations.	65 VdB ⁴	65 VdB ⁴	65 VdB ⁴
Category 2: Residences and buildings where people normally sleep.	72 VdB	75 VdB	80 VdB
Category 3: Institutional land uses with primarily daytime use.	75 VdB	78 VdB	83 VdB
Notes: 1. "Frequent Events" is defined as more than 70 vibration events of the same source per day. 2. "Occasional Events" is defined as between 30 and 70 vibration events of the same source per day. 3. "Infrequent Events" is defined as fewer than 30 vibration events of the same kind per day. 4. This criterion is based on levels that are acceptable for most moderately sensitive equipment such as optical microscopes.			
Source: FTA, Transit Noise and Vibration Impact Assessment Manual, 2018.			

State of California Noise Standards

The State does not have standards for environmental noise, but the Governor’s Office of Planning and Research (OPR) has established general plan guidelines for evaluating the compatibility of various land uses as a function of community noise exposure.¹ The purpose of these guidelines is to maintain acceptable noise levels in a community setting for different land use types. Noise compatibility by different land uses types is categorized into four general levels: “normally acceptable,” “conditionally acceptable,” “normally unacceptable,” and “clearly unacceptable.”

For instance, a noise environment ranging from 50 dBA CNEL to 65 dBA CNEL is considered to be “normally acceptable” for multi-family residential uses, while a noise environment of 75 dBA CNEL or above for multi-family residential uses is considered to be “clearly unacceptable. In addition, California Government Code Section 65302(f) requires each county and city in the State to prepare and adopt a comprehensive long-range general plan for its physical development, with California Government Code Section 65302(f) requiring a noise element to be included in the general plan. The noise element must: (1) identify and appraise noise problems in the community; (2) recognize Office of Noise Control guidelines; and (3) analyze and quantify current and projected noise levels.

City of Riverside General Plan

The General Plan Noise Element identifies sources of noise and provides objectives and policies designed to incorporate noise control in the planning process. It requires protection of sensitive

¹ State of California Governor’s Office of Planning and Research, General Plan Guidelines Appendix D, 2003. Accessed at https://opr.ca.gov/docs/OPR_Appendix_D_final.pdf. Accessed on August 18, 2022.

receptors from excessive noise associated with transportation and non-transportation activities. The goals of the Noise Element are to examine noise sources in the City with a view toward identifying and appraising the potential for noise conflicts and identify ways to reduce existing and potential noise impacts. Additionally, it requires the use of noise control measures to reduce the impact from transportation related noise; to incorporate noise consideration into land use planning decisions; and to develop measures to control non-transportation noise impacts.

The City of Riverside Noise Standards are developed from those of several federal and State agencies including the Federal Highway Administration (FHWA), the United States Environmental Protection Agency (USEPA), the Department of Housing and Urban Development, the American National Standards Institute (ANSI), and the State of California Department of Health Services. These standards set limits on the noise exposure level for various land uses. As with the California Noise Standards described above, these General Plan standards are related to the siting of land uses and are not typically used as thresholds of significance for determining noise impacts associated with construction and operation of the Project. However, the standards do provide a means for judging whether an existing noise environment would be compatible with development of a new noise-sensitive land use or whether a new use would create an incompatible noise environment for existing noise-sensitive uses. The City of Riverside General Plan (CRGP) Noise Element Table N-10 provides noise and land use compatibility criteria; see [Table 3: Land Use Compatibility for Community Noise Exposure](#).

Land Use Category	Exterior Noise Level (CNEL)						
	55	60	65	70	75	80	85
Residential- single family residences, multi-family residences, senior housing, convalescent homes	A	A	B	C	D	D	D
Infill Residential- mobile homes, mixed-use (commercial/residential)	A	A	A	B	B	C	D
Commercial Transient Lodging- motels, hotels, resorts	A	A	B	B	C	C	D
Schools, Libraries, Churches, Hospitals, Nursing Homes	A	A	B	B	C	C	D
Auditoriums, Concert Halls, Amphitheaters, Meeting Halls	B	B	B	D	D	D	D
Sports Arenas, Outdoor Spectator Sports, Amusement Parks	B	B	B	B	D	D	D
Playgrounds, Neighborhood Parks	A	A	A	C	D	D	D
Golf Courses, Riding Stables, Cemeteries	A	A	A	C	C	D	D

Office Buildings, Business, Commerical, Professional	A	A	B	B	C	C	C
Industrial, Manufacturing, Utilities, Wholesale, Service Stations, Agricultural	A	A	A	B	B	C	C
Freeway Adjacent Commercial, Office, and Industrial Uses.	A	A	B	B	B	C	C
A	NORMALLY ACCEPTABLE—Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal construction, without any special noise insulation requirements.						
B	CONDITIONALLY ACCEPTABLE—New construction or development should be undertaken only after a detailed analysis of the noise requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.						
C	NORMALLY UNACCEPTABLE—New construction or development should generally be discouraged. If it does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.						
D	UNACCEPTABLE—New construction or development shall not be undertaken.						

Source: City of Riverside, *Riverside General Plan Table N-10: Noise/Land Use Compatibility Criteria, 2007.*

The compatibility criteria indicate that residential land uses are considered clearly compatible with noise levels below 55 dBA L_{dn} and compatible with mitigation with noise levels of between 55 and 60 dBA L_{dn}. The compatibility criteria indicate that commercial land uses are considered clearly compatible with noise levels below 65 dBA L_{dn} and compatible with mitigation with noise levels of less than 70 dBA L_{dn}.

Table 4: Interior and Exterior Noise Standards lists exterior noise level standards and the type of occupancy to which they should be applied. While the City specifically identifies an exterior noise level limit for noise-sensitive land uses such as hotels, hospitals, schools, and parks, the City does not maintain exterior noise standards for non-noise sensitive land uses such as industrial uses, among others.

Table 4: Interior and Exterior Noise Standards		
Exterior Noise Standards		
Land Use Category	Time Period	Noise Level
Residential	Night (10:00 p.m. to 7:00 a.m.)	45 dBA
	Day (7:00 a.m. to 10:00 p.m.)	55 dBA
Office/commercial	Any time	65 dBA
Industrial	Any time	70 dBA

Community support	Any time	60 dBA
Public recreation facility	Any time	65 dBA
Nonurban	Any time	70 dBA
Interior Noise Standards		
Land Use Category	Time Period	Noise Level
Residential	Night (10 p.m. to 7 a.m.)	35 dBA
	Day (7 a.m. to 10 p.m.)	45 dBA
School	7 a.m. to 10 p.m. (while school is in session)	45 dBA
Hospital	Any time	45 dBA
Source: City of Riverside, City of Riverside Municipal Code, Chapter 7.25 - NUISANCE EXTERIOR SOUND LEVEL LIMITS, Tables 7.25.010A - Exterior Noise Standards & Table 7.30.015 - Interior Noise Standards, 2022.		

Objective N-1: Minimize noise levels from point sources throughout the community and, wherever possible, mitigate the effects of noise to provide a safe and healthful environment:

- Policy N–1.1: Continue to enforce noise abatement and control measures particularly within residential neighborhoods.
- Policy N–1.2: Require the inclusion of noise-reducing design features in development consistent with standards in Figure N–10 (Noise/Land Use Compatibility Criteria), Title 24 California Code of Regulations and Title 7 of the Municipal Code.
- Policy N–1.3: Enforce 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 minimized.
- 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–1.6: Educate the public about City noise regulations.
- Policy N–1.7: Evaluate noise impacts from roadway improvement projects by using the City’s Acoustical Assessment Procedure.
- Policy N–1.8: Continue to consider noise concerns in evaluating all proposed development decisions and roadway projects.

City of Riverside Municipal Code

City of Riverside Municipal Code (CRMC) Chapter 5 Section 7.34.020 provides specific noise restrictions and exemptions for noise sources within the City. RMC noise regulations state that construction activity shall be prohibited, except between the hours of 7:00 A.M. and 7:00 P.M. Mondays through Fridays and also 8:00 A.M. and 5:00 P.M. Saturday and Sundays. There are no

established noise limits for noise associated with construction activity when construction occurs within the permitted hours.

Exemptions

- A. *Emergency work.* The provisions of this title shall not apply to the emission of sound for the purpose of alerting persons to the existence of an emergency or in the performance of emergency work.
- B. *Construction.* Noise sources associated with construction, repair, remodeling, or grading of any real property; provided a permit has been obtained from the City as required; and provided said activities do not take place between the hours of 7:00 P.M. and 7:00 A.M. on weekdays, between the hours of 5:00 P.M. and 8:00 A.M. on Saturdays, or at any time on Sunday or a federal holiday.

Existing Environmental Setting

Mobile noise sources, especially cars and trucks, are the City's most common and significant noise sources. The existing mobile noise sources in the Project area are the motor vehicles traveling on University Avenue, Chicago Avenue, and Cranford Avenue. The primary stationary noise sources in the Project vicinity are those associated with the surrounding residential and commercial uses. Such stationary noise sources include mechanical equipment (e.g., heating, ventilation, and air conditioning [HVAC] equipment), idling vehicles, restaurant customers, music playing, dogs barking, and people talking. The noise associated with these sources may represent a single-event noise occurrence or short-term noise.

Sensitive Receptors

Noise exposure standards and guidelines for various types of land uses reflect varying noise sensitivities associated with uses. Land uses considered sensitive receptors include residences, schools, playgrounds, childcare centers, long-term health facilities, rehabilitation centers, convalescent centers, and retirement homes. Sensitive land uses surrounding the Project Site consist of mostly residential communities and travel lodging approximately 50 feet east and south, respectively, of the Project Site. In addition, a high school is located approximately 730 feet north of the Project Site. To quantify noise exposure levels near the Project Site, four noise measurements (see [Exhibit 2](#)) were chosen surrounding the Project Site closest to the noise-sensitive receptors including:

- SR-1: University Gardens Apartment Building at the corner of Seventh Street and Cranford Ave, approximately 50 feet east of the Project Site
- SR-2: Quality Inn Riverside and Courtyard Marriott off of University Ave approximately 98 feet south of the Project Site
- SR-3: John W North High School along West Linden Street about 730 feet north of the Project Site

- SR-4: Apartment Complexes at the Corner of Cranford Ave and Seventh Street approximately 358 feet east of the Project Site
- SR-5: Rock Ridge Apartment Complex along Chicago Ave approximately 705 feet west of the Project Site

Noise Measurements

The Project Site contains one unoccupied vacant building and an existing occupied commercial building. To quantify existing ambient noise levels in the Project area, Kimley-Horn conducted four short-term noise measurements on July 6, 2022; see Appendix B: Project Site Visit Log. The noise measurement sites are representative of typical existing noise exposure within and immediately adjacent to the Project Site. The 15-minute measurements were taken between 10:00 A.M. and 1:00 P.M. Measurements of L_{eq} are considered representative of the noise levels throughout the day. The average noise levels and sources of noise measured at each location are listed in Table 5: Existing Noise Measurements and shown on Exhibit 2: Noise Measurement Location.

Site #	Location	L_{eq} (dBA)	L_{min} (dBA)	L_{max} (dBA)	Time
NM-1	Dead end of 7th St. near Presley Ave.	52.3	44.1	71.9	11:30 A.M.
NM-2	University Avenue between Cranford and Chicago Ave.	69.1	48.7	79.5	1:04 P.M.
NM-3	Linden St and between Cranford & Presley Ave	64.1	48.4	76.9	11:55 A.M.
NM-4	Intersection between Chicago Ave. and Seventh St.	68.7	46.5	81.8	1:45 P.M.

Source: Noise measurements taken by Kimley-Horn and Associates, July 6, 2022. See Appendix A for noise measurement results.

A noise measurement on the eastern boundary of the Project Site was anticipated to represent the ambient noise levels for the University Garden Apartment Building (SR-1), located just east of the Project Site and multi-family residences (SR-4) further east. However, Kimley-Horn staff were unable to access the location due to unanticipated active construction occurring at the University Gardens Apartment Building. Furthermore, the construction activities at that location would not be representative of the permanent ambient conditions at SR-1 or SR-4. The noise measurement taken at NM-1 is considered to be representative of ambient conditions at SR-1 and SR-4 because it was taken adjacent to similar office uses. Since it is located further away from University Avenue, the main traffic thoroughfare for the Project Site, than SR-1, using that measurement as the baseline would be considered conservative.

Exhibit 2: Noise Measurement Locations



1575 University Avenue Development Project
 Noise Measurement Locations

Construction Noise

Construction noise typically occurs intermittently and varies depending on the nature or phase of construction. Noise generated by construction equipment can reach high levels. During construction, exterior noise levels could affect the noise-sensitive receptors near the construction site. Construction activities would include demolition, site preparation, grading, building construction, paving, and architectural coating. Such activities may require graders, dozers, and tractors during site preparation and grading; cranes, forklifts, generators, tractors, and welders during building construction; pavers, rollers, mixers, tractors, and paving equipment during paving; and air compressors during architectural coating. Typical operating cycles for these types of construction equipment may involve one or two minutes of full power operation followed by three to four minutes at lower power settings. Other primary sources of acoustical disturbance would be random incidents, which would last less than one minute (such as dropping large pieces of equipment or the hydraulic movement of machinery lifts). Noise generated by construction equipment, including earth movers, material handlers, and portable generators, can reach high levels. L_{max} is the maximum level of a noise source environment and is often used as a threshold value for typical noise levels of construction activities. Typical noise levels associated with individual construction equipment are listed in [Table 6: Typical Construction Noise Levels](#).

Equipment	Typical Noise Level (dBA L_{max}) at 50 feet from Source	Typical Noise Level (dBA L_{max}) at 100 feet from Source¹
Air Compressor	80	74
Backhoe	80	74
Compactor	82	76
Concrete Mixer	85	79
Concrete Pump	82	76
Concrete Vibrator	76	70
Crane, Mobile	83	77
Dozer	85	79
Generator	82	76
Grader	85	79
Jack Hammer	88	82
Loader	80	74
Paver	85	79
Pneumatic Tool	85	79
Pump	77	71
Roller	85	79
Saw	76	70
Shovel	82	76
Truck	84	78
Note: 1. Calculated using the inverse square law formula for sound attenuation: $dBA_2 = dBA_1 + 20\log(d_1/d_2)$		

Table 6: Typical Construction Noise Levels		
Equipment	Typical Noise Level (dBA L _{max}) at 50 feet from Source	Typical Noise Level (dBA L _{max}) at 100 feet from Source ¹
Where: dBA ₂ = estimated noise level at receptor; dBA ₁ = reference noise level; d ₁ = reference distance; d ₂ = receptor location distance.		
Source: Federal Transit Administration, <i>Transit Noise and Vibration Impact Assessment Manual</i> , September 2018.		

The City does not administer noise level standards for construction activities. However, this analysis conservatively uses the FTA’s threshold of 80 dBA (8-hour L_{eq}) for residential uses to evaluate construction noise.² Following FTA’s methodology for quantitative construction noise assessments, FHWA’s Roadway Construction Noise Model (RCNM) was used to predict construction noise at the nearest noise receptors (i.e., the multi-family residential and commercial uses adjacent/immediately surrounding the Project Site) consistent with the methodologies in the FTA *Transit Noise and Vibration Impact Assessment Manual*. Table 6 above shows the estimated exterior construction noise levels at the nearest receptors to the east of the Project Site. Following FTA methodology, when calculating construction noise, all equipment is assumed to operate at the center of the Project Site because equipment would operate throughout the Project Site and not at a fixed location for extended periods of time. Therefore, the distance used in the RCNM model were varied depending on the sensitive receptors distance to the center of the Project Site.

As indicated in Table 7: Estimated Construction Noise Levels at Sensitive Receptors and Table 8: Construction Noise Levels Summary, Project construction noise would be below the FTA noise threshold for residential land uses. Residential land use was used as the most conservative ambient noise threshold in RCNM. The Project’s existing surroundings include both residential and commercial uses nearby. In addition, although construction noise levels may exceed the area’s existing ambient levels, construction would be temporary and would not result in a permanent increase in ambient noise levels in the area. Project construction would also be prohibited between the hours of 7:00 P.M. and 7:00 A.M. on weekdays, between the hours of 5:00 P.M. and 8:00 A.M. on Saturdays, or at any time on Sunday or a federal holiday, in compliance with RMC Section 7.35.020. Therefore, construction noise impacts would be less than significant.

² Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, September 2018, Table 7-2, Page 179.

Table 7: Estimated Construction Noise Levels at Sensitive Receptors

<u>Off-site Sensitive Land Uses</u>	<u>Receptor Location</u>	<u>Land Use</u>	<u>Nearest Distance from Construction Activity to Noise Receptor (ft.)¹</u>	<u>Construction Phase</u>	<u>Estimated Maximum Construction Noise Levels (dBA L_{eq})</u>
SR-1	West (Northeast Corner of Site)*	Residential	199	Demolition	74.4
				Site Preparation	74.3
				Grading/Excavation	74.6
				Building Construction	74.9
				Paving	75.4
Architectural Coating	61.7				
Maximum Noise Level				74.9	
SR-2	South	Residential	432	Demolition	67.7
				Site Preparation	67.5
				Grading/Excavation	67.9
				Building Construction	68.1
				Paving	68.6
Architectural Coating	55.0				
Maximum Noise Level				68.6	
SR-3	North	Residential	935	Demolition	61.0
				Site Preparation	60.8
				Grading/Excavation	61.2
				Building Construction	61.4
				Paving	61.9
Architectural Coating	48.3				
Maximum Noise Level				61.9	
SR-4	West	Residential	578	Demolition	65.2
				Site Preparation	65.0
				Grading/Excavation	74.6
				Building Construction	65.6
				Paving	66.1
Architectural Coating	52.4				
Maximum Noise Level				74.6	
SR-5	East	Residential	899	Demolition	61.3
				Site Preparation	61.2
				Grading/Excavation	61.5

<u>Off-site Sensitive Land Uses</u>	<u>Estimated Maximum Noise Level (dBA L_{eq})</u>	<u>Measured Ambient Noise Level (dBA L_{eq})</u>	<u>Combined Ambient Noise Level (dBA L_{eq})</u>	<u>Threshold (dBA L_{eq})¹</u>	<u>Exceed Threshold?</u>
SR-1	74.9	52.3	74.9	80	No
SR-2	68.6	69.1	71.9	80	No
SR-3	61.9	64.1	66.1	80	No
SR-4	74.6	52.3	74.6	80	No
SR-5	62.3	68.7	69.6	80	No

1. The City does not have a quantitative noise threshold for construction and only limits the hours of the construction activities. Therefore, FTA's construction noise threshold are conservatively used for this analysis (FTA, *Transit Noise and Vibration Impact Assessment Manual*, September 2018).

Operational Noise

Project implementation would create new noise sources in the Project vicinity. The Project’s primary noise sources that could potentially impact nearby noise-sensitive land uses include mechanical equipment (e.g., HVAC, etc.), activities associated with loading/unloading commercial items, parking areas, trash/recycling truck pickups, and off-site traffic noise. The Project’s hours of operation would be restricted to 7:00 A.M. and 10:00 P.M., as per RMC Exterior Noise Guidelines.³

Mechanical Equipment

Potential stationary noise sources related to long-term Project operations include mechanical equipment (e.g., HVAC equipment). The nearest receptors are the commercial and residential mixed use buildings approximately 50 feet adjacent from the nearest mechanical equipment location on the Project Site. Mechanical equipment typically generates noise levels of approximately 52 dBA at 50 feet, at the adjacent residential mixed use building.⁴ Noise has a decay rate due to distance attenuation, which is calculated based on the Inverse Square Law of sound propagation. Based upon the Inverse Square Law, sound levels decrease by 6 dBA for each doubling of distance from the noise source. As a result, mechanical equipment noise would attenuate to to less than 52 dBA at greater distances than 50 feet. The Project’s mechanical equipment noise would be below the City’s most stringent exterior standards for residential uses of 55 dBA CNEL. Therefore, the Project would result in a less than significant impact concerning mechanical equipment noise levels.

³ City of Riverside, *Municipal Code § 07.35.020*, 2021, Riverside, Riverside County, California

⁴ Elliott H. Berger, Rick Neitzel, and Cynthia A. Kladden, *Noise Navigator Sound Level Database with Over 1700 Measurement Values*, June 26, 2015.

Mobile Traffic Noise

As indicated in Table 9: Summary of Project Trip Generation, the Project is anticipated to generate 1,751 daily trips, with up to 147 trips during the A.M. peak-hour and up to 149 trips during the P.M. peak-hour.⁵ In general, a 3-dBA increase in traffic noise is barely perceptible to people, while a 5-dBA increase is readily noticeable. Traffic volumes on Project area roadways would have to approximately double for the resulting traffic noise levels to generate a barely perceptible 3-dBA increase.⁶ The City has Average Daily Traffic (ADT) volume data for the Project vicinity’s main thoroughfares. For reference, ADT volume along perpendicular side streets to University Ave such as Iowa Avenue and Chicago Avenue range from 4,000 to 10,000 ADT respectively.⁷ As noted above, the Project would result in approximately 1,751 daily trips, which is not enough to double the existing traffic volumes on Iowa Avenue and Chicago Avenue, or nearby throughstreets. The Project would not generate enough traffic to result in a noticeable 3-dBA increase in ambient noise levels. Therefore, the Project would result in a less than significant impact concerning mobile traffic noise levels.

Table 9: Summary of Project Trip Generation									
			Trip Generation Rates						
			AM Peak Hour				PM Peak Hour		
Land Use	ITE Code/Quantity	Unit	Daily	In	Out	Total	In	Out	Total
Multifamily Housing (Mid-Rise)	221	DU	4.54	0.085	0.285	0.37	0.238	0.152	0.39
High-Turnover (Sit-Down) Restaurant	932	KSF	107.20	5.264	4.307	9.57	5.521	3.530	9.05
Proposed Project Land Use									
Multifamily Housing (Mid-Rise)	257.00	DU	1,167	22	73	95	61	39	100
High-Turnover (Sit-Down) Restaurant	5.450	KSF	584	29	23	52	30	19	49
Project Trips			1,751	51	96	147	91	58	149

Source: Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition.

⁵ The Project’s daily vehicle trips are based on Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition.

⁶ According to the California Department of Transportation, Technical Noise Supplement to Traffic Noise Analysis Protocol (September 2013), it takes a doubling of traffic to create a noticeable (i.e., 3 dBA) noise increase.

⁷ City of Riverside, 24-Hour Volume Counts, January 04, 2008. Available at: <https://www.riversideca.gov/pdf2/traffic-volume-count.pdf>. Accessed on August 15, 2022.

Vibration

Increases in ground-borne vibration levels attributable to the Project would be primarily associated with short-term construction-related activities. Project construction could result in varying degrees of temporary ground-borne vibration, depending on the specific construction equipment used and the operations involved.

The FTA has published standard vibration velocities for construction equipment operations. In general, the FTA architectural damage criterion for continuous vibrations (i.e., 0.20 inch-per-second peak particle velocity [in/sec PPV]) appears to be conservative. The types of construction vibration impacts include human annoyance and building damage. Human annoyance occurs when construction vibration rises significantly above the threshold of human perception for extended periods of time. Building damage can be cosmetic or structural. Ordinary buildings that are not particularly fragile would not experience any cosmetic damage (e.g., plaster cracks) at distances beyond 30 feet. This distance can vary substantially depending on the soil composition and underground geological layer between vibration source and receiver. In addition, not all buildings respond similarly to vibration generated by construction equipment. For example, for a building that is constructed with reinforced concrete with no plaster, the FTA guidelines show that a vibration level of up to 0.20 in/sec PPV is considered safe and would not result in any construction vibration damage. This analysis uses the FTA architectural damage criterion for continuous vibrations at non-engineered timber and masonry buildings of 0.20 in/sec PPV and human annoyance criterion of 0.40 in/sec PPV in accordance with Caltrans guidance⁸ to evaluate potential construction vibration impacts.

Table 10: Typical Construction Equipment Vibration Levels lists vibration levels at 25 feet for typical construction equipment. The nearest off-site buildings/structures are the residential and commercial buildings located adjacent to the north and east of the Project Site, approximately 50 feet from Project construction activities. Groundborne vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance. As indicated in Table 6, based on FTA data, vibration velocities from typical heavy construction equipment operations that would be used during Project construction range from 0.003 to 0.089 in/sec PPV at 25 feet from the activity source.

Table 10: Typical Construction Equipment Vibration Levels	
Equipment	PPV at 25 feet (in/sec)
Large Bulldozer	0.089
Caisson Drilling	0.089
Loaded Trucks	0.076
Rock Breaker	0.089
Jackhammer	0.035
Small Bulldozer/Tractors	0.003
Source: Federal Transit Administration, <i>Transit Noise and Vibration Impact Assessment Manual</i> , 2018.	

⁸ California Department of Transportation, Transportation and Construction Vibration Guidance Manual, September 2013, Table 20.

As shown in Table 10, the vibration velocities at 25 feet from construction equipment would be 0.089 in/sec PPV, which would be below the FTA's 0.20 in/sec PPV threshold for building damage and Caltrans' 0.40 in/sec PPV threshold for human annoyance. It is also acknowledged that construction activities would occur throughout the Project Site and would not be concentrated at the point closest to the nearest off-site structures. Once operational, the proposed Project would not include vibration-generating uses or operations. Therefore, the Project would result in a less than significant impact concerning construction vibration levels.

Conclusion

The Project's construction and operational noise and vibration levels would not exceed the City and FTA standards. The Project would result in less than significant construction and operational noise and vibration impacts and no mitigation is required.

Appendix A

RCNM Modeling Results

Demolition

Report date: 08/18/2022
 Case Description: Demolition

		Baselines (dBA)	
Description	Land Use	Daytime	
ST-1	Residential		1

Description	Impact Device
Concrete Saw	No
Excavator	No
Excavator	No
Excavator	No
Dozer	No
Dozer	No

		Calculated (dBA)	
Equipment	*Lmax		
Concrete Saw		77.6	
Excavator		68.7	
Excavator		68.7	
Excavator		68.7	
Dozer		69.7	
Dozer		69.7	
Total		77.6	

*Calculated Lmax is the Loudest value.

		Baselines (dBA)	
Description	Land Use	Daytime	
ST-2	Residential		1

Description	Impact Device
Concrete Saw	No
Excavator	No
Excavator	No
Excavator	No
Dozer	No
Dozer	No

Calculated (dBA)

Demolition

Equipment		*Lmax	
Concrete Saw			70.8
Excavator			62
Excavator			62
Excavator			62
Dozer			62.9
Dozer			62.9
	Total		70.8

*Calculated Lmax is the Loudest value.

		Baselines (dBA)	
Description	Land Use	Daytime	
ST-3	Residential		1

	Impact
Description	Device
Concrete Saw	No
Excavator	No
Excavator	No
Excavator	No
Dozer	No
Dozer	No

Calculated (dBA)

Equipment		*Lmax	
Concrete Saw			64.1
Excavator			55.3
Excavator			55.3
Excavator			55.3
Dozer			56.2
Dozer			56.2
	Total		64.1

*Calculated Lmax is the Loudest value.

		Baselines (dBA)	
Description	Land Use	Daytime	
ST-4	Residential		1

	Impact
Description	Device
Concrete Saw	No
Excavator	No
Excavator	No
Excavator	No
Dozer	No

Demolition

Dozer	No	
	Calculated (dBA)	
Equipment	*Lmax	
Concrete Saw		68.3
Excavator		59.5
Excavator		59.5
Excavator		59.5
Dozer		60.4
Dozer		60.4
	Total	68.3

*Calculated Lmax is the Loudest value.

		Baselines (dBA)
Description	Land Use	Daytime
ST-5	Residential	1

	Impact
Description	Device
Concrete Saw	No
Excavator	No
Excavator	No
Excavator	No
Dozer	No
Dozer	No

	Calculated (dBA)
Equipment	*Lmax
Concrete Saw	64.5
Excavator	55.6
Excavator	55.6
Excavator	55.6
Dozer	56.6
Dozer	56.6
	Total
	64.5

*Calculated Lmax is the Loudest value.

Demolition

Roadway Construction Noise Model (RCNM), Version 1.1

---- Receptor #1 ----

Evening	Night		
	1	1	
	Equipment Spec	Actual	
Usage(%)	Lmax (dBA)	Lmax (dBA)	
	20		89.6
	40		80.7
	40		80.7
	40		80.7
	40		81.7
	40		81.7

Results

		Noise Limits (dBA)
Leq	Day Lmax	Leq
	70.6 N/A	N/A
	64.7 N/A	N/A
	64.7 N/A	N/A
	64.7 N/A	N/A
	65.7 N/A	N/A
	65.7 N/A	N/A
	74.4 N/A	N/A

---- Receptor #2 ----

Evening	Night		
	1	1	
	Equipment Spec	Actual	
Usage(%)	Lmax (dBA)	Lmax (dBA)	
	20		89.6
	40		80.7
	40		80.7
	40		80.7
	40		81.7
	40		81.7

Results

	Day	Noise Limits (dBA)
--	-----	--------------------

Demolition

Leq	Lmax	Leq
	63.9 N/A	N/A
	58 N/A	N/A
	58 N/A	N/A
	58 N/A	N/A
	59 N/A	N/A
	59 N/A	N/A
	67.7 N/A	N/A

---- Receptor #3 ----

Evening	Night	
	1	1
	Equipment	
	Spec	Actual
Usage(%)	Lmax (dBA)	Lmax (dBA)
	20	89.6
	40	80.7
	40	80.7
	40	80.7
	40	81.7
	40	81.7

Results

	Day	Noise Limits (dBA)
Leq	Lmax	Leq
	57.2 N/A	N/A
	51.3 N/A	N/A
	51.3 N/A	N/A
	51.3 N/A	N/A
	52.3 N/A	N/A
	52.3 N/A	N/A
	61 N/A	N/A

---- Receptor #4 ----

Evening	Night	
	1	1
	Equipment	
	Spec	Actual
Usage(%)	Lmax (dBA)	Lmax (dBA)
	20	89.6
	40	80.7
	40	80.7
	40	80.7
	40	81.7

Demolition

40

81.7

Results

Noise Limits (dBA)

Leq	Day		Leq
	Lmax		
	61.3	N/A	N/A
	55.5	N/A	N/A
	55.5	N/A	N/A
	55.5	N/A	N/A
	56.4	N/A	N/A
	56.4	N/A	N/A
	65.2	N/A	N/A

---- Receptor #5 ----

Evening	Night	
	1	1

Usage(%)	Equipment		Actual
	Spec	Lmax	
	(dBA)	(dBA)	
	20		89.6
	40		80.7
	40		80.7
	40		80.7
	40		81.7
	40		81.7

Results

Noise Limits (dBA)

Leq	Day		Leq
	Lmax		
	57.5	N/A	N/A
	51.6	N/A	N/A
	51.6	N/A	N/A
	51.6	N/A	N/A
	52.6	N/A	N/A
	52.6	N/A	N/A
	61.3	N/A	N/A

Demolition

Receptor Distance (feet)	Estimated Shielding (dBA)
199	0
199	0
199	0
199	0
199	0
199	0

Noise Limit Exceedance (dBA)									
Evening		Night		Day		Evening		Night	
Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Receptor Distance (feet)	Estimated Shielding (dBA)
432	0
432	0
432	0
432	0
432	0
432	0

Noise Limit Exceedance (dBA)				
Evening	Night	Day	Evening	Night

Demolition

Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Receptor Distance (feet)	Estimated Shielding (dBA)
935	0
935	0
935	0
935	0
935	0
935	0

Noise Limit Exceedance (dBA)

Evening		Night		Day		Evening		Night	
Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Receptor Distance (feet)	Estimated Shielding (dBA)
578	0
578	0
578	0
578	0
578	0

Demolition

578

0

Noise Limit Exceedance (dBA)

Evening		Night		Day		Evening		Night	
Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Receptor Distance (feet)	Estimated Shielding (dBA)
899	0
899	0
899	0
899	0
899	0
899	0

Noise Limit Exceedance (dBA)

Evening		Night		Day		Evening		Night	
Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Site Preparatation

Report date: 08/18/2022
 Case Description: Demolition

		Baselines (dBA)	
Description	Land Use	Daytime	
ST-1	Residential		1

Description	Impact Device
Dozer	No
Dozer	No
Dozer	No
Tractor	No
Tractor	No
Backhoe	No
Backhoe	No

		Calculated (dBA)	
Equipment		*Lmax	
Dozer			69.7
Dozer			69.7
Dozer			69.7
Tractor			72
Tractor			72
Backhoe			65.6
Backhoe			65.6
	Total		72

*Calculated Lmax is the Loudest value.

		Baselines (dBA)	
Description	Land Use	Daytime	
ST-2	Residential		1

Description	Impact Device
Dozer	No
Dozer	No
Dozer	No
Tractor	No
Tractor	No
Backhoe	No
Backhoe	No

Site Preparation

Calculated (dBA)

Equipment	*Lmax	
Dozer		62.9
Dozer		62.9
Dozer		62.9
Tractor		65.3
Tractor		65.3
Backhoe		58.8
Backhoe		58.8
	Total	65.3

*Calculated Lmax is the Loudest value.

Baselines (dBA)

Description	Land Use	Daytime	
ST-3	Residential		1

Impact

Description	Device
Dozer	No
Dozer	No
Dozer	No
Tractor	No
Tractor	No
Backhoe	No
Backhoe	No

Calculated (dBA)

Equipment	*Lmax	
Dozer		56.2
Dozer		56.2
Dozer		56.2
Tractor		58.6
Tractor		58.6
Backhoe		52.1
Backhoe		52.1
	Total	58.6

*Calculated Lmax is the Loudest value.

Baselines (dBA)

Description	Land Use	Daytime	
ST-4	Residential		1

Impact

Site Preparatation

Description	Device
Dozer	No
Dozer	No
Dozer	No
Tractor	No
Tractor	No
Backhoe	No
Backhoe	No

Calculated (dBA)

Equipment	*Lmax	
Dozer		60.4
Dozer		60.4
Dozer		60.4
Tractor		62.7
Tractor		62.7
Backhoe		56.3
Backhoe		56.3
Total		62.7

*Calculated Lmax is the Loudest value.

Baselines (dBA)

Description	Land Use	Daytime	
ST-5	Residential		1

Impact

Description	Device
Dozer	No
Dozer	No
Dozer	No
Tractor	No
Tractor	No
Backhoe	No
Backhoe	No

Calculated (dBA)

Equipment	*Lmax	
Dozer		56.6
Dozer		56.6
Dozer		56.6
Tractor		58.9
Tractor		58.9
Backhoe		52.5
Backhoe		52.5
Total		58.9

*Calculated Lmax is the Loudest value.

Site Preparation

Roadway Construction Noise Model (RCNM), Version 1.1

---- Receptor #1 ----

Evening	Night		
	1	1	
Usage(%)	Equipment Spec		Actual
	Lmax (dBA)		Lmax (dBA)
	40		81.7
	40		81.7
	40		81.7
	40	84	
	40	84	
	40		77.6
	40		77.6

Results

Leq	Day		Noise Limits (dBA)
	Lmax		Leq
	65.7	N/A	N/A
	65.7	N/A	N/A
	65.7	N/A	N/A
	68	N/A	N/A
	68	N/A	N/A
	61.6	N/A	N/A
	61.6	N/A	N/A
	74.3	N/A	N/A

---- Receptor #2 ----

Evening	Night		
	1	1	
Usage(%)	Equipment Spec		Actual
	Lmax (dBA)		Lmax (dBA)
	40		81.7
	40		81.7
	40		81.7
	40	84	
	40	84	
	40		77.6
	40		77.6

Site Preparatation

Leq	Results		Noise Limits (dBA)
	Day		
	Lmax	Leq	
	59 N/A	N/A	
	59 N/A	N/A	
	59 N/A	N/A	
	61.3 N/A	N/A	
	61.3 N/A	N/A	
	54.9 N/A	N/A	
	54.9 N/A	N/A	
	67.5 N/A	N/A	

---- Receptor #3 ----

Evening	Night		Usage(%)
	1	1	
	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	
	40		81.7
	40		81.7
	40		81.7
	40	84	
	40	84	
	40		77.6
	40		77.6

Leq	Results		Noise Limits (dBA)
	Day		
	Lmax	Leq	
	52.3 N/A	N/A	
	52.3 N/A	N/A	
	52.3 N/A	N/A	
	54.6 N/A	N/A	
	54.6 N/A	N/A	
	48.1 N/A	N/A	
	48.1 N/A	N/A	
	60.8 N/A	N/A	

---- Receptor #4 ----

Evening	Night	
	1	1
	Equipment Spec Lmax	Actual Lmax

Site Preparatation

Usage(%)	(dBA)	(dBA)	
	40		81.7
	40		81.7
	40		81.7
	40	84	
	40	84	
	40		77.6
	40		77.6

Results

Leq	Noise Limits (dBA)	
	Day	Leq
	Lmax	
	56.4 N/A	N/A
	56.4 N/A	N/A
	56.4 N/A	N/A
	58.8 N/A	N/A
	58.8 N/A	N/A
	52.3 N/A	N/A
	52.3 N/A	N/A
	65 N/A	N/A

---- Receptor #5 ----

Evening	Night		
	1	1	
	Equipment		
	Spec	Actual	
Usage(%)	Lmax	Lmax	
	(dBA)	(dBA)	
	40		81.7
	40		81.7
	40		81.7
	40	84	
	40	84	
	40		77.6
	40		77.6

Results

Leq	Noise Limits (dBA)	
	Day	Leq
	Lmax	
	52.6 N/A	N/A
	52.6 N/A	N/A
	52.6 N/A	N/A
	54.9 N/A	N/A
	54.9 N/A	N/A
	48.5 N/A	N/A
	48.5 N/A	N/A
	61.2 N/A	N/A

Site Preparation

Receptor Distance (feet)	Estimated Shielding (dBA)
199	0
199	0
199	0
199	0
199	0
199	0
199	0
199	0

Noise Limit Exceedance (dBA)									
Evening		Night		Day		Evening		Night	
Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Receptor Distance (feet)	Estimated Shielding (dBA)
432	0
432	0
432	0
432	0
432	0
432	0
432	0
432	0

Site Preparation

Noise Limit Exceedance (dBA)

Evening		Night		Day		Evening		Night	
Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Receptor Distance (feet)	Estimated Shielding (dBA)
935	0
935	0
935	0
935	0
935	0
935	0
935	0
935	0

Noise Limit Exceedance (dBA)

Evening		Night		Day		Evening		Night	
Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Receptor Distance	Estimated Shielding
-------------------	---------------------

Site Preparatation

(feet)	(dBA)
578	0
578	0
578	0
578	0
578	0
578	0
578	0
578	0

Noise Limit Exceedance (dBA)

Evening		Night		Day		Evening		Night	
Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Receptor Distance (feet)	Estimated Shielding (dBA)
899	0
899	0
899	0
899	0
899	0
899	0
899	0
899	0

Noise Limit Exceedance (dBA)

Evening		Night		Day		Evening		Night	
Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Grading

Report date: 08/18/2022
 Case Description: Grading

		Baselines (dBA)	
Description	Land Use	Daytime	
ST-1	Residential		1

Description	Impact Device
Excavator	No
Dozer	No
Tractor	No
Tractor	No
Backhoe	No
Grader	No

		Calculated (dBA)	
Equipment	*Lmax		
Excavator		68.7	
Dozer		69.7	
Tractor		72	
Tractor		72	
Backhoe		65.6	
Grader		73	
Total		73	

*Calculated Lmax is the Loudest value.

		Baselines (dBA)	
Description	Land Use	Daytime	
ST-2	Residential		1

Description	Impact Device
Excavator	No
Dozer	No
Tractor	No
Tractor	No
Backhoe	No
Grader	No

Calculated (dBA)

Grading

Equipment		*Lmax	
Excavator			62
Dozer			62.9
Tractor			65.3
Tractor			65.3
Backhoe			58.8
Grader			66.3
	Total		66.3

*Calculated Lmax is the Loudest value.

		Baselines (dBA)	
Description	Land Use	Daytime	
ST-3	Residential		1

	Impact
Description	Device
Excavator	No
Dozer	No
Tractor	No
Tractor	No
Backhoe	No
Grader	No

Calculated (dBA)

Equipment		*Lmax	
Excavator			55.3
Dozer			56.2
Tractor			58.6
Tractor			58.6
Backhoe			52.1
Grader			59.6
	Total		59.6

*Calculated Lmax is the Loudest value.

		Baselines (dBA)	
Description	Land Use	Daytime	
ST-4	Residential		1

	Impact
Description	Device
Excavator	No
Dozer	No
Tractor	No
Tractor	No
Backhoe	No

Grading

Grader	No	
		Calculated (dBA)
Equipment	*Lmax	
Excavator		59.5
Dozer		60.4
Tractor		62.7
Tractor		62.7
Backhoe		56.3
Grader		63.7
	Total	63.7
		*Calculated Lmax is the Loudest value.

		Baselines (dBA)
Description	Land Use	Daytime
ST-5	Residential	1

		Impact
Description		Device
Excavator		No
Dozer		No
Tractor		No
Tractor		No
Backhoe		No
Grader		No

		Calculated (dBA)
Equipment	*Lmax	
Excavator		55.6
Dozer		56.6
Tractor		58.9
Tractor		58.9
Backhoe		52.5
Grader		59.9
	Total	59.9
		*Calculated Lmax is the Loudest value.

Grading

Roadway Construction Noise Model (RCNM), Version 1.1

		---- Receptor #1 ----		
	Evening	Night		
		1	1	
		Equipment		
		Spec	Actual	
Usage(%)		Lmax	Lmax	
		(dBA)	(dBA)	
		40		80.7
		40		81.7
		40	84	
		40	84	
		40		77.6
		40	85	
		Results		
				Noise Limits (dBA)
	Leq	Day	Leq	
		Lmax		
		64.7 N/A		N/A
		65.7 N/A		N/A
		68 N/A		N/A
		68 N/A		N/A
		61.6 N/A		N/A
		69 N/A		N/A
		74.6 N/A		N/A

		---- Receptor #2 ----		
	Evening	Night		
		1	1	
		Equipment		
		Spec	Actual	
Usage(%)		Lmax	Lmax	
		(dBA)	(dBA)	
		40		80.7
		40		81.7
		40	84	
		40	84	
		40		77.6
		40	85	
		Results		
				Noise Limits (dBA)
	Day			

Grading

Leq	Lmax	Leq
	58 N/A	N/A
	59 N/A	N/A
	61.3 N/A	N/A
	61.3 N/A	N/A
	54.9 N/A	N/A
	62.3 N/A	N/A
	67.9 N/A	N/A

---- Receptor #3 ----

Evening	Night	
	1	1
	Equipment	
	Spec	Actual
Usage(%)	Lmax (dBA)	Lmax (dBA)
	40	80.7
	40	81.7
	40	84
	40	84
	40	77.6
	40	85

Results

	Day	Noise Limits (dBA)
	Lmax	Leq
Leq	51.3 N/A	N/A
	52.3 N/A	N/A
	54.6 N/A	N/A
	54.6 N/A	N/A
	48.1 N/A	N/A
	55.6 N/A	N/A
	61.2 N/A	N/A

---- Receptor #4 ----

Evening	Night	
	1	1
	Equipment	
	Spec	Actual
Usage(%)	Lmax (dBA)	Lmax (dBA)
	40	80.7
	40	81.7
	40	84
	40	84
	40	77.6

Grading

40

85

Results

Noise Limits (dBA)

Leq	Day		Leq
	Lmax		
	55.5	N/A	N/A
	56.4	N/A	N/A
	58.8	N/A	N/A
	58.8	N/A	N/A
	52.3	N/A	N/A
	59.8	N/A	N/A
	65.3	N/A	N/A

---- Receptor #5 ----

Evening	Night	
	1	1

Usage(%)	Equipment		Actual Lmax (dBA)
	Spec Lmax (dBA)		
	40		80.7
	40		81.7
	40	84	
	40	84	
	40		77.6
	40	85	

Results

Noise Limits (dBA)

Leq	Day		Leq
	Lmax		
	51.6	N/A	N/A
	52.6	N/A	N/A
	54.9	N/A	N/A
	54.9	N/A	N/A
	48.5	N/A	N/A
	55.9	N/A	N/A
	61.5	N/A	N/A

Grading

Receptor Distance (feet)	Estimated Shielding (dBA)
199	0
199	0
199	0
199	0
199	0
199	0

Noise Limit Exceedance (dBA)									
Evening		Night		Day		Evening		Night	
Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Receptor Distance (feet)	Estimated Shielding (dBA)
432	0
432	0
432	0
432	0
432	0
432	0

Noise Limit Exceedance (dBA)				
Evening	Night	Day	Evening	Night

Grading

Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Receptor Distance (feet)	Estimated Shielding (dBA)
935	0
935	0
935	0
935	0
935	0
935	0

Noise Limit Exceedance (dBA)

Evening		Night		Day		Evening		Night	
Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Receptor Distance (feet)	Estimated Shielding (dBA)
578	0
578	0
578	0
578	0
578	0

Grading

578

0

Noise Limit Exceedance (dBA)

Evening		Night		Day		Evening		Night	
Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Receptor Distance (feet)	Estimated Shielding (dBA)
899	0
899	0
899	0
899	0
899	0
899	0

Noise Limit Exceedance (dBA)

Evening		Night		Day		Evening		Night	
Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Building Construction

Report date: 08/18/2022
 Case Description: Building Construction

Description	Land Use	Baselines (dBA) Daytime
ST-1	Residential	1

Description	Impact Device
Excavator	No
Dozer	No
Tractor	No
Tractor	No
Backhoe	No
Backhoe	No
Crane	No
Backhoe	No
Backhoe	No
Welder / Torch	No
Generator	No

Equipment		Calculated (dBA) *Lmax
Excavator		68.7
Dozer		69.7
Tractor		72
Tractor		72
Backhoe		65.6
Backhoe		65.6
Crane		68.6
Backhoe		65.6
Backhoe		65.6
Welder / Torch		62
Generator		68.6
Total		72

*Calculated Lmax is the Loudest value.

Description	Land Use	Baselines (dBA) Daytime
ST-2	Residential	1

Description	Impact Device
-------------	------------------

Building Construction

Excavator	No
Dozer	No
Tractor	No
Tractor	No
Backhoe	No
Backhoe	No
Crane	No
Backhoe	No
Backhoe	No
Welder / Torch	No
Generator	No

Calculated (dBA)

Equipment	*Lmax	
Excavator		62
Dozer		62.9
Tractor		65.3
Tractor		65.3
Backhoe		58.8
Backhoe		58.8
Crane		61.8
Backhoe		58.8
Backhoe		58.8
Welder / Torch		55.3
Generator		61.9
Total		65.3

*Calculated Lmax is the Loudest value.

Baselines (dBA)

Description	Land Use	Daytime	
ST-3	Residential		1

Impact

Description	Device
Excavator	No
Dozer	No
Tractor	No
Tractor	No
Backhoe	No
Backhoe	No
Crane	No
Backhoe	No
Backhoe	No
Welder / Torch	No
Generator	No

Calculated (dBA)

Building Construction

Equipment		*Lmax	
Excavator			55.3
Dozer			56.2
Tractor			58.6
Tractor			58.6
Backhoe			52.1
Backhoe			52.1
Crane			55.1
Backhoe			52.1
Backhoe			52.1
Welder / Torch			48.6
Generator			55.2
	Total		58.6

*Calculated Lmax is the Loudest value.

		Baselines (dBA)	
Description	Land Use	Daytime	
ST-4	Residential		1

		Impact
Description		Device
Excavator		No
Dozer		No
Tractor		No
Tractor		No
Backhoe		No
Backhoe		No
Crane		No
Backhoe		No
Backhoe		No
Welder / Torch		No
Generator		No

Calculated (dBA)

Equipment		*Lmax	
Excavator			59.5
Dozer			60.4
Tractor			62.7
Tractor			62.7
Backhoe			56.3
Backhoe			56.3
Crane			59.3
Backhoe			56.3
Backhoe			56.3
Welder / Torch			52.7
Generator			59.4
	Total		62.7

Building Construction

*Calculated Lmax is the Loudest value.

Description	Land Use	Baselines (dBA)	
ST-5	Residential	Daytime	1

Description	Impact
Excavator	No
Dozer	No
Tractor	No
Tractor	No
Backhoe	No
Backhoe	No
Crane	No
Backhoe	No
Backhoe	No
Welder / Torch	No
Generator	No

Equipment	Calculated (dBA)
Excavator	*Lmax 55.6
Dozer	56.6
Tractor	58.9
Tractor	58.9
Backhoe	52.5
Backhoe	52.5
Crane	55.5
Backhoe	52.5
Backhoe	52.5
Welder / Torch	48.9
Generator	55.5
Total	58.9

*Calculated Lmax is the Loudest value.

Building Construction

Roadway Construction Noise Model (RCNM), Version 1.1

		---- Receptor #1 ----		
Evening		Night		
		1	1	
		Equipment		
		Spec	Actual	
Usage(%)		Lmax	Lmax	
		(dBA)	(dBA)	
		40		80.7
		40		81.7
		40	84	
		40	84	
		40		77.6
		40		77.6
		16		80.6
		40		77.6
		40		77.6
		40		74
		50		80.6

		Results		
				Noise Limits (dBA)
Leq		Day	Leq	
		Lmax		
		64.7 N/A	N/A	
		65.7 N/A	N/A	
		68 N/A	N/A	
		68 N/A	N/A	
		61.6 N/A	N/A	
		61.6 N/A	N/A	
		60.6 N/A	N/A	
		61.6 N/A	N/A	
		61.6 N/A	N/A	
		58 N/A	N/A	
		65.6 N/A	N/A	
		74.9 N/A	N/A	

		---- Receptor #2 ----		
Evening		Night		
		1	1	
		Equipment		
		Spec	Actual	
Usage(%)		Lmax	Lmax	
		(dBA)	(dBA)	

Building Construction

40		80.7
40		81.7
40	84	
40	84	
40		77.6
40		77.6
16		80.6
40		77.6
40		77.6
40		74
50		80.6

Results

Noise Limits (dBA)

Leq	Day	
	Lmax	Leq
	58 N/A	N/A
	59 N/A	N/A
	61.3 N/A	N/A
	61.3 N/A	N/A
	54.9 N/A	N/A
	54.9 N/A	N/A
	53.9 N/A	N/A
	54.9 N/A	N/A
	54.9 N/A	N/A
	51.3 N/A	N/A
	58.9 N/A	N/A
	68.1 N/A	N/A

---- Receptor #3 ----

Evening	Night	
	1	1
Usage(%)	Equipment	
	Spec Lmax (dBA)	Actual Lmax (dBA)
	40	80.7
	40	81.7
	40	84
	40	84
	40	77.6
	40	77.6
	16	80.6
	40	77.6
	40	77.6
	40	74
	50	80.6

Results

Noise Limits (dBA)

Building Construction

Leq	Day	
	Lmax	Leq
	51.3 N/A	N/A
	52.3 N/A	N/A
	54.6 N/A	N/A
	54.6 N/A	N/A
	48.1 N/A	N/A
	48.1 N/A	N/A
	47.2 N/A	N/A
	48.1 N/A	N/A
	48.1 N/A	N/A
	44.6 N/A	N/A
	52.2 N/A	N/A
	61.4 N/A	N/A

---- Receptor #4 ----

Evening	Night	
	1	1
Usage(%)	Equipment	
	Spec Lmax (dBA)	Actual Lmax (dBA)
	40	80.7
	40	81.7
	40	84
	40	84
	40	77.6
	40	77.6
	16	80.6
	40	77.6
	40	77.6
	40	74
	50	80.6

Results

Leq	Noise Limits (dBA)	
	Day Lmax	Leq
	55.5 N/A	N/A
	56.4 N/A	N/A
	58.8 N/A	N/A
	58.8 N/A	N/A
	52.3 N/A	N/A
	52.3 N/A	N/A
	51.3 N/A	N/A
	52.3 N/A	N/A
	52.3 N/A	N/A
	48.8 N/A	N/A
	56.4 N/A	N/A
	65.6 N/A	N/A

Building Construction

---- Receptor #5 ----

Evening

Night
1 1

Usage(%)

Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	
40		80.7
40		81.7
40	84	
40	84	
40		77.6
40		77.6
16		80.6
40		77.6
40		77.6
40		74
50		80.6

Results

Noise Limits (dBA)

Leq

Day Lmax	Leq
51.6 N/A	N/A
52.6 N/A	N/A
54.9 N/A	N/A
54.9 N/A	N/A
48.5 N/A	N/A
48.5 N/A	N/A
47.5 N/A	N/A
48.5 N/A	N/A
48.5 N/A	N/A
44.9 N/A	N/A
52.5 N/A	N/A
61.8 N/A	N/A

Building Construction

Receptor Distance (feet)	Estimated Shielding (dBA)
199	0
199	0
199	0
199	0
199	0
199	0
199	0
199	0
199	0
199	0
199	0
199	0
199	0
199	0

Noise Limit Exceedance (dBA)									
Evening		Night		Day		Evening		Night	
Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Receptor Distance (feet)	Estimated Shielding (dBA)
--------------------------	---------------------------

Building Construction

432	0
432	0
432	0
432	0
432	0
432	0
432	0
432	0
432	0
432	0
432	0
432	0
432	0

Noise Limit Exceedance (dBA)

Evening		Night		Day		Evening		Night	
Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Receptor Distance (feet)	Estimated Shielding (dBA)
935	0
935	0
935	0
935	0
935	0
935	0
935	0
935	0
935	0
935	0
935	0
935	0

Noise Limit Exceedance (dBA)

Building Construction

Evening		Night		Day		Evening		Night	
Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Receptor Distance (feet)	Estimated Shielding (dBA)
578	0
578	0
578	0
578	0
578	0
578	0
578	0
578	0
578	0
578	0
578	0
578	0

Noise Limit Exceedance (dBA)

Evening		Night		Day		Evening		Night	
Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Paving

Report date: 08/18/2022
 Case Description: Paving

Description	Land Use	Baselines (dBA) Daytime
ST-1	Residential	1

Description	Impact Device
All Other Equipment > 5 HP Roller	No
All Other Equipment > 5 HP Roller	No
Tractor	No
Concrete Mixer Truck	No
Paver	No
Concrete Mixer Truck	No

Calculated (dBA)	
Equipment	*Lmax
All Other Equipment > 5 HP Roller	73
All Other Equipment > 5 HP Roller	68
All Other Equipment > 5 HP Roller	73
Tractor	68
Concrete Mixer Truck	72
Paver	66.8
Concrete Mixer Truck	65.2
Concrete Mixer Truck	66.8
Total	73

*Calculated Lmax is the Loudest value.

Description	Land Use	Baselines (dBA) Daytime
ST-2	Residential	1

Description	Impact Device
All Other Equipment > 5 HP Roller	No
All Other Equipment > 5 HP Roller	No
Tractor	No
Concrete Mixer Truck	No

Paving

Paver No
 Concrete Mixer Truck No

Calculated (dBA)

Equipment	*Lmax	
All Other Equipment > 5 HP		66.3
Roller		61.3
All Other Equipment > 5 HP		66.3
Roller		61.3
Tractor		65.3
Concrete Mixer Truck		60.1
Paver		58.5
Concrete Mixer Truck		60.1
	Total	66.3

*Calculated Lmax is the Loudest value.

Baselines (dBA)

Description	Land Use	Daytime	
ST-3	Residential		1

Impact

Description	Device
All Other Equipment > 5 HP	No
Roller	No
All Other Equipment > 5 HP	No
Roller	No
Tractor	No
Concrete Mixer Truck	No
Paver	No
Concrete Mixer Truck	No

Calculated (dBA)

Equipment	*Lmax	
All Other Equipment > 5 HP		59.6
Roller		54.6
All Other Equipment > 5 HP		59.6
Roller		54.6
Tractor		58.6
Concrete Mixer Truck		53.4
Paver		51.8
Concrete Mixer Truck		53.4
	Total	59.6

*Calculated Lmax is the Loudest value.

Baselines (dBA)

Paving

Description	Land Use	Daytime	
ST-4	Residential		1

Description	Impact Device
All Other Equipment > 5 HP Roller	No
All Other Equipment > 5 HP Roller	No
Tractor	No
Concrete Mixer Truck Paver	No
Concrete Mixer Truck	No

Calculated (dBA)

Equipment	*Lmax	
All Other Equipment > 5 HP Roller		63.7
All Other Equipment > 5 HP Roller		58.7
All Other Equipment > 5 HP Roller		63.7
Tractor		58.7
Tractor		62.7
Concrete Mixer Truck		62.7
Paver		57.5
Paver		56
Concrete Mixer Truck		57.5
Total		63.7

*Calculated Lmax is the Loudest value.

Baselines (dBA)

Description	Land Use	Daytime	
ST-5	Residential		1

Description	Impact Device
All Other Equipment > 5 HP Roller	No
All Other Equipment > 5 HP Roller	No
Tractor	No
Concrete Mixer Truck Paver	No
Concrete Mixer Truck	No

Calculated (dBA)

Equipment	*Lmax

Paving

All Other Equipment > 5 HP	59.9
Roller	54.9
All Other Equipment > 5 HP	59.9
Roller	54.9
Tractor	58.9
Concrete Mixer Truck	53.7
Paver	52.1
Concrete Mixer Truck	53.7
Total	59.9

*Calculated Lmax is the Loudest value.

Paving

Roadway Construction Noise Model (RCNM), Version 1.1

---- Receptor #1 ----

Evening	Night		
	1	1	
Usage(%)	Equipment Spec		Actual
	Lmax (dBA)		Lmax (dBA)
	50	85	
	20		80
	50	85	
	20		80
	40	84	
	40		78.8
	50		77.2
40		78.8	

Results

Leq	Day		Noise Limits (dBA)
	Lmax	Leq	
	70 N/A	N/A	
	61 N/A	N/A	
	70 N/A	N/A	
	61 N/A	N/A	
	68 N/A	N/A	
	62.8 N/A	N/A	
	62.2 N/A	N/A	
	62.8 N/A	N/A	
	75.4 N/A	N/A	

---- Receptor #2 ----

Evening	Night		
	1	1	
Usage(%)	Equipment Spec		Actual
	Lmax (dBA)		Lmax (dBA)
	50	85	
	20		80
	50	85	
	20		80
	40	84	
	40		78.8

Paving

50	77.2
40	78.8

Results

Noise Limits (dBA)

Leq	Day	
	Lmax	Leq
	63.3 N/A	N/A
	54.3 N/A	N/A
	63.3 N/A	N/A
	54.3 N/A	N/A
	61.3 N/A	N/A
	56.1 N/A	N/A
	55.5 N/A	N/A
	56.1 N/A	N/A
	68.6 N/A	N/A

---- Receptor #3 ----

Evening	Night	
	1	1
Usage(%)	Equipment	
	Spec	Actual
	Lmax	Lmax
	(dBA)	(dBA)
	50	85
	20	80
	50	85
	20	80
40	84	
40	78.8	
50	77.2	
40	78.8	

Results

Noise Limits (dBA)

Leq	Day	
	Lmax	Leq
	56.6 N/A	N/A
	47.6 N/A	N/A
	56.6 N/A	N/A
	47.6 N/A	N/A
	54.6 N/A	N/A
	49.4 N/A	N/A
	48.8 N/A	N/A
	49.4 N/A	N/A
	61.9 N/A	N/A

---- Receptor #4 ----

Paving

Evening

Night

1

1

Usage(%)

Equipment

Spec

Actual

Lmax

Lmax

(dBA)

(dBA)

50

85

20

80

50

85

20

80

40

84

40

78.8

50

77.2

40

78.8

Results

Noise Limits (dBA)

Leq

Day

Lmax

Leq

60.7 N/A

N/A

51.8 N/A

N/A

60.7 N/A

N/A

51.8 N/A

N/A

58.8 N/A

N/A

53.6 N/A

N/A

53 N/A

N/A

53.6 N/A

N/A

66.1 N/A

N/A

---- Receptor #5 ----

Evening

Night

1

1

Usage(%)

Equipment

Spec

Actual

Lmax

Lmax

(dBA)

(dBA)

50

85

20

80

50

85

20

80

40

84

40

78.8

50

77.2

40

78.8

Results

Noise Limits (dBA)

Leq

Day

Lmax

Leq

Paving

56.9 N/A	N/A
47.9 N/A	N/A
56.9 N/A	N/A
47.9 N/A	N/A
54.9 N/A	N/A
49.7 N/A	N/A
49.1 N/A	N/A
49.7 N/A	N/A
62.3 N/A	N/A

Paving

Receptor Distance (feet)	Estimated Shielding (dBA)
199	0
199	0
199	0
199	0
199	0
199	0
199	0
199	0
199	0
199	0

Noise Limit Exceedance (dBA)									
Evening		Night		Day		Evening		Night	
Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Receptor Distance (feet)	Estimated Shielding (dBA)
432	0
432	0
432	0
432	0
432	0
432	0

Paving

432 0
432 0

Noise Limit Exceedance (dBA)

Evening		Night		Day		Evening		Night	
Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Receptor Distance (feet)	Estimated Shielding (dBA)
935	0
935	0
935	0
935	0
935	0
935	0
935	0
935	0
935	0

Noise Limit Exceedance (dBA)

Evening		Night		Day		Evening		Night	
Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Paving

Receptor Distance (feet)	Estimated Shielding (dBA)
578	0
578	0
578	0
578	0
578	0
578	0
578	0
578	0
578	0

Noise Limit Exceedance (dBA)

Evening		Night		Day		Evening		Night	
Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Receptor Distance (feet)	Estimated Shielding (dBA)
899	0
899	0
899	0
899	0
899	0
899	0
899	0
899	0
899	0

Noise Limit Exceedance (dBA)

Evening		Night		Day		Evening		Night	
Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq

Paving

N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Architectural Coating

Report date: 08/18/2022
 Case Description: Arch Coating

Description	Land Use	Baselines (dBA)	
ST-1	Residential	Daytime	1

Description	Impact
Compressor (air)	Device
	No

	Calculated (dBA)	
Equipment	*Lmax	
Compressor (air)		65.7
Total		65.7
	*Calculated Lmax is the Loudest value.	

Description	Land Use	Baselines (dBA)	
ST-2	Residential	Daytime	1

Description	Impact
Compressor (air)	Device
	No

	Calculated (dBA)	
Equipment	*Lmax	
Compressor (air)		58.9
Total		58.9
	*Calculated Lmax is the Loudest value.	

Description	Land Use	Baselines (dBA)	
ST-3	Residential	Daytime	1

Description	Impact
Compressor (air)	Device
	No

Architectural Coating

		Calculated (dBA)	
Equipment Compressor (air)		*Lmax	52.2
	Total		52.2
*Calculated Lmax is the Loudest value.			

		Baselines (dBA)	
Description ST-4	Land Use Residential	Daytime	1

Description Compressor (air)	Impact Device No
---------------------------------	------------------------

		Calculated (dBA)	
Equipment Compressor (air)		*Lmax	56.4
	Total		56.4
*Calculated Lmax is the Loudest value.			

		Baselines (dBA)	
Description ST-5	Land Use Residential	Daytime	1

Description Compressor (air)	Impact Device No
---------------------------------	------------------------

		Calculated (dBA)	
Equipment Compressor (air)		*Lmax	52.6
	Total		52.6
*Calculated Lmax is the Loudest value.			

Architectural Coating

Roadway Construction Noise Model (RCNM), Version 1.1

---- Receptor #1 ----

Evening	Night		
	1		1
	Equipment		
	Spec		Actual
Usage(%)	Lmax		Lmax
	(dBA)		(dBA)
	40		77.7
	Results		
			Noise Limits (dBA)
	Day		
Leq	Lmax		Leq
	61.7 N/A		N/A
	61.7 N/A		N/A

---- Receptor #2 ----

Evening	Night		
	1		1
	Equipment		
	Spec		Actual
Usage(%)	Lmax		Lmax
	(dBA)		(dBA)
	40		77.7
	Results		
			Noise Limits (dBA)
	Day		
Leq	Lmax		Leq
	55 N/A		N/A
	55 N/A		N/A

---- Receptor #3 ----

Evening	Night		
	1		1
	Equipment		
	Spec		Actual
Usage(%)	Lmax		Lmax
	(dBA)		(dBA)
	40		77.7

Architectural Coating

		Results		Noise Limits (dBA)
Leq	Day			
	Lmax	48.3 N/A		Leq N/A
		48.3 N/A		N/A
---- Receptor #4 ----				
Evening	Night			
		1	1	
Usage(%)	Equipment Spec			
	Lmax (dBA)	40		Actual Lmax (dBA) 77.7
		Results		Noise Limits (dBA)
Leq	Day			
	Lmax	52.4 N/A		Leq N/A
		52.4 N/A		N/A
---- Receptor #5 ----				
Evening	Night			
		1	1	
Usage(%)	Equipment Spec			
	Lmax (dBA)	40		Actual Lmax (dBA) 77.7
		Results		Noise Limits (dBA)
Leq	Day			
	Lmax	48.6 N/A		Leq N/A
		48.6 N/A		N/A

Architectural Coating

Receptor Distance (feet) 199
 Estimated Shielding (dBA) 0

Noise Limit Exceedance (dBA)									
Evening		Night		Day		Evening		Night	
Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Receptor Distance (feet) 432
 Estimated Shielding (dBA) 0

Noise Limit Exceedance (dBA)									
Evening		Night		Day		Evening		Night	
Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Receptor Distance (feet) 935
 Estimated Shielding (dBA) 0

Architectural Coating

Noise Limit Exceedance (dBA)

Evening		Night		Day		Evening		Night	
Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Receptor Distance (feet) 578
 Estimated Shielding (dBA) 0

Noise Limit Exceedance (dBA)

Evening		Night		Day		Evening		Night	
Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Receptor Distance (feet) 899
 Estimated Shielding (dBA) 0

Noise Limit Exceedance (dBA)

Evening		Night		Day		Evening		Night	
Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Appendix B

Project Site Visit Log

Noise Measurement Field Data

Project:	1575 University Avenue	Job Number:	099613009.1.107
Site No.:	ST-1 (ING018)	Date:	7/6/2022
Analyst:	Alice Cao, Ryan Callahan	Time:	11:30 AM
Location:	Dead end of 7th St. near Presley Ave.		

Noise Sources:	Industrial processes, construction, traffic, wind
Comments:	light traffic, light construction beeping

Results (dBA):				
	Leq:	Lmin:	Lmax:	Peak:
	52.3	44.1	71.9	87.9

Equipment	
Sound Level Meter:	LD SoundExpert LxT
Calibrator:	CAL200
Response Time:	Slow
Weighting:	A
Microphone Height:	5 feet

Weather	
Temp. (degrees F):	81
Wind (mph):	8
Sky:	Clear
Bar. Pressure:	29.90 mmHg
Humidity:	43%

Photo:





Attachment B

Updated CalEEMod Modeling Results

1575 University Ave. Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	1575 University Ave.
Construction Start Date	1/1/2024
Operational Year	2026
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.20
Precipitation (days)	14.2
Location	1575 University Ave, Riverside, CA 92507, USA
County	Riverside-South Coast
City	Riverside
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5488
EDFZ	11
Electric Utility	City of Riverside
Gas Utility	Southern California Gas
App Version	2022.1.1.14

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
------------------	------	------	-------------	-----------------------	------------------------	--------------------------------	------------	-------------

Apartments Mid Rise	257	Dwelling Unit	4.29	284,561	0.00	—	830	—
High Turnover (Sit Down Restaurant)	4.92	1000sqft	0.11	4,918	0.00	—	—	—
Enclosed Parking Structure	499	Space	4.29	152,603	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-5	Use Advanced Engine Tiers
Construction	C-10-A	Water Exposed Surfaces
Construction	C-11	Limit Vehicle Speeds on Unpaved Roads
Construction	C-13	Use Low-VOC Paints for Construction

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e	
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Unmit.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Mit.	2.04	1.87	43.2	49.9	0.11	1.62	12.1	13.7	1.46	5.73	7.19	—	13,624	13,624	0.44	0.87	19.0	13,908	
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Mit.	2.94	42.9	46.5	50.3	0.09	1.96	8.84	10.8	1.78	4.18	5.96	—	9,931	9,931	0.39	0.39	0.49	10,004
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mit.	1.20	5.99	12.7	19.8	0.03	0.49	2.41	2.90	0.44	0.74	1.19	—	4,557	4,557	0.23	0.17	4.20	4,635
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mit.	0.22	1.09	2.31	3.61	< 0.005	0.09	0.44	0.53	0.08	0.14	0.22	—	754	754	0.04	0.03	0.70	767
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2.3. Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e	
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	2.04	1.87	43.2	49.9	0.11	1.62	12.1	13.7	1.46	5.73	7.19	—	13,624	13,624	0.44	0.87	19.0	13,908	
2025	1.98	1.69	15.5	34.8	0.04	0.56	3.74	4.30	0.51	0.90	1.41	—	7,568	7,568	0.28	0.39	17.6	7,710	
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	2.94	2.68	46.5	50.3	0.09	1.96	8.84	10.8	1.78	4.18	5.96	—	9,931	9,931	0.39	0.39	0.49	10,004	
2025	1.81	42.9	15.7	30.1	0.04	0.56	3.74	4.30	0.51	0.90	1.41	—	7,284	7,284	0.29	0.39	0.46	7,408	
2026	0.28	42.9	1.31	3.70	< 0.005	0.07	0.66	0.72	0.06	0.15	0.22	—	771	771	0.02	0.03	0.06	779	
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.20	1.11	12.7	19.8	0.03	0.49	2.41	2.90	0.44	0.74	1.19	—	4,557	4,557	0.17	0.23	3.88	4,635	
2025	1.00	5.99	8.60	17.0	0.02	0.31	2.06	2.36	0.28	0.49	0.77	—	4,008	4,008	0.16	0.21	4.20	4,079	
2026	< 0.005	0.08	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.52	1.52	< 0.005	< 0.005	< 0.005	1.54	
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.22	0.20	2.31	3.61	< 0.005	0.09	0.44	0.53	0.08	0.14	0.22	—	754	754	0.03	0.04	0.64	767	
2025	0.18	1.09	1.57	3.10	< 0.005	0.06	0.38	0.43	0.05	0.09	0.14	—	664	664	0.03	0.04	0.70	675	
2026	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.25	0.25	< 0.005	< 0.005	< 0.005	0.26	

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e	
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	3.90	3.59	3.21	29.7	0.07	0.05	6.38	6.43	0.05	1.62	1.67	—	7,505	7,505	0.30	0.33	26.0	7,638
Area	2.58	9.15	0.20	21.4	< 0.005	0.01	—	0.01	0.02	—	0.02	0.00	67.2	67.2	< 0.005	< 0.005	—	67.4
Energy	0.11	0.06	0.99	0.48	0.01	0.08	—	0.08	0.08	—	0.08	—	6,412	6,412	0.31	0.03	—	6,428
Water	—	—	—	—	—	—	—	—	—	—	—	22.9	195	217	2.35	0.06	—	293
Waste	—	—	—	—	—	—	—	—	—	—	—	134	0.00	134	13.4	0.00	—	469
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9.73	9.73
Total	6.60	12.8	4.40	51.6	0.08	0.15	6.38	6.53	0.15	1.62	1.77	157	14,180	14,336	16.4	0.42	35.8	14,905
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	3.66	3.35	3.44	25.0	0.07	0.05	6.38	6.43	0.05	1.62	1.67	—	7,051	7,051	0.31	0.34	0.67	7,162
Area	0.00	6.74	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00
Energy	0.11	0.06	0.99	0.48	0.01	0.08	—	0.08	0.08	—	0.08	—	6,412	6,412	0.31	0.03	—	6,428
Water	—	—	—	—	—	—	—	—	—	—	—	22.9	195	217	2.35	0.06	—	293
Waste	—	—	—	—	—	—	—	—	—	—	—	134	0.00	134	13.4	0.00	—	469
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9.73	9.73
Total	3.78	10.1	4.43	25.5	0.08	0.13	6.38	6.51	0.13	1.62	1.75	157	13,658	13,815	16.4	0.43	10.4	14,362
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	3.51	3.23	3.14	23.2	0.06	0.05	5.53	5.58	0.04	1.40	1.45	—	6,191	6,191	0.29	0.31	9.74	6,300
Area	1.77	8.39	0.14	14.7	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	46.0	46.0	< 0.005	< 0.005	—	46.2
Energy	0.11	0.06	0.99	0.48	0.01	0.08	—	0.08	0.08	—	0.08	—	6,412	6,412	0.31	0.03	—	6,428
Water	—	—	—	—	—	—	—	—	—	—	—	22.9	195	217	2.35	0.06	—	293
Waste	—	—	—	—	—	—	—	—	—	—	—	134	0.00	134	13.4	0.00	—	469

Off-Road Equipment	0.04	0.03	0.49	0.45	< 0.005	0.02	0.02	—	0.02	—	69.9	69.9	< 0.005	< 0.005	—	70.2
Demolition	—	—	—	—	—	0.01	0.01	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.09	0.95	0.00	0.20	0.20	0.00	0.05	—	198	198	0.01	0.01	0.02	201
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.02	0.01	0.52	0.12	< 0.005	0.12	0.12	0.01	0.03	—	445	445	0.01	0.07	0.02	467
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.12	0.00	0.02	0.02	0.00	0.01	—	24.8	24.8	< 0.005	< 0.005	0.05	25.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.07	0.02	< 0.005	0.02	0.01	< 0.005	< 0.005	—	54.9	54.9	< 0.005	0.01	0.05	57.6
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	< 0.005	< 0.005	0.00	< 0.005	—	4.10	4.10	< 0.005	< 0.005	0.01	4.16
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	9.09	9.09	< 0.005	< 0.005	0.01	9.54

3.3. Site Preparation (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.01	< 0.005	0.01	0.06	0.00	0.00	0.01	0.01	0.01	0.00	< 0.005	< 0.005	< 0.005	< 0.005	12.7	12.7	< 0.005	< 0.005	0.02	12.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.34	0.08	< 0.005	0.01	0.07	0.08	0.01	0.02	0.03	0.01	0.01	0.05	288	288	0.01	0.05	0.26	302
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	2.10	2.10	< 0.005	< 0.005	< 0.005	2.13
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.06	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	47.7	47.7	< 0.005	0.01	0.04	50.0

3.7. Building Construction (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

3.8. Building Construction (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.56	0.54	12.6	14.8	0.02	0.54	—	0.54	0.49	—	0.49	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.56	0.54	12.6	14.8	0.02	0.54	—	0.54	0.49	—	0.49	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	0.22	5.29	6.21	0.01	0.22	—	0.22	0.20	—	0.20	—	1,004	1,004	0.04	0.01	—	1,008
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.04	0.96	1.13	< 0.005	0.04	—	0.04	0.04	—	0.04	—	166	166	0.01	< 0.005	—	167
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.11	0.10	0.13	1.51	0.00	0.00	0.32	0.32	0.00	0.07	0.07	—	292	292	0.01	0.50	296
Vendor	0.01	< 0.005	0.18	0.05	< 0.005	< 0.005	0.05	0.04	< 0.005	0.01	0.01	—	144	144	< 0.005	0.18	151
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.11. Paving (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

3.12. Paving (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	0.32	8.62	10.6	0.01	0.39	—	0.39	0.36	—	0.36	—	1,512	1,512	0.06	0.01	—	1,517
Paving	—	0.49	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.54	0.67	< 0.005	0.02	—	0.02	0.02	—	0.02	—	95.3	95.3	< 0.005	< 0.005	—	95.6
Paving	—	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.10	0.12	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.8	15.8	< 0.005	< 0.005	—	15.8
Paving	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.07	1.25	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	216	216	0.01	0.01	0.86	219
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e	
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

3.16. Architectural Coating (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e	
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.05	1.09	0.96	< 0.005	0.07	—	—	0.06	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	42.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	—	< 0.005	—	0.26	0.26	< 0.005	< 0.005	—	0.26
Architectural Coatings	0.08	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	—	< 0.005	—	0.04	0.04	< 0.005	< 0.005	—	0.04
Architectural Coatings	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.23	0.20	2.74	0.00	0.66	0.66	0.15	0.15	0.15	637	637	0.01	0.02	0.06	645
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

4.1.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	2.71	2.50	2.24	20.7	0.05	0.04	4.45	4.48	0.04	1.13	1.16	—	5,232	5,232	0.21	0.23	18.1	5,324
High Turnover (Sit Down Restaurant)	1.18	1.09	0.97	8.99	0.02	0.02	1.93	1.95	0.02	0.49	0.51	—	2,274	2,274	0.09	0.10	7.88	2,314
Enclosed Parking Structure	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	3.90	3.59	3.21	29.7	0.07	0.05	6.38	6.43	0.05	1.62	1.67	—	7,505	7,505	0.30	0.33	26.0	7,638
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	2.55	2.34	2.40	17.4	0.05	0.04	4.45	4.48	0.04	1.13	1.16	—	4,915	4,915	0.22	0.24	0.47	4,992
High Turnover (Sit Down Restaurant)	1.11	1.02	1.04	7.59	0.02	0.02	1.93	1.95	0.02	0.49	0.51	—	2,136	2,136	0.09	0.10	0.20	2,170
Enclosed Parking Structure	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	3.66	3.35	3.44	25.0	0.07	0.05	6.38	6.43	0.05	1.62	1.67	—	7,051	7,051	0.31	0.34	0.67	7,162
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Apartments	0.46	0.42	0.45	3.30	0.01	0.01	0.81	0.82	0.01	0.21	0.21	—	821	821	0.04	0.04	1.30	835
High Turnover (Sit Down Restaurant)	0.18	0.17	0.13	0.94	< 0.005	< 0.005	0.20	0.20	< 0.005	0.05	0.05	—	204	204	0.01	0.01	0.32	208
Enclosed Parking Structure	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.64	0.59	0.57	4.24	0.01	0.01	1.01	1.02	0.01	0.26	0.26	—	1,025	1,025	0.05	0.05	1.61	1,043

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOX	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.2.2. Electricity Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOX	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

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High Turnover (Sit Down Restaurant)	0.02	0.01	0.15	0.13	< 0.005	0.01	—	0.01	—	0.01	—	0.01	—	180	180	0.02	< 0.005	—	180
Enclosed Parking Structure	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	—	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.11	0.06	0.99	0.48	0.01	0.08	—	0.08	—	0.08	—	0.08	—	1,242	1,242	0.11	< 0.005	—	1,245
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.10	0.05	0.84	0.36	0.01	0.07	—	0.07	—	0.07	—	0.07	—	1,062	1,062	0.09	< 0.005	—	1,065
High Turnover (Sit Down Restaurant)	0.02	0.01	0.15	0.13	< 0.005	0.01	—	0.01	—	0.01	—	0.01	—	180	180	0.02	< 0.005	—	180
Enclosed Parking Structure	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	—	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.11	0.06	0.99	0.48	0.01	0.08	—	0.08	—	0.08	—	0.08	—	1,242	1,242	0.11	< 0.005	—	1,245
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.02	0.01	0.15	0.06	< 0.005	0.01	—	0.01	—	0.01	—	0.01	—	176	176	0.02	< 0.005	—	176
High Turnover (Sit Down Restaurant)	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	—	< 0.005	—	< 0.005	—	< 0.005	—	29.8	29.8	< 0.005	< 0.005	—	29.8
Enclosed Parking Structure	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	—	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.02	0.01	0.18	0.09	< 0.005	0.01	—	0.01	—	0.01	—	0.01	—	206	206	0.02	< 0.005	—	206

4.3. Area Emissions by Source

4.3.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e	
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.3.1. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e	
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	
Consumer Products	—	6.21	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.53	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Landscape Equipment	2.58	2.42	0.20	21.4	< 0.005	0.01	0.02	—	0.02	—	0.02	67.2	< 0.005	< 0.005	—	67.4
Total	2.58	9.15	0.20	21.4	< 0.005	0.01	0.02	—	0.02	—	0.02	67.2	< 0.005	< 0.005	—	67.4
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	—	6.21	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.53	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.00	6.74	0.00	0.00	0.00	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	—	1.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.10	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.32	0.30	0.02	2.68	< 0.005	< 0.005	< 0.005	—	< 0.005	—	< 0.005	7.62	< 0.005	< 0.005	—	7.64
Total	0.32	1.53	0.02	2.68	< 0.005	< 0.005	< 0.005	—	< 0.005	—	< 0.005	7.62	< 0.005	< 0.005	—	7.64

4.4. Water Emissions by Land Use

4.4.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.4.1. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	20.0	170	190	2.06	0.05	—	257
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	2.86	24.3	27.2	0.29	0.01	—	36.6
Enclosed Parking Structure	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	22.9	195	217	2.35	0.06	—	293

Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	102	0.00	102	10.2	0.00	—	358
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	31.5	0.00	31.5	3.15	0.00	—	110
Enclosed Parking Structure	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	134	0.00	134	13.4	0.00	—	469
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	17.0	0.00	17.0	1.69	0.00	—	59.3
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	5.22	0.00	5.22	0.52	0.00	—	18.3
Enclosed Parking Structure	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	22.2	0.00	22.2	2.22	0.00	—	77.6

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e	
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e	
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e	
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e	
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e	
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Remove	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	1/1/2024	3/1/2024	5.00	45.0	—
Site Preparation	Site Preparation	3/1/2024	4/1/2024	5.00	22.0	—
Grading	Grading	4/1/2024	5/1/2024	5.00	23.0	—
Building Construction	Building Construction	6/1/2024	9/30/2025	5.00	347	—
Paving	Paving	5/1/2024	5/31/2024	5.00	23.0	—
Architectural Coating	Architectural Coating	11/1/2025	1/1/2026	5.00	44.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Demolition	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	1.00	8.00	36.0	0.38

Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	Diesel	Tier 3	1.00	8.00	33.0	0.73
Demolition	Excavators	Diesel	Tier 3	3.00	8.00	36.0	0.38
Demolition	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Demolition	Rubber Tired Dozers	Diesel	Tier 3	1.00	8.00	367	0.40
Site Preparation	Rubber Tired Dozers	Diesel	Tier 3	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Tier 3	3.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Tier 3	1.00	8.00	36.0	0.38
Grading	Graders	Diesel	Tier 3	1.00	8.00	148	0.41

Grading	Rubber Tired Dozers	Diesel	Tier 3	1.00	8.00	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Grading	Tractors/Loaders/Backhoes	Diesel	Tier 3	2.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Tier 3	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Tier 3	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Tier 3	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Tier 3	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Tier 3	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Tier 3	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Tier 3	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Tier 3	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	15.0	18.5	LDA,LDT1,LDT2
Demolition	Vendor	—	10.2	HHDT,MHDT
Demolition	Hauling	6.36	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2	HHDT,MHDT

Site Preparation	Hauling	4.77	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	15.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	65.2	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	251	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	53.3	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	50.2	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	15.0	18.5	LDA,LDT1,LDT2

Demolition	Vendor	—	10.2	HHDT,MHDT
Demolition	Hauling	6.36	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2	HHDT,MHDT
Site Preparation	Hauling	4.77	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	15.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	65.2	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	251	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	53.3	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	50.2	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT

Architectural Coating	Onsite truck	—	—	HHDT
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5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	576,236	192,079	15,786	3,393	11,212

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (Building Square Footage)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	24,848	—
Site Preparation	—	833	33.0	0.00	—
Grading	—	12,000	23.0	0.00	—
Paving	0.00	0.00	0.00	0.00	4.29

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Apartments Mid Rise	—	0%
High Turnover (Sit Down Restaurant)	0.00	0%

Enclosed Parking Structure	4.29	100%
----------------------------	------	------

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	873	0.03	< 0.005
2025	0.00	873	0.03	< 0.005
2026	0.00	873	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Apartments Mid Rise	619	619	619	225,882	6,277	6,277	6,277	2,290,967
High Turnover (Sit Down Restaurant)	270	270	270	98,550	1,049	2,728	2,728	557,980
Enclosed Parking Structure	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Apartments Mid Rise	619	619	619	225,882	6,277	6,277	6,277	2,290,967
High Turnover (Sit Down Restaurant)	270	270	270	98,550	1,049	2,728	2,728	557,980
Enclosed Parking Structure	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Apartments Mid Rise	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	257
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.1.2. Mitigated

Hearth Type	Unmitigated (number)
Apartments Mid Rise	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	257
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
576236.025	192,079	15,786	3,393	11,212

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.10.4. Landscape Equipment - Mitigated

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Apartments Mid Rise	1,454,404	873	0.0330	0.0040	3,313,453
High Turnover (Sit Down Restaurant)	172,695	873	0.0330	0.0040	560,941
Enclosed Parking Structure	534,329	873	0.0330	0.0040	0.00

5.11.2. Mitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBtu/yr)
Apartments Mid Rise	1,454,404	873	0.0330	0.0040	3,313,453
High Turnover (Sit Down Restaurant)	172,695	873	0.0330	0.0040	560,941
Enclosed Parking Structure	534,329	873	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Apartments Mid Rise	10,453,160	0.00
High Turnover (Sit Down Restaurant)	1,492,779	0.00
Enclosed Parking Structure	0.00	0.00

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Apartments Mid Rise	10,453,160	0.00
High Turnover (Sit Down Restaurant)	1,492,779	0.00
Enclosed Parking Structure	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Apartments Mid Rise	190	—
High Turnover (Sit Down Restaurant)	58.5	—
Enclosed Parking Structure	0.00	—

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Apartments Mid Rise	190	—
High Turnover (Sit Down Restaurant)	58.5	—
Enclosed Parking Structure	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
High Turnover (Sit Down Restaurant)	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
High Turnover (Sit Down Restaurant)	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
High Turnover (Sit Down Restaurant)	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

High Turnover (Sit Down Restaurant)	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
High Turnover (Sit Down Restaurant)	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
High Turnover (Sit Down Restaurant)	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
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5.15.2. Mitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
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5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Year	Horsepower	Load Factor
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5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)
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5.17. User Defined

Equipment Type	Fuel Type
—	—

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres
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5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres
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5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres
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5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres
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5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
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5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
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6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	26.3	annual days of extreme heat
Extreme Precipitation	2.65	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	1.71	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi. Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about $\frac{3}{4}$ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi. Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft. Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A

Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
 The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
 The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
 The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
 The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
-----------	---------------------------------

Exposure Indicators	—
AQ-Ozone	97.6
AQ-PM	90.4
AQ-DPM	91.9
Drinking Water	77.4
Lead Risk Housing	47.9
Pesticides	29.2
Toxic Releases	60.5
Traffic	75.5
Effect Indicators	—
CleanUp Sites	84.6
Groundwater	41.0
Haz Waste Facilities/Generators	95.5
Impaired Water Bodies	0.00
Solid Waste	35.7
Sensitive Population	—
Asthma	70.8
Cardio-vascular	80.0
Low Birth Weights	92.4
Socioeconomic Factor Indicators	—
Education	64.5
Housing	87.7
Linguistic	70.3
Poverty	98.2
Unemployment	96.3

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	12.57538817
Employed	4.837674836
Median HI	5.068651354
Education	—
Bachelor's or higher	30.70704478
High school enrollment	100
Preschool enrollment	10.45810343
Transportation	—
Auto Access	47.37585012
Active commuting	84.85820608
Social	—
2-parent households	33.60708328
Voting	0.423456949
Neighborhood	—
Alcohol availability	18.58077762
Park access	21.57064032
Retail density	85.85910432
Supermarket access	82.20197613
Tree canopy	11.94661876
Housing	—
Homeownership	17.28474272
Housing habitability	14.19222379
Low-inc homeowner severe housing cost burden	27.74284614
Low-inc renter severe housing cost burden	22.85384319
Uncrowded housing	28.08931092

Health Outcomes	—
Insured adults	41.85807776
Arthritis	93.3
Asthma ER Admissions	40.4
High Blood Pressure	84.3
Cancer (excluding skin)	96.0
Asthma	12.1
Coronary Heart Disease	88.8
Chronic Obstructive Pulmonary Disease	47.8
Diagnosed Diabetes	82.1
Life Expectancy at Birth	5.7
Cognitively Disabled	30.7
Physically Disabled	67.1
Heart Attack ER Admissions	53.0
Mental Health Not Good	21.2
Chronic Kidney Disease	85.5
Obesity	39.2
Pedestrian Injuries	80.0
Physical Health Not Good	44.3
Stroke	75.8
Health Risk Behaviors	—
Binge Drinking	61.9
Current Smoker	25.4
No Leisure Time for Physical Activity	33.2
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0

Children	79.8
Elderly	90.8
English Speaking	57.5
Foreign-born	52.1
Outdoor Workers	86.2
Climate Change Adaptive Capacity	—
Impervious Surface Cover	48.4
Traffic Density	84.2
Traffic Access	58.1
Other Indices	—
Hardship	77.4
Other Decision Support	—
2016 Voting	13.7

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	98.0
Healthy Places Index Score for Project Location (b)	8.00
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

b: The maximum Healthy Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Based on provided land uses, building square footage, and site acreage.
Construction: Construction Phases	Based on Client provided construction schedule.
Operations: Vehicle Data	Based on conducted Traffic Study for Mixed-Use Development at 1575 University Avenue based on Net Trip Generation
Operations: Hearths	Woodstoves and fireplaces would not be present in the mixed-use dwelling units



Attachment C

Historic Property Profile

Kimley»»Horn



MEMORANDUM

To: Judy Egüez, Senior Planner
City of Riverside Community & Economic Development, Planning Division
3900 Main St., 3rd Floor, Riverside, CA 92522

From: Jessica Mauck, MA, RPA
Kimley-Horn and Associates, Inc.
3801 University Ave., Ste 300, Riverside, CA 92501

Date: 17 August 2023

Subject: Summary of Inventory and Evaluations of a Historic Building at 1575 University Ave. in the City of Riverside, Riverside County, California

Dear Ms. Egüez,

At the request of the City of Riverside, Kimley-Horn and Associates, Inc. (KHA) conducted a review of prior inventories and evaluations completed for a historic building located at 1575 University Ave. within the City of Riverside, Riverside County, California. The building is over 50 years old and, therefore, requires consideration as a potential “historical resource”, as defined by the California Environmental Quality Act (CEQA), and as potentially eligible for local listing or designation, per Title 20 – Cultural Resources of Riverside Municipal Code (RMC). As such, KHA conducted a literature review for the building to ascertain the current status of the building as a potential “historical resource” or potentially eligible for local listing or designation, the results of which are presented in this memorandum. All research, analysis, and reporting for this effort was conducted by a cultural resources management professional that meets Secretary of Interior (SOI) Professional Qualifications and who has extensive experience in the field of historic preservation (Attachment 4).

Literature Review

A review of available historical maps, aerial/street view imagery, technical studies, and planning files was conducted to better understand the history of the building and prior inventory and evaluations conducted for the structure. Review of historical topographic maps and aerial imagery show the building was constructed by 1948 (*Historic Aerials*). A Historic Property Profile (HPP) generated by the City of Riverside in 2023 notes the building was recorded and evaluated for significance in 2012 as a part of planning efforts for the University Avenue Specific Plan (Attachment 1). A summary of the study describes the building as commercial and thematically connected to the Postwar Automobile Culture that was present from 1948-1966 (HPP 2023, Gudis 2012). However, the summary also indicates that a compilation of permit data and advertisements showed that the building changed owner/operators several times between the 1940s and 1960s, and again in the mid-1990s, and that the overall appearance of the building was heavily altered over time (HPP 2023, Gudis 2012).

When recorded in 2012, the building was described as having “a broad symmetrical façade” with a stucco parapet, stucco wall, and stucco monolith projecting from the wall above the roof (HPP 2023, Guid 2012). The study concluded that the building no longer retained architectural integrity

due to successive alterations over the years and, as such, was not recommended eligible for any local registers or the California Register of Historical Resources (CRHR) (HPP 2023, Gudis 2012). The HPP further notes that the building was subsequently provided the CRHR Status Code 6L, which notes the building was “determined ineligible for local listing or designation through local government review processes” (2023). CRHR Status Code 6L also notes that a property, though determined ineligible for local listing or designation, may still warrant special consideration in local planning. This does not indicate that the structure is a historical resource under CEQA but rather the design of the building should be taken into account when reviewing proposed modifications. As such the design was considered during the review of proposed modification to the building in 2015, which included additional substantial alterations to the exterior and façade of the building (Assadzadeh 2015; Attachments 2-3). In its current condition, none of the original historic exterior remains (Attachment 3). As the design was altered, the building no longer warrants special consideration.

Recommendations

Though the building located at 1575 University Ave in Riverside, California was constructed in 1948, multiple modifications were made to the exterior of the building between the 1940s and 1960s, and again in the 1990s (HPP 2023; Gudis 2012). During recordation and evaluation of the building in 2012, it was stated that the building lacked architectural integrity and was not recommended eligible for any local registers or the CRHR (HPP 2023; Gudis 2012). The building was then additionally reviewed by the City of Riverside through both local government review processes and through planning, and it was determined ineligible for local listing or designation (HPP 2023). As a result, the City of Riverside approved additional modifications to the exterior of the building in 2015 (Assadzadeh 2015). In its current condition, the property retains none of its original historic integrity and, consequently, the building is not a “historical resource” as defined by CEQA, and its removal will not result in a significant impact.

Sincerely,



Jessica Mauck, MA, RPA
Kimley-Horn and Associates, Inc.

RPA Number: 37243944

Enclosed:

Attachment 1 – Historic Property Profile

Attachment 2 – Communication from the City of Riverside: P15-0153 – 1575 University Avenue –
Administrative Minor Conditional Use Permit (Assadzadeh 2015)

Attachment 3 – Photographs

Attachment 4 – Professional Qualifications

References:

Assadzadeh, Candace 2015. "P15-0153 – 1575 University Avenue – Administrative Minor Conditional Use Permit". Communication from Community Development Department, City of Riverside. On File at the City of Riverside.

Gudis, Catherine 2012. *Reconnaissance Survey and Context Statement for the University Avenue Specific Plan, City of Riverside, California*. On File at the City of Riverside.

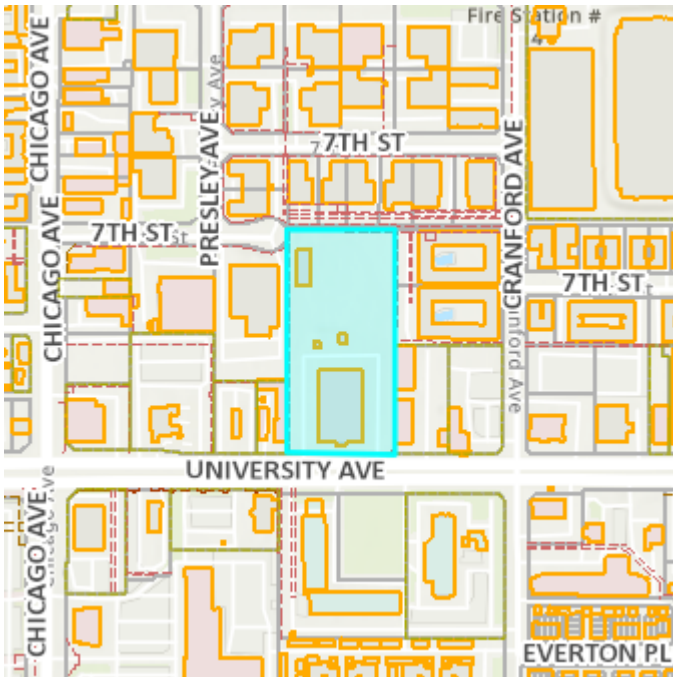
Historic Aerials. <https://www.historicaerials.com/viewer>. Accessed August 9, 2023.

HPP 2023. *Historic Property Profile: 1575 UNIVERSITY*. On File at the City of Riverside

Attachment 1:
Historic Property Profile

Historic Property Profile: 1575 UNIVERSITY

Produced On June 27, 2023



Address:		Year Built:	1948
APN:	250170036	Builder:	
Name:		Contractor:	
Architect:		Style:	Commercial Vernacular
Original Use:	Commercial	Original Owner:	Braman-Dickerson Co agri- implements

Legal Description:

Property Description:

Designations

Date:	Name:	
Level:	Description:	
Plaque Date:	Landmark No:	Merit No:
Plaque Text:		
Remarks:		

Survey Results

Survey Description

Survey Year: 2012

The front portion of this building has a broad symmetrical façade comprised of a stucco parapet above two pairs of five part glazing that flank a central element. The central element consists of a stucco wall projection beneath a streamline Moderne flat canopy that has a stucco monolith projecting from the wall and above the roof. The rear portion appears to have a quonset style roof and large multi-paned

windows.

Significance

This portion of University Avenue (then Eighth Street) was not recorded on early Sanborn maps and a look at historic aerial photos show the structure was established by at least 1948. The earliest permits for this structure are for a sign and sewer connection in 1965 for International Harvester Co. However, according to city directories other occupants included: Braman-Dickerson Co. (1949-1952) which was an agricultural implements & tractor business, Brown-Bevis Industrial Equipment Co. (1963) and finally International Harvester Co. (1966). Permits were issued in 1995/1996 for Kawasaki. A rendering of the Braman-Dickerson building in an unidentified ad from the period shows the original appearance of the building has been much altered. Due to the lack of architectural integrity and modifications to the property it does not appear eligible for any local designations or the California Register; however, due to its historical associations it may still be eligible for special consideration in the local planning process.

Property Type: Commercial

Theme: Postwar Automobile Culture

Period of Significance: 1948-1966

Related Features:

Resource Attributes: HP06

Report Citation: "Reconnaissance Survey and Context Statement for the University Avenue Specific Plan, City of Riverside, California," Catherine Gudis, Ph.D., 2012.

NRHP Status: 6L Determined ineligible for local listing or designation through local gov't review process; may warrant special consideration in local planning.

Applicable Criteria:

NRHP Eligible

Condition:

Survey Type: Intensive/Section 106 Compliance

2011

File: 1575_University_2011_05.JPG

File Date:

Photographer: Krystal Marquez



Attachment 2:

Communication from the City of Riverside: P15-0153 – 1575 University Avenue – Administrative
Minor Conditional Use Permit (Assadzadeh 2015)



City of Arts & Innovation

COMMUNITY DEVELOPMENT DEPARTMENT

Planning Division

Administrative Design Review (DR) Staff Report

PROJECT DETAILS

LWS → 11/5/14
After-the-fact demo
permit, req'd

CASE NUMBER: P13-0950
CONTACT PLANNER: Kyle Smith, Associate Planner
951-826-5220 kjsmith@riversideca.gov
APPLICANT: JWL Associates
PROPERTY ADDRESS: 1575 University Ave

ITEMS TO BE REVIEWED:

Plot Plan
Building Elevations

DETAILED DESCRIPTION OF THE PROPOSAL

The project area consists of a 4.28-acre parcel located on the north side of University Avenue between Chicago Avenue and Cranford Avenue. The existing site includes a vacant 24,000 sq. ft., rectangular-shaped building, which was built prior to 1948 and was owned and was most recently occupied by a motorcycle dealership. Additionally, other smaller structures exist on the site, generally built in the late 1950s to early 1960s. One structure, an approximately 4,000 square quonset hut has been identified as a potentially historic resource.

The applicant is proposing a substantial façade improvement to the primary building and its conversion from a single tenant building to a multiple tenant building. Proposed are seven retail/commercial tenant spaces. The proposed architectural enhancements can generally be described as contemporary with the use of stack stone wainscot, canvas awnings over windows and a steel awning over the primary entries, substantial use of roof cornices, and a complementary color scheme. Enhancements to the site plan include an approximately 186 space parking lot. (The rear third of the site is not proposed to be developed and the existing quonset hut is proposed to remain)

Vehicular access to the site is proposed to be obtained via the existing driveway on the westerly side of the building. Additionally, a second driveway on the easterly side of the building is proposed. The site plan proposed pedestrian access to the primary building entries from the public sidewalk, as well as substantial streetscape landscaping.

No tenants have been identified.

ENVIRONMENTAL DETERMINATION

The project represents replacement or reconstruction of a commercial structure which is categorically exempt per the California Environmental Quality Act (CEQA) pursuant to Section 15302 Article 19 of the CEQA Guidelines.

FINAL STAFF DECISION

The staff **APPROVES** this proposal, subject to the conditions below.

CONDITIONS OF APPROVAL

1. *Advisory:* Any future use with outdoor dining shall comply with Chapter 19.495 (Outdoor Dining and Food Preparation (Permanent)) of the Zoning Code.
2. *Advisory:* ~~(Due to the presence of cultural resources on-site, any future development of the rear portion of the property may require the submittal of a Cultural Study to the satisfaction of the City's Historic Preservation officer.)~~
3. The Project shall comply with all existing State Water Quality Control Board and City storm water regulations, including compliance with NPDES requirements related to construction and operation measures to prevent erosion, siltation, transport of urban pollutants, and flooding.
4. Signs shall be permitted in accordance with Chapter 19.620 of the Zoning Code. Any new signs shall be subject to separate review and assessment, including any required variances. A separate sign application, including fees and additional sets of plans, will be necessary prior to sign permit issuance.

Prior to Grading Permit Issuance:

5. If the presence of contaminated soils is discovered, special handling or disposal may be required pursuant to the Phase II Environmental Assessment prepared for this project.
6. As deemed necessary by the Public Works Department, a 40-scale precise grading plan shall be submitted to the Planning Division and include the following:
7. Hours of construction and grading activity are limited to between 7:00 a.m. and 7:00 p.m. weekdays and 8:00 a.m. and 5:00 p.m. Saturdays. No construction noise is permitted on Sundays or Federal Holidays;
8. Compliance with City adopted interim erosion control measures;
9. Compliance with all recommendations of the required Project specific Water Quality Management Plan;
10. Compliance with any applicable recommendations of qualified soils engineer to minimize potential soil stability problems;
11. Include a note requiring the developer to contact Underground Service Alert at least 48 hours prior to any type of work within pipeline easement; and

light to minimum light of four to one (4:1). The light sources shall be shielded to minimize off-site glare, shall not direct light skyward and shall be directed away from adjacent properties and public rights-of-ways. If lights are proposed to be mounted on buildings, down-lights shall be utilized. Light poles shall not exceed twenty (20) feet in height, including the height of any concrete or other base material.

17. Plans submitted for Plan check review should specify the location, design and color of all domestic water meters, backflow preventers and utility cabinets subject to the Planning and Public Utilities' review and approval. The visibility of such facilities shall be minimized to Community Development Department, Planning Division, review and approval through means including but not limited to relocation, berming, landscaping, and/or installation of a screen wall.
18. **Staff Required Plot Plan Conditions:** Revise the submitted plot plan such that the plan provided for building permit plan check incorporates the following changes:
 - a. Verify that all internal drive aisles have a minimum width of 24 feet and all parking stalls are a minimum 9 feet in width by 18 feet in depth;
 - b. Provision for minimum 12-inch wide concrete walkways, including curb width, along the sides of landscape planters whenever the side of a parking stall is adjacent to it;
 - c. Provision for handicap accessible parking as deemed necessary by Building and Safety Division;
 - d. Provision for bicycle racks on the subject site; and
 - e. Wheel stops shall be provided for parking spaces adjacent to walkways or building walls.
19. **Staff Required Building Elevations Conditions:** Revise the submitted building elevations such that the plans provided for building permit plan check incorporate the following changes:
 - a. All windows shall be recessed two inches;
 - b. The roll up door along the easterly elevation shall be painted to match the building to the satisfaction of Design Review Staff,
 - c. Manufacture's cut sheets of the metal canopies shall be provided to Design Review Staff for review and approval;
 - d. Amend the blueprints submitted for building permits so that they clearly specify all building **MATERIALS** and **COLORS** to Design Review staff approval.
 - e. Column articulation and building modulation shall be satisfactory to Design Review Staff;
 - f. Include details of mechanical equipment screening as follows:
 - i. Where exposed pitched roofs are proposed, locate **NO** mechanical equipment on any roof pitch, except as specifically approved by the Planning Commission.

- ii. Where exposed roof pitches are not proposed (i.e., "flat" roofs), specify all roof mounted equipment for screening on all sides with either separate screens or parapet walls at least as high as the equipment to be screened.
- iii. Specify all electric meters and panels to match adjacent building wall surface and color or to be placed in enclosures.
- iv. Indicate all gas meters, pipes and valves, ground mounted AC units, etc., for screening devices indicating materials and design complimentary to building architecture subject to Design Review staff approval. Wooden roof screens are generally not acceptable.

20. **Staff Required Landscape and Irrigation Conditions:** Landscape and irrigation plans shall include the following:

- a. Decorative potted plants shall be placed along the University Avenue frontage and at primary building entries to the satisfaction of Design Review Staff;
- b. The undeveloped rear portion of the property shall be hydro-seeded for dust mitigation to the satisfaction of Design Review Staff.

21. Add details for the enhancement of the trash enclosure to include colors and materials complementary to the proposed building and a decorative overhead trellis subject to Planning Division Staff approval and in accordance with the City's trash enclosure policies and standard drawings (available at the Planning Division) as follows:

REQUIRED ENCLOSURE MATERIALS:

- a. Block color: Stuccoed wall painted to match building or decorative block.
- b. Cap color: To match exterior of enclosure walls;
- c. Gate/Gauge Material: 16/ga ribbed metal to match color of building;
- d. Pedestrian access requirement: Yes;
- e. Decorative overhead trellis requirement: Yes; and
- f. Overhead cover to prevent contact with storm water: Yes.

During grading and construction activities:

22. To reduce diesel emissions associated with construction, construction contractors shall provide temporary electricity to the site to eliminate the need for diesel-powered electric generators, or provide evidence that electrical hook ups at construction sites are not cost effective or feasible.

23. To reduce construction related particulate matter air quality impacts of City Projects the following measures shall be required:

- a. The generation of dust shall be controlled as required by the AQMD;

- b. Grading activities shall cease during periods of high winds (greater than 25 mph);
 - c. Trucks hauling soil, dirt or other emissive materials shall have their loads covered with a tarp or other protective cover as determined by the City Engineer; and
 - d. The contractor shall prepare and maintain a traffic control plan, prepared, stamped and signed by either a licensed Traffic Engineer or a Civil Engineer. The preparation of the plan shall be in accordance with Chapter 5 of the latest edition of the Caltrans Traffic Manual and the State Standard Specifications. The plan shall be submitted for approval, by the engineer, at the preconstruction meeting. Work shall not commence without an approved traffic control plan.
24. During all Project grading on site, the Project contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers consistent with manufacturers' standards.
25. The Construction Contractor shall place all stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the Project site.
26. The Construction Contractor shall locate equipment staging in areas that will create the greatest distance between construction-related noise sources and noise-sensitive receptors nearest the Project site during all Project construction.
27. During all Project site construction, the Construction Contractor shall limit all construction-related activities that would result in high noise levels to between the hours of 7:00 a.m. and 7:00 p.m., Monday through Friday and between the hours of 8:00 a.m. and 5:00 p.m. on Saturdays. No construction is permitted on Sundays or federal holidays.
28. Should cultural, historical or archaeological items be found during grading and construction activity, the construction and grading of this Project shall be halted in the vicinity of the find and a qualified archaeologist shall be hired at the applicant's expense to work with the Planning Division to determine the finds' significance and possible mitigation measures.
29. In compliance with Health and Safety Code 7050.5, State CEQA Guidelines 15064.5(e) and Public Resources Code 5097.98 if buried materials and/or human remains are found during construction and/or grading activities construction personnel shall halt work in the immediate area; leave the buried materials and/or remains in place; contact the City Manager, the City Historic Preservation Officer, and/or the Riverside County Coroner. The final disposition of buried materials and/or remains will be coordinated by representatives of the property owner and the most likely descendent from the Native American community and perhaps assisted by the City's Historic Preservation Officer and/or the Project archaeologist. If human remains are found they must not be removed until a representative from the Coroner's office reviews the remains in the field. If the Coroner determines that the remains are prehistoric, the Coroner contacts the Native American Heritage Commission and the most likely descendent from the Native American community is informed.

Prior to Release of Utilities and/or Occupancy:

30. Install the landscape and irrigation per the approved plans and submit the completed "Certificate of Substantial Completion" (Appendix C of the Water Efficient Landscaping and Irrigation Ordinance Summary and Design Manual) signed by the Designer/auditor responsible for the Project. Call Kyle Administrative Design Review

Smith at (951) 826-5220 to schedule the final inspection at least one week prior to needing the release of utilities.

Operational Conditions

31. The applicant is responsible for maintaining on site at all times a 5-gallon supply of paint to assist the City's graffiti crew when necessary.

32. General Information Conditions:

- a. The project must be completed per the Design Review staff's approval, including all conditions listed below. Any subsequent changes to the project must be approved by the Design Review staff or Planning Commission. Upon completion of the project, a Design Review staff inspection must be requested, and **UTILITIES** will not be released until it is confirmed that the approved plans and all conditions have been implemented.
- b. This approval is for design concept only, and does not indicate the project has been thoroughly checked for compliance with all requirements of law. As such, it is not a substitute for the formal building permit plan check process, and other changes may be required during the plan check process.
- c. There is a one year time limit on this approval.
- d. This project shall fully and continually comply with all applicable conditions of approval, State, Federal and local laws in effect at the time the permit is approved and exercised and which may become effective and applicable thereafter, and in accordance with the terms contained within the staff report and all testimony regarding this case. Failure to do so will be grounds for Code Enforcement action, revocation or further legal action.

• **Public Works**

THE FOLLOWING PUBLIC WORKS "ENGINEERING" CONDITIONS TO BE MET PRIOR TO CASE FINALIZATION:

33. Size, number and location of driveways to Public Works specifications.

34. Prior to issuance of a building or grading permit, the applicant shall submit to the City for review and approval, a project-specific WQMP that:

- a. Addresses Site Design BMP's such as minimizing impervious areas, maximizing permeability, minimizing directly connected impervious areas, creating reduced or "zero discharge" areas and conserving natural areas;
- b. Incorporates the applicable Source Control BMP's as described in the Santa Ana River Region WQMP and provides a detailed description of their implementation;
- c. Incorporates Treatment Control BMP's as described in the Santa Ana River Region WQMP and provides information regarding design considerations;

- d. Describes the long-term operation and maintenance requirements for BMP's requiring long-term maintenance; and
- e. Describes the mechanism for funding the long-term operation and maintenance of the BMP's requiring long-term maintenance.

35. Prior to issuance of any building or grading permits, the property owner shall record a "Covenant and Agreement" with the County-Clerk Recorder or other instrument acceptable to the City Attorney to inform future property owners of the requirement to implement the approved project-specific WQMP. Other alternative instruments for requiring implementation of the approved project-specific WQMP include: requiring the implementation of the project-specific WQMP in the Home Owners Association or Property Owners Association Conditions, Covenants and Restrictions (C,C&R's); formation of Landscape, Lighting and Maintenance Districts, Assessment Districts or Community Service Areas responsible for implementing the project-specific WQMP; or equivalent may also be considered. Alternative instruments must be approved by the City prior to the issuance of any building or grading permits.

36. If the project will cause land disturbance of one acre or more, it must comply with the statewide General Permit for Storm Water Discharges Associated with Construction Activity. The project applicant shall cause the approved final project-specific WQMP to be incorporated by reference or attached to the project's Storm Water Pollution Prevention Plan as the Post-Construction Management Plan.

37. Prior to building or grading permit closeout or the issuance of a certificate of occupancy or certificate of use, the applicant shall:

- a. Demonstrate that all structural BMP's described in the project-specific WQMP have been constructed and installed in conformance with approved plans and specifications;
- b. Demonstrate that applicant is prepared to implement all non-structural BMP's described in the approved project-specific WQMP; and
- c. Demonstrate that an adequate number of copies of the approved project-specific WQMP are available for the future owners/ occupants.

- **Public Utilities - Electric**

CONTACT SUMMER DELGADO AT 951-826-2129 FOR QUESTIONS REGARDING PUBLIC UTILITIES (ELECTRIC) CONDITIONS/CORRECTIONS LISTED BELOW.

38. None

- **Public Utilities – Water**

CONTACT TONI REDMAN AT 951/826-2126 FOR QUESTIONS REGARDING PUBLIC UTILITIES (WATER) CONDITIONS/CORRECTIONS LISTED BELOW.

39. None

- **Fire Department**

CONTACT MARGARET ALBANESE AT 951-826-5455 FOR QUESTIONS REGARDING FIRE CONDITIONS OR CORRECTIONS.

THE FOLLOWING TO BE MET PRIOR TO CONSTRUCTION PERMIT ISSUANCE:

40. An automatic fire sprinkler system may be required for an A2 occupancy per the 2010 California Building Code, Section 903.2.1.2
41. Requirements for construction shall follow the currently adopted California Building Code and California Fire Code with City of Riverside amendments.
42. Construction plans shall be submitted and permitted prior to construction.
43. Any required fire hydrants shall be installed and operational prior to Fire Department release of permit.
44. Fire Department access is required to be maintained during all phases of construction.

APPEAL INFORMATION

The Zoning Administrator's decision or any conditions of approval can be appealed to the Planning Commission by the applicant or any interested person. Appeals will be accepted until 5:00 p.m., ten days from approval. To appeal this decision, submit a letter stating what you wish to appeal and why, the General Application form and a check in the amount of \$1,531.20, made payable to the City of Riverside to cover the appeal fee. Appeals may be delivered in person or mailed, but they must be received ten days from approval at 5:00 p.m. The Community Development Department's address is:

City of Riverside
Community Development Department
3900 Main Street, 3rd Floor
Riverside, CA 92522

Appeals will be considered by the Planning Commission within thirty days of the end of the appeal period.

Attachment 3:
Photographs



Figure 1: Exterior of Building in 2011 (Gudis 2012)



Figure 2: Exterior of Building under Construction in 2015 (Google Maps – Street View)



Figure 3: Overview of Modified Exterior in 2022 (Google Maps – Street View)

Attachment 4:
Professional Qualifications



Jessica Mauck, MA, RPA

Cultural Resources Management Practice Builder

Jessica has more than 10 years of experience focused on California cultural resources management with a focus on historic preservation and heritage stewardship. Due to her background working for Federal and Tribal Government, she has a robust background in effective communication between diverse groups of stakeholders and maintains a strong understanding of complex subject matters related to historic preservation and environmental law. She has been responsible for all aspects of fieldwork, technical reporting, and consultation for compliance with Federal and California historic preservation and environmental law. She meets Secretary of Interior (SOI) Professional Qualifications and is listed on the Register of Professional Archaeologists.

RELEVANT RECENT EXPERIENCE

- 2245 W. Valley Blvd Project, Historic Property Resources Assessment, Colton, CA
- BLM Land Sale Project, Historic Resources Inventory and Evaluation Report, Barstow, CA
- Tracy Emergency Shelter, Cultural Resources Assessment (Archaeology and Historic Built Environment), Tracy, CA
- LA ART Project, Environmental Support Services (Aesthetics, Archaeology, and Historic Built Environment), Los Angeles, CA
- Irwindale Speedway, Cultural Resources Assessment (Archaeology and Historic Built Environment), Irwindale, CA
- 1610 Artesia Blvd Project, Cultural Resources Assessment (Archaeology and Historic Built Environment), Gardena, CA
- Lowes Norwalk Relocation Project, Cultural Resources Assessment (Archaeology and Historic Built Environment), Norwalk, CA
- Park 55 Project, Cultural Resources Assessment (Archaeology and Historic Built Environment), Santa Ana, CA
- Hollister Airport Runway 6 Improvements, Cultural Resources Assessment (Archaeology and Historic Built Environment), Hollister, CA
- The Greens - Indio Project, Cultural Resources Assessment (Archaeology and Historic Built Environment), Indio, CA
- Crafton Pipeline Replacement Project, CEQA Consulting Party (Cultural/Historic and Tribal Cultural Resources), Redlands, CA*
- Warmington Residential Project, CEQA Consulting Party (Cultural/Historic and Tribal Cultural Resources), San Bernardino, CA*
- Caltrans SR-138 Improvements Project, CEQA and NHPA Consulting Party (Cultural and Tribal Cultural Resources), Cajon Pass, CA*
- High Speed Rail Project (Bakersfield to Palmdale, Palmdale to Burbank), CEQA Consulting Party (Cultural and Tribal Cultural Resources), Various Cities, CA*
- Brightline Xpress West High Speed Rail Project, NHPA Consulting Party and NEPA Cooperating Agency (Aesthetics, AQ, Visual, Vibration/Noise, Biological, and Cultural/Historic Resources), Various Cities, CA*
- Edwards Solar/Transmission Line Project, CEQA, NHPA, and NEPA Consulting Party (Biological, Cultural/Historic, and Tribal Cultural Resources), Kern County, CA*

*Prior to joining Kimley-Horn

EDUCATION

- Master of Arts, Historical Archaeology, University of Leicester, England
- Bachelor of Arts, Anthropology, University of California, Los Angeles

PROFESSIONAL AFFILIATIONS

- Register of Professional Archaeologists (2015-Present)
- Society for American Archaeology Desert Renewable Energy Conservation Plan (DRECP) Task Force Chair (2021-2023)
- CALFIRE Native American Advisory Council (2019-2023)
- Caltrans Native American Advisory Council (2022-2023)

Kimley-Horn and Associates, Inc. – Cultural Resources Management Practice Builder – 02/27/2023-Present

- Responsible for building the organization's CRM practice to handle compliance with State and Federal Laws, such as the National Historic Preservation Act (NHPA), National Environmental Policy Act (NEPA), and the California Environmental Quality Act (CEQA), as it relates to archaeological resources, historic built environment resources, and Tribal cultural resources
- Drafts/reviews cultural resources-based scopes of work and conducts (or oversees the implementation of) research, fieldwork, and technical reporting for Phase I inventory, Phase II evaluation, and Phase III data recovery efforts for archaeological and built historic resources
- Conducts outreach to Tribes for report-based information gathering and supports government-to-government Tribal Consultation
- Drafts/reviews cultural resource-based project mitigation and conditions, cultural sections in environmental documents, and various cultural resource-based management plans (Cultural Resources Management Plans, Monitoring and Treatment Plans, Plans of Action, etc.)

San Manuel Band of Mission Indians – Director of Cultural Resources Management – 02/10/2020-02/17/2023

- Oversees the department's efforts to enhance the Tribe's heritage stewardship program as it relates to the many facets of cultural preservation and revitalization – includes creating/managing the department budget, managing all department staff, conducting outreach to the Tribal community to ascertain needs for future programming, creating intra-departmental and inter-departmental policy/procedure alongside program growth, and drafting/submitting regular reports to applicable Tribal bodies and the Federal Government
- Oversees a robust regulatory compliance and land management program for historic preservation, environmental, and land use laws/policies (particularly CEQA, SB18, NEPA, and NHPA) on the Tribe's Reservation and off-Reservation properties, as well as across the Tribe's 7.4 million acre ancestral territory
- Manages a prominent reclamation effort of the Tribe's ancestral lands, ancestors, and cultural materials via acquisition of materials/lands via purchase, donation, and legal repatriation under applicable state/federal law, as well as legal access to private/government lands via permits, conservation easements, MOU/MOA, etc.
- Manages various digital and physical data resources, such as the cultural Geographical Information System (GIS) platform and the OnBase digital regulatory project management/reference library repository, as well as oversees management of a physical Archive and Curation facility that contains thousands of archival, archaeological, and ethnographic materials
- Spearheads a robust capacity-building program that includes increasing public awareness of the Tribe's history/culture across their ancestral lands, building cultural literacy within Tribal Government staff, and providing technical and professional training to Tribal community members of all ages
- Facilitates the department's Tribal outreach efforts with the general population, the Cultural Advisor Working Group (CAWG), and Tribal leadership to ensure community needs are understood and met within departmental programming, which has led to the department increasing staff and programming efforts by 400% in 2.5 years

San Manuel Band of Mission Indians – Cultural Resources Analyst – 05/17/2017-02/07/2020 (Promoted)

- Created the Tribe's CEQA and SB18 regulatory program and managed consultation with hundreds of agencies, developers, etc. pursuant to CEQA, SB18, NEPA, and NHPA for projects within the Tribe's 7.4 million acre ancestral territory
- Responsible for creating and maintaining partnerships with external agencies with an emphasis on providing regular assistance and steady, transparent communication in a manner that is above and beyond the expectations of the regulatory process

- Reviewed technical documents (i.e., geotechnical reports, soil studies, cultural studies, etc.), conducted internal research, and provided verbal/written feedback in order to ensure compliant/appropriate field methodology, resource sensitivity assessments, and well-rounded preservation recommendations are included within project documentation
- Drafted and provided mitigation/conditions of approval, monitoring and treatment plans, archaeological testing plans, etc. to ensure legally compliant and culturally appropriate preservation/treatment measures regarding the Tribe's archaeological resources, ethnobotanical resources, and intangible cultural resources (i.e., viewsheds, landscapes, etc.) are pursued
- Created and maintained a cultural resources geodatabase, and other complimentary digital data management systems, to better assist the Tribe in their decision-making during consultation, as well as to increase the Tribe's stewardship over their own resources both on and off Tribal land

Versar, Inc. – Archaeologist, Task Manager – 06/20/2016-05/12/2017

- Contracted as an Archaeologist, Task Manager for the Bureau of Land Management (BLM) working on preconstruction projects in the Barstow, Needles, Palm Springs, Ridgecrest field areas for deteriorated SCE poles, restoration, and travel management as well as ground truthing projects in the Barstow and Ridgecrest field areas focused on disturbances (OHV, weather, etc.), cultural/natural resource route triggers, and travel management/site mitigation
- Managed various contracts, handled intake and assignments for all work requests, conducted cultural background research, completed all field planning/mapping, performed all cultural resource surveys, maintained all collected data (resources, disturbances, etc.), and produced all cultural reports (NHPA/NEPA, Quarterly) as well as all contract deliverables to client (progress reports, budget reports, etc.)
- Managed 5 direct reports, ensured all daily/weekly BLM deliverables were up to standard and on time, confirmed all Versar administrative tasks were completed for safety and billing requirements, and maintained a safe and healthy working environment for all Versar personnel
- Point of contact for all contracts for both Versar program manager and BLM clients, attended weekly meetings with clients to ensure client satisfaction for all contracts, submitted monthly reports for contract task order review, assisted program manager with quality assurance plans, contract bids/budgets, and rental contracts
- Created all report/deliverable templates, SOPs, and project tracklogs from scratch and worked with BLM to create an efficient workflow for each contract

Redhorse Corporation – Archaeologist – 04/13/2015-06/17/2016

- Contracted as GS-09 level archaeologist on a team of 4 with a lead (GS-11), coworker (GS-09), and technician (GS-06/7) on Fort Irwin (DoD) for the Directorate of Public Works (DPW) Environmental Division implementing compliance measures for archaeological and built environment historic resources across the installatoin
- Main responsibilities included compliant data management (GIS data; completion/update/management of site records), plan/implement preconstruction/Section 110 survey/inventory and construction monitoring, draft/submit NHPA reports and NEPA Cultural Resources sections for SHPO, THPO, and internal review, and conduct survey/prepare annual reports for NRHP site monitoring program
- Tasked with completely re-organizing the cultural data on post: digitizing legacy data, re-creating the schema for the GeoXH Trimble units, creating a new schema for the cultural geodatabase for implementation by the GIS technician, creating protocols for data collection and input to maintain consistency, ensure data compliance with the Army standard (SDSFIE) as well as internal needs for report production, re-map the cultural drive, etc.
- Tasked with providing support for a complete overhaul and re-organization of the Fort Irwin Archaeological Curation Facility as well as re-organizing the curation database in conjunction with my tasked data project

University of Leicester – Archaeology Graduate Student – 01/15/2014-01/28/2015

- Coursework included both archaeology and built historic resources coursework and led to the finalization of a 15,000 word Master's thesis entitled “Race and Gender in Rural Central Texas Between 1865 and 1920”

- Led a team of field technicians on a pedestrian survey of a 208-acre homestead and ranch to inventory archaeological and historic built environment resources and conducted background research within the Caldwell County Courthouse and other repositories for documents, oral histories, museum archives, books, etc.

Aerotek – Archaeology/GIS Technician – 06/30/2014-11/15/2014

- Contract 1: GIS technician editing and producing utility plans for engineering design and associated construction permits for utility extensions, replacements, and relocations in the City of Austin
- Contract 2: Archaeology technician shovel testing and completing pedestrian surveys in central Texas and surrounding areas when contract opportunities arrived

American Conservation Experience – Archaeology and GIS Technician – 06/03/2013-05/09/2014

- Contracted as a GS-07 level archaeology and GIS technician on the South Zone of the Inyo National Forest supporting compliance efforts related to archaeological and historic built environment resources
- Responsible for weekly progress and budget reporting to ACE and client
- Responsible for performing site conditions assessments and report (i.e. monitoring records, site record updates, and management/mitigation reports, etc.)
- Responsible for conducting preconstruction archaeological and historic built environment resource surveys and reporting pursuant to the NHPA (and the applicable CA/NV Programmatic Agreement) and NEPA
- Solely responsible for maintaining the Trimble GeoXH and ArcGIS cultural geodatabase for the South Zone
- Leadership over a GIS intern and a Paiute Tribe intern both in the field and in the office

POWER Engineers – Archaeology Technician – 09/11/2012-09/15/2012

- Preconstruction pedestrian survey of 1000 acres of LADWP land near Lone Pine, CA for power line development